2009 Q1 RELIABILITY REPORT

TABLE OF CONTENTS

1.0 OVERVIEW OF CYPRESS SEMICONDUCTOR, INC. TOTAL QUALITY MANAGEMENT SYSTEM

This report summarizes Cypress Semiconductor Product Reliability for the period of the 1st quarter of 2009. It includes data from devices fabricated at both internal Cypress and external subcontractor wafer fabrication and assembly facilities.

Cypress Semiconductor has established aggressive reliability objectives. The quality standard at Cypress is zero defects, driven by a culture requiring continuous improvement in quality and reliability.

Product reliability is assured by a total quality management system. The quality management system is described in detail in the Cypress Semiconductor Quality Manual (Cypress Semiconductor Document Number 90-00001). Key reliability-related programs of the total quality management system are: (1) design rule review and approval; (2) control of raw materials and vendor quality; (3) manufacturing statistical process controls; (4) "Maverick Lot" yield limits; (5) formal training and certification of manufacturing personnel; (6) qualification of new products and manufacturing processes; (7) continuous reliability monitoring; (8) formal failure analysis and corrective action; and (9) competitive benchmarking.

Product Reliability data is accumulated as a result of new product Qualification Test Plan activities (Cypress Semiconductor Document Number 25-00040) as well as from the Reliability Monitor Program (Cypress Semiconductor Document Number 25-00008). All reliability test samples are obtained from standard production material. Sample selection is based on generic product families. These generic products are designed with very similar design rules and manufactured from a core set of processes.

Reliability strategy requires that every failure that occurs during reliability testing be subjected to failure analysis (Cypress Semiconductor Document Number 25-00039) to determine the failure mechanism. Corrective action is then implemented to prevent future failures, resulting in continuous improvement in product reliability.

Sabbas Daniel
Executive Vice-President, Quality

2.0 PRODUCT RELIABILITY

In product stress testing, the main emphasis is on the useful life section of the bathtub curve. The test methodology used to predict the useful life period is a life test under a dynamic bias and at temperatures of 125°C or 150°C at the maximum specified use voltage of the product. The duration at these temperatures is 1,000 and 500 hours, respectively.

At Cypress, product reliability tests are performed as part of both the qualification processes and the standard reliability monitoring program. Each fab site and technology family from each product line is sampled. These reliability tests utilize the following stress factors to accelerate failure: temperature, current and /or voltage. The product reliability tests currently employed at Cypress include Early Failure Rate (EFR) and Long Term Failure Rate (LFR).

2.1 EARLY FAILURE RATE SUMMARY

Early Failure Rate Determination: High Temperature Operating Life testing (HTOL), for as long as 96 hours, is used to estimate device early failure rate. This stress will typically correspond to the first 2000 hours of device operation in a system environment. The remainder of the device's lifetime is characterized with extended LFR testing (See Section 3)

Test : High Temperature Operating Life Test (HTOL)
Conditions : Dynamic Operating Conditions, VCC nominal + 15%, 150°C or 125°C.
Duration : 48 hours HTOL at 150°C or 96 hours at 125°C.
(Refer to Appendix C for derating factor calculation)
Failure : A failure is any device that fails to meet data sheet electrical requirements.

Table 1. Early Failure Rate Summary

Technology	Device Hours	# Failed	FIT Rate	PPM	Failure Mode
C9	3,218,736	31	30	463	No visual defect-4, Fab defect-27 (see Note 2)
L28	94,512	0	Insufficient	0	None
B53	15,006	0	Insufficient	0	None
R8	1,266,442	2	7	93	Fab defect-2 (see Note 3)
C8	289,011	0	19	0	None
R5	275,328	0	20	0	None
R95	1,007,217	0	5	0	None
R9	785,937	1	8	37	Fab defect-1 (see Note 4)
R7	269,112	0	20	0	None
S4	727,728	0	7	0	None
S8	441,251	0	12	0	None
Grand Total	**7,949,029**	**34**	**13**	**174**	**See above**

Notes: 1) Insufficient data – interpret as insufficient accumulated life-time hours to project a 60%confidence bound for a zero-fails sample.
2) CAR 200840004 – DDLI (Local Interconnect OPC) improvement
3) CAR 200838014 & 200842019 – Improve cleaning process
4) CAR 200813026 – Tungsten flakes reduction

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2.2 LONG TERM FAILURE RATE SUMMARY

A High Temperature Operating Life test (HTOL) is used to estimate long-term reliability. By operating the devices at accelerated temperature and voltage, hundreds of thousands of use hours can be compressed into hundreds of test hours.

Test : High Temperature Operating Life Test (HTOL)
Conditions : Dynamic Operating Conditions, VCC nominal +15% 150°C or 125°C.
Duration : A minimum of 80 hours at 150°C or 168 hours at 125°C
Generally 500 hours at 150°C or 1000 hours at 125°C.
(Refer to Appendix C for derating factor calculation)
Failure : A failure is any device that fails to meet data sheet electrical requirements.
Fit Rate : Derated to 55° C ambient, with 60% upper confidence bound for 0 failures, Ea =0.7ev (Refer to Appendix A)

Table 2. Long Term Failure Rate Summary

Technology	Device Hours	# Failed	FIT Rate	Failure Mode
B53	288,808	0	19	None
L28	192,192	0	28	None
C8	235,587	0	23	None
C9	1,349,163	0	4	None
R5	110,160	0	Insufficient	None
R8	859,907	0	6	None
R9	780,384	0	7	None
S4	2,223,738	0	2	None
S8	740,599	0	7	None
R7	572,248	0	9	None
R95	541,074	0	10	None
Grand Total	**7,893,860**	**0**	**1**	**None**

Note: Insufficient data – interpret as insufficient accumulated life-time hours to project a 60% confidence bound for a zero-fails sample.

2.3 DATA RETENTION SUMMARY

A high-temperature, non-biased bake test ensures that data retention meets established reliability goals. The devices are baked without bias at either 165°C for plastic-packaged devices, or 250°C for hermetically-packaged devices. DRET is performed on programmed devices to establish a failure rate for cell charge loss. The reliability at nominal system ambient temperature is related to the failure rate at elevated temperatures through the Arrhenius equation.

Test : Data Retention Testing (DRET)
Conditions : High temperature non-biased bake
Duration : A minimum of 500 hours at 150°C or 168 hours at 165°C
Generally 1000 hours at 150°C or 500 hours at 165°C.
Failure : Devices are programmed with a worst case program pattern before being subjected to data retention testing. The memory pattern is verified at each readpoint and any device with altered bits is classified a failure.

Table 3. Data Retention Summary

Technology	Sample Size	Device-Hours	# Failed	PPM	Failure Mode
L28	154	77,000	0	0	None
S4	5,194	2,054,996	0	0	None
S8	2,712	1,095,843	0	0	None
Grand Total	**8,060**	**3,227,839**	**0**	**0**	**None**

Note: Insufficient data – interpret as insufficient accumulated life-time hours to project a 60%confidence bound for a zero-fails sample.

3.0 PACKAGE RELIABILITY

Package-level reliability testing refers to the assessment of the overall reliability of the device in packaged form. This consists of subjecting packaged samples to reliability tests that expose the various sample sets to different stress conditions, after which the samples are tested for any degradation.

At Cypress, package reliability tests are performed as part of the qualification processes and as part of the standard reliability monitoring program. The reliability test employed is chosen based on the failure mechanism, as different stress tests accelerate different failure mechanisms. These reliability tests utilize one or more of the following stress factors to accelerate failure: temperature, moisture or humidity, current, voltage, and pressure. The package reliability tests currently employed at Cypress include Pressure Cooker Test (PCT, Highly Accelerated Stress Test (HAST), Temperature Cycle Test (TCT), and High Temperature Storage (HTS). Figure 1 shows the Cypress package reliability stress flow.

Surface-mount samples are preconditioned per Jedec Std JESD22-A113 prior to package reliability testing. This is required prior to TCT, PCT and HAST testing. Preconditioning simulates the board mounting process of the customer. It normally consists of a temperature cycle to simulate exposure to different temperatures during shipping, a bake to drive away the moisture inside the packages of the samples, a soak to drive a controlled amount of moisture into the package, and three cycles of convection reflow. Packages are soaked and reflowed based on their shipping moisture sensitivity classification. The samples are tested (acoustic and electrical) after preconditioning, failures from which are considered as preconditioning failures and not reliability failures. Preconditioning failures should be taken seriously, since these imply that the samples are not robust enough to withstand the board mounting process.

Cypress conducts all major classes of package reliability tests on each of its package families. The package characteristics and assembly locations are the primary considerations when grouping packages into package families. A package family may consist of a group of 44-lead to 144-lead TQFP packages manufactured at a particular manufacturing location.

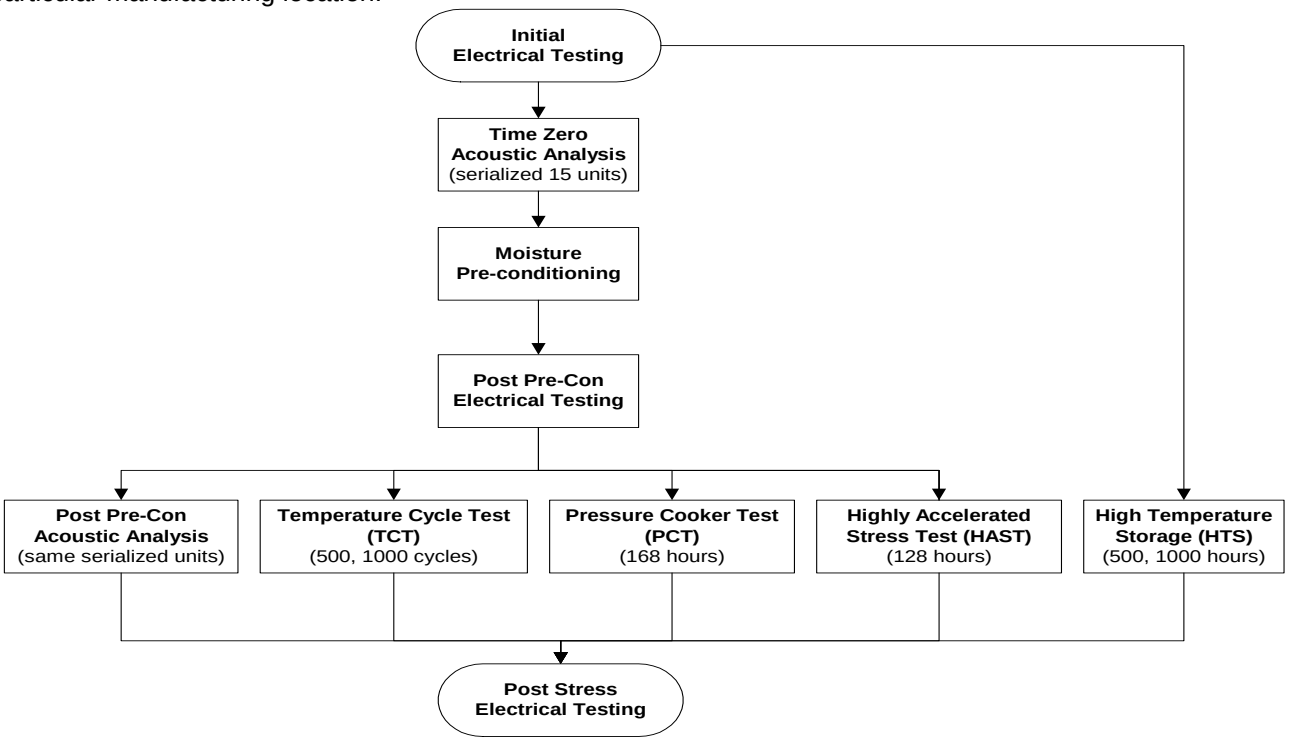

Figure 1. Cypress Package Reliability Stress Flow

3.1 PRESSURE COOKER TEST (PCT)

The Pressure Cooker Test is a highly accelerated packaging stress test used to ensure environmental durability of epoxy-packaged parts. Passivation cracks, ionic contamination, and corrosion susceptibility are all accelerated by this stress.

Conditions : 15 PSIG, 121°C, No bias, for a minimum of 168 hours.
Pre-Conditioning : 5 cycles Temperature Cycle –65/+150, 24 hr Bake 125°C, Moisture loading to qualified MSL level
Failure Modes : Parametric shifts, high leakage, and/or catastrophic
Failure Mechanism : Die corrosion or contaminants such as foreign material on or within the package materials. Poor package sealing.

Table 4. Pressure Cooker Test Failure Rate Summary

Package	Sample Size	# Failed	Defects %	Failure Mode
FBGA (0.75-0.8, 0.3mm)	80	0	0	None
FBGA (0.75-0.8, 0.3mm, Pb-free)	154	0	0	None
FBGA (1.0-1.27)	255	0	0	None
FLIPCHIP CSP (Pb-Free)	436	0	0	None
PBGA (with Heat Spreader)	240	18	7.50%	Cu Bridging-18 (see Note 1)
PDIP	0	0	0	None
PDIP (Pb-Free)	160	0	0	None
PLCC	400	0	0	None
PLCC (Pb-Free)	80	0	0	None
PQFP (Pb-Free)	80	0	0	None
QFN (0.4mm, Saw Type, Pb-free)	157	0	0	None
QFN (0.6mm, Punch Type, Pb-Free)	238	0	0	None
QFN (0.6mm, Saw Type, Pb-Free)	861	0	0	None
QFN (COL, 0.6mm, Saw Type, Pb-free)	239	0	0	None
QFN (Punch Type, Pb-Free)	478	0	0	None
QFN (Saw Type, Pb-free)	620	0	0	None
QSOP (Pb-Free)	239	0	0	None
RTSOP (Pb-free)	161	0	0	None
SNC (Pb-Free)	291	0	0	None
SOIC	320	0	0	None
SOIC (J-Lead)	228	0	0	None
SOIC (J-Lead, Pb-Free)	399	0	0	None
SOIC (Pb-Free)	2,393	0	0	None
SSOP (Pb-Free)	1,572	0	0	None
TQFP	160	0	0	None
TQFP (10mm X 10mm)	0	0	0	None
TQFP (Pb-Free)	1,272	0	0	None
TQFP (Thermal)	240	0	0	None
TQFP (Thermal, Pb-Free)	50	0	0	None
TSOP (Pb-free)	636	0	0	None
EXPOSED TSOP (Pb-free)	0	0	0	None
TSOP I (Pb-Free)	239	0	0	None
TSOP II	0	0	0	None
TSOP II (Pb-Free)	984	0	0	None
TSSOP	319	0	0	None
TSSOP (Pb-Free)	554	0	0	None
VFBGA (0.75-0.8, 0.3mm)	80	0	0	None
VFBGA (0.75-0.8, 0.3mm, Pb-Free)	1,037	0	0	None
Grand Total	**15,652**	**18**	**0.12%**	**See above**

Notes: 1) CAR 200837011 – Enhance equipment to improve the manufacturability

3.2 HIGHLY ACCELERATED STRESS TEST (HAST)

Cypress uses HAST to accelerate temperature, humidity, bias failure mechanisms. This change was necessary because our package reliability had improved to the point where the old 85°C/85% R.H. temperature-humidity-bias testing would not induce failures. Failures are necessary to judge progress and compare packaging changes. HAST testing has been shown to be at least twenty times more accelerated then 85°C/85% R.H. temperature-humidity-bias testing.

Conditions : Present Conditions: 130°C / 85% RH minimum power dissipation, for a minimum of 128 hours.

Pre-Conditioning : 5 cycles Temperature Cycle –65/+150, 24 hr Bake 125°C, Moisture loading to qualified MSL level

Failure Modes : Parametric shifts, high leakage, and/or catastrophic

Failure Mechanism : Die corrosion or contaminants such as foreign material on or within the package materials. Poor package sealing.

Table 5. Highly Accelerated Stress Test (HAST) Failure Rate Summary

Package	Sample Size	# Failed	Defects %	Failure Mode
FBGA (0.75-0.8, 0.3mm)	125	0	0	None
FBGA (0.75-0.8, 0.3mm, Pb-free)	77	0	0	None
FBGA (1.0-1.27)	0	0	0	None
FLIPCHIP CSP (Pb-Free)	258	0	0	None
PBGA (with Heat Spreader)	0	0	0	None
PDIP	0	0	0	None
PDIP (Pb-Free)	160	0	0	None
PLCC	279	0	0	None
PLCC (Pb-Free)	80	0	0	None
QFN (0.4mm, Saw Type, Pb-free)	23	0	0	None
QFN (0.6mm, Punch Type, Pb-Free)	246	0	0	None
QFN (0.6mm, Saw Type, Pb-Free)	842	0	0	None
QFN (COL, 0.6mm, Saw Type, Pb-free)	354	0	0	None
QFN (Punch Type, Pb-Free)	350	0	0	None
QFN (Saw Type, Pb-free)	350	0	0	None
QSOP (Pb-Free)	105	0	0	None
RTSOP (Pb-free)	103	0	0	None
SNC (Pb-Free)	240	0	0	None
SOIC	343	0	0	None
SOIC (J-Lead)	264	0	0	None
SOIC (J-Lead, Pb-Free)	429	0	0	None
SOIC (Pb-Free)	2,102	0	0	None
SSOP (Pb-Free)	957	0	0	None
TQFP	78	0	0	None
TQFP (10mm X 10mm)	0	0	0	None
TQFP (Pb-Free)	631	0	0	None
TQFP (Thermal)	158	0	0	None
TQFP (Thermal, Pb-free)	92	0	0	None
TSOP (Pb-free)	305	0	0	None
TSOP I (Pb-Free)	224	0	0	None
TSOP II	0	0	0	None
TSOP II (Pb-Free)	944	0	0	None
TSSOP	312	0	0	None
TSSOP (Pb-Free)	438	0	0	None
VFBGA (0.75-0.8, 0.3mm)	0	0	0	None
Grand Total	**10,869**	**0**	**0.00%**	**None**

3.3 TEMPERATURE CYCLE TEST (TC)

Differences in thermal expansion coefficients are accentuated by cycling devices through temperature extremes. If the materials do not expand and contract equally, large stresses can develop. The Temperature Cycle test stresses mechanical integrity by exposing a device to alternating temperature extremes. Weakness and thermal expansion mismatches in die interconnections, die attach, and wire bonds are often detected with this accelerated test.

Condition	:	MIL-STD-883D, Method 1010, Condition B, -55°C to 125°C MIL-STD-883D, Method 1010, Condition C, -65°C to 150°C (Refer to Appendix C for derating factor calculation)
Pre-Conditioning	:	5 cycles Temperature Cycle –65/+150, 24 hr Bake 125°C, Moisture loading to qualified MSL level
Duration	:	500 cycles minimum at Condition C, 1000 cycles minimum at Condition B
Failure Mode	:	Parametric shifts and catastrophic failures
Failure Mechanism	:	Wire bond, cracked or lifted die and package failure.

Table 6. Temperature Cycling Failure Rate Summary

Package	Sample Size	# Failed	Defects %	Failure Mode
FBGA (0.75-0.8, 0.3mm)	160	0	0	None
FBGA (0.75-0.8, 0.3mm, Pb-free)	231	0	0	None
FBGA (1.0-1.27)	962	0	0	None
FBGA (1.0-1.27, Pb-free)	420	0	0	None
FLIPCHIP CSP (Pb-Free)	2,284	0	0	None
PBGA (with Heat Spreader)	478	0	0	None
PBGA (Cavity/Heat Sink)	151	0	0	None
PDIP	0	0	0	None
PDIP (Pb-Free)	1,710	1	0.06%	Lifted ball bond-1 (see Note 1)
PLCC	483	0	0	None
PLCC (Pb-Free)	394	0	0	None
PQFP (Pb-free)	350	0	0	None
QFN (Open Cavity, Pb-free)	230	0	0	None
QFN (0.4mm, Saw Type, Pb-free)	538	0	0	None
QFN (0.6mm, Punch Type, Pb-Free)	5,778	8	0.14%	Broken wedge-8 (see Note 2)
QFN (0.6mm, Saw Type, Pb-Free)	3,402	0	0	None
QFN (COL, 0.6mm, Saw Type, Pb-free)	2,546	0	0	None
QFN (Punch Type, Pb-Free)	1,891	0	0	None
QFN (Saw Type, Pb-free)	2,138	0	0	None
QSOP (Pb-Free)	465	0	0	None
RTSOP (Pb-free)	318	0	0	None
SNC (Pb-Free)	1,085	0	0	None
SOIC	1,158	0	0	None
SOIC (J-Lead)	637	0	0	None
SOIC (J-Lead, Pb-Free)	896	0	0	None
SOIC (Pb-Free)	7,937	10	0.13%	Cut wedge-10 (see Note 3)
SSOP (Pb-Free)	7,613	5	0.07%	Cut wedge-4 (see Note 3), PO Metal Damage-1
TQFP	553	0	0	None
TQFP (10mm X 10mm)	73	0	0	None
TQFP (Pb-Free)	3,782	0	0	None
TQFP (Thermal)	478	0	0	None
TQFP (Exposed Pad, Pb-free)	406	0	0	None
TSOP (Pb-free)	1,512	0	0	None
EXPOSED TSOP (Pb-free)	0	0	0	None
TSOP I (Pb-Free)	794	0	0	None
TSOP II	45	0	0	None
TSOP II (Pb-Free)	3,136	0	0	None
TSSOP	478	0	0	None
TSSOP (Pb-Free)	1,506	0	0	None
VFBGA (0.75-0.8, 0.3mm)	235	0	0	None
VFBGA (0.75-0.8, 0.3mm, Pb-Free)	4,798	0	0	None
Grand Total	**62,051**	**24**	**0.04%**	**See above**

Notes: 1) CAR 200827014 – Improve Mold assembly process.
2) CAR 200831014 – Convert to Saw Singulation process.
3) CAR 200824016 – Increase mold compound cure time.

3.4 HIGH TEMPERATURE STORAGE (HTS)

A high-temperature, non-biased bake test is performed to determine the effect on devices of long-term storage at elevated temperatures without any electrical stresses applied. The devices are baked without bias at either or 150°C or 165°C for plastic-packaged devices. The reliability at nominal system ambient temperature is related to the failure rate at elevated temperatures through the Arrhenius equation.

Test	:	High Temperature Storage (HTS)
Conditions	:	High temperature non-biased bake
Duration	:	A minimum of 500 hours tested up to 1000 hours at 150°C
Failure Mode	:	Parametric shifts and catastrophic failures
Failure Mechanism	:	Lifted ball bonds due to gross intermetallic growth

Table 7. High Temperature Storage Failure Rate Summary

Package	Sample Size	# Failed	Defects %	Failure Mode
FBGA (0.75-0.8, 0.3mm)	160	0	0	None
FBGA (0.75-0.8, 0.3mm, Pb-free)	234	0	0	None
FBGA (1.0-1.27)	634	0	0	None
FBGA (1.0-1.27, Pb-free)	158	0	0	None
FLIPCHIP CSP (Pb-Free)	180	0	0	None
PBGA (with Heat Spreader)	480	0	0	None
PBGA (Cavity/Heat Sink)	160	0	0	None
PDIP	0	0	0	None
PDIP (Pb-Free)	880	0	0	None
PLCC	630	0	0	None
PLCC (Pb-Free)	0	0	0	None
PQFP (Pb-free)	160	0	0	None
QFN (Open Cavity, Pb-free)	462	0	0	None
QFN (0.4mm, Saw Type, Pb-free)	237	0	0	None
QFN (0.6mm, Punch Type, Pb-Free)	636	0	0	None
QFN (0.6mm, Saw Type, Pb-Free)	945	0	0	None
QFN (COL, 0.6mm, Saw Type, Pb-free)	480	0	0	None
QFN (Punch Type, Pb-Free)	640	0	0	None
QFN (Saw Type, Pb-free)	622	0	0	None
QSOP (Pb-Free)	560	0	0	None
RTSOP (Pb-free)	320	0	0	None
SNC (Pb-Free)	640	0	0	None
SOIC	638	0	0	None
SOIC (J-Lead)	160	0	0	None
SOIC (J-Lead, Pb-Free)	792	0	0	None
SOIC (Pb-Free)	4,630	0	0	None
SSOP (Pb-Free)	2,300	0	0	None
TQFP	319	0	0	None
TQFP (10mm X 10mm)	0	0	0	None
TQFP (Pb-Free)	2,075	0	0	None
EXPOSED TSOP (Pb-free)	0	0	0	None
TSOP (Pb-free)	1,434	0	0	None
TSOP I (Pb-Free)	640	0	0	None
TSOP II	0	0	0	None
TSOP II (Pb-Free)	1,516	0	0	None
TSSOP	635	0	0	None
TSSOP (Pb-Free)	1,120	0	0	None
VFBGA (0.75-0.8, 0.3mm)	160	0	0	None
VFBGA (0.75-0.8, 0.3mm, Pb-Free)	1,354	0	0	None
Grand Total	**26,991**	**0**	**0.00%**	**None**

APPENDIX A: FAILURE RATE CALCULATION

Thermal Acceleration Factors

Acceleration factors (AF) for thermal stresses (Early Failure Rate, Latent Failure Rate, Data Retention and High Temperature Storage) are calculated from the Arrhenius equation)

$$AF = exp\left(\frac{E_a}{k}\left(\frac{1}{T_u} - \frac{1}{T_t}\right)\right)$$

where :

E_a = Activation Energy of the defect mechanism
K = Boltzmann's constant = 8.62 x 10 –5 eV/Kelvin
T_t is the junction temperature of the device under stress
T_u is the junction temperature of the device at use conditions

While there is no substitute for experimentally determining the activation energy, obtaining this information is very difficult because few devices fail stress tests. In the absence of experimental data, the following literature values are used.

APPENDIX A: FAILURE RATE CALCULATION (cont.)

Temperature-Humidity Acceleration Factors

Cypress estimates acceleration factors for temperature-humidity stresses (Pressure Cooker Test and Highly Accelerated Stress Test) from a model developed by Hallberg and Peck ("Quality and Reliability Engineering International". Vol. 7, 1991).

$$AF = \left(\frac{RH_t}{RH_u}\right)^{-3} exp \frac{E_a}{k}\left(\left(\frac{1}{T_u} - \frac{1}{T_t}\right)\right)$$

where :

T_u = use environment junction temperature (°K)
T_t = test environment junction temperature (°K)
E_a = failure mechanism activation energy (0.9 for corrosion)
k = Boltzman's Constant (8.62 x 10 –5 eV/^{0}Kelvin)
RH_u = use environment relative humidity
RH_t = test environment relative humidity
AF = acceleration factor

The Hallberg and Peck model requires the stress junction temperature and relative humidity as well as the use temperature and relative humidity. To estimate the use relative humidity, we assume that the device room temperature is 35 ^{o}C (95 ^{o}F) and the room relative humidity is 100%. From any Handbook of Chemistry and Physics, the vapor pressure of water VP (water) at 35 ^{o}C is 41.175 mm Hg. If we assume that the device will operate with a junction temperature of 70 ^{o}C (VP (water) at 70 ^{o}C is 233.7 mm Hg), the junction relative humidity (RHj) is

$$RHj = 100\% \left(\frac{41.175}{233.7}\right) = 17.6\%$$

The operating conditions of the devices are then 70 ^{o}C and 17.6% relative humidity.

Our Pressure Cooker Test (PCT) submits the devices to a temperature of 121 ^{o}C and 100% relative humidity. Using the Hallberg and Peck model, the acceleration factor for the PCT stress can be calculated:

$$AF = \left(\frac{17.6}{100}\right)^{-3} exp \frac{0.9}{k}\left(\left(\frac{1}{343} - \frac{1}{394}\right)\right) = 9,433$$

APPENDIX A: FAILURE RATE CALCULATION (cont.)

The acceleration factor for HAST is calculated similarly, except that junction temperature heating effects must be included when estimating the relative humidity at the die surface. Assuming an average junction temperature rise of 5 °C, the relative humidity at the die surface during 130 C HAST testing can be calculated.

VP (130 °C) = 2026.10 mm Hg
VP (135 °C) = 2347.26 mm Hg

$$RHj = 85\% \left(\frac{2026.10}{2347.26} \right) = 73.4\%$$

$$AF = \left(\frac{17.6}{73.4} \right)^{-3} exp \frac{0.9}{k} \left(\left(\frac{1}{343} - \frac{1}{408} \right) \right) = 9{,}261$$

Similarly, for 140 °C HAST testing,

VP (140 °C) = 2710.92 mm Hg
VP (145 °C) = 3116.76 mm Hg

$$RHj = 85\% \left(\frac{2710.92}{3116.76} \right) = 73.9\%$$

$$AF = \left(\frac{17.6}{73.9} \right)^{-3} exp \frac{0.9}{k} \left(\left(\frac{1}{343} - \frac{1}{418} \right) \right) = 17{,}433$$

APPENDIX A: FAILURE RATE CALCULATION (cont.)

Failure Rate Calculation

For all but LFR test, Cypress reports the failure rate in terms of ppm. Early life reliability is reported in terms of ppm defective expected during the first year of use under typical use conditions. No upper confidence bound will be used for this estimate. The ppm defective is the ratio of the number of rejects to the number of samples and expressed in ppm.

$$PPM = \left(\frac{Total\ Rejects}{Total\ Samples} \right) x\ 1{,}000{,}000$$

Intrinsic, or later life reliability, shall be reported using the exponential model, in terms of FITs, with a 60% upper confidence bound for 0 failures or the demonstrated FIT estimate in the case there are failures.

$$FR\ (FIT) = \chi^2 \alpha,\ 2n+2 / (2 * AF * Device\ Hours) * 10^9$$

where:
$\chi 2\ \alpha, 2n+2$ = Chi square factor for 2n +2 degrees of freedom at 60% confidence level.
n = number of failure.
AF = Thermal Acceleration factor and is calculated per Arrhenius equation assuming a 0.7eV activation energy.

Voltage acceleration factor is not included in failure rate calculation even though voltage acceleration may be used during stress. Typical use conditions shall be considered to be 55°C ambient with a 15°C temperature rise at the junction. Thus, use junction temperature is 70°C.

APPENDIX B: TEMPERATURE CYCLING STRESS MODELS

Two acceleration factor (AF) models are used to model temperature cycle failures. The model proposed by Zelenka [1] and others uses the epoxy molding temperature (T_{mold} = 170 °C) and the minimum temperature reached during temperature cycling , (T_{min}).

$$AF_{brittle} = \left(\frac{T_{mold} - T_{min,stress}}{T_{mold} - T_{min,stress}} \right)^{m}$$

The model constant, m, is experimentally calculated for each failure mechanism. The acceleration factor is labeled 'brittle' because the derivation of this equation assumes brittle fracture mechanics. Basically, the model assumed that cracks advance a little every time the maximum stress is reached. The maximum stress is assumed to be proportional to the difference in temperature between the minimum and maximum stress temperatures. For plastic-encapsulated devices, the stress is minimum during molding, (T_{mold}), and maximum during the lowest temperature reached during temperature cycling, (T_{min}).

The model constant, m, is a function of the failure mechanism.

Thin film cracking	m = 12 (Blish and Vaney [2])
Al/Au Intermetallic fractures	m = 4
Chip-out (cratering) bond failures	m = 7 (Dunn and McPherson [3])

For ductile materials, dislocation movement dominates the fracture mechanics and a different model is used.

The second, and most widely accepted model, uses the difference between the minimum and maximum temperatures during temperature cycle testing (T_{min} and T_{max}) to calculate an acceleration factor.

$$AF_{ductile} = \left(\frac{T_{max,\,stress} - T_{min,stress}}{T_{max,use} - T_{min,use}} \right)^{m}$$

The model constant, 'm', is again experimentally calculated for each failure mechanism.

Coffin and Manson [4] developed this model from empirical observations of metal fatigue. In ductile materials, if the applied stress is high enough, dislocations are produced. At the high temperature condition of the temperature cycling stress, dislocations are forced towards one metal surface. At the low temperature, the dislocations try to glide back to their original position, but many cannot because they became entangled with other dislocations. After many cyles, these tangles grow until cracking, and finally failure, occurs. Both minimum and maximum temperatures are important, because both contribute to dislocation movement and entanglement. This model is recommended for any failures involving ductile materials. Model constants for ductile failure follow.

Wirebond breakage	m = 5.16 (Cypress experimentation)
Solder Fatigue	m = 2 (Blish and Vaney [2])

APPENDIX B: TEMPERATURE CYCLING STRESS MODELS (cont.)

Our commercial devices are specified to operate between 0°C and 70 °C. Using this information, the acceleration factor, AF, between use and Military Condition C stress testing (-65°C to 150°C), for the brittle, thin film cracking failure mechanism and ductile, wire bond breakage failure mechanism can be calculated.

$$AF_{brittle} = \left(\frac{170 - (-65)}{170 - 0}\right)^{12} = 49$$

$$AF_{ductile} = \left(\frac{150 - (-65)}{70 - 0}\right)^{5.16} = 327$$

References:

[1] R.L. Zelenka, IEEE/IRPS, pp. 30-34, 1991
[2] R.C. Blish and P.R. Vaney, IEEE/IRPS, pp 22-29, 1991
[3] C.F. Dunn and J.W. McPherson, IEEE/IRPS, pp 252-258, 1990
[4] S.S. Manson, thermal Stress and Low-Cycle Fatigue, (Robert Krieger : Malabar, Florida), 1981.

APPENDIX C: EQUIVALENCE OF DIFFERENT STRESS TEST CONDITIONS

During stress testing, more than one set of test conditions were used. To account for this difference, stress test hours or cycles at the lower stress condition were derated and then added to the total for the most severe stress test condition.

Dynamic (HTOL)

HTOL (EFR/LFR) test is performed at 150 °C and 125 °C. Using the Arrhenius equation (Appendix A) and an activation energy of 0.7 eV, the derating factor, DF, between 125°C and 150 °C can be calculated.

$$DF \text{ (between 125C and 150C)} = \exp\left(\frac{0.6}{k}\left(\frac{1}{150 + 15 + 273} - \frac{1}{125 + 15 + 273}\right)\right) = 0.326$$

The derating calculation assumes a 15 °C rise due to junction heating.

Temperature Cycling

Two different temperature cycling conditions were used to measure reliability, -65°C to 150°C and –55°C to 125°C. Using the brittle failure mechanism model with m = 12, the derating factor between -65°C to 150°C and –55°C to 125°C is calculated.

$$DF = \left(\frac{170 - (-55)}{170 - (-65)}\right)^{12} = 1.685$$

Using the ductile failure mechanism model with m = 5.16, the derating factor between -65°C to 150°C and –55°C to 125°C is obtained.

$$DF = \left(\frac{125 - (-55)}{150 - (-65)}\right)^{5.16} = 2.501$$

HAST

The derating factor between two HAST conditions, 140 °C / 85%RH and 130 °C / 85% RH is simply the ratio of the acceleration factors (See Appendix A)

$$DF = \frac{9,261}{17,433} = 0.531$$

FROM: 3/29/2008
TO: 3/29/2009

Summary Detail -- EFR Performance Over Time

TECHNOLOGY	DIVISION	EVALNUM	TV	DEVICE	TEMP	VOLT	READOUT	DURATION	SS	REJECT	FA	COMMENTS
C9												
	MID	080602	R6A	CY7C1061DV33	125	3.77	96	96	918	0		
	MID	080602	R6B	CY7C1061DV33	125	3.77	96	96	217	0		
	MID	080602	R6C	CY7C1061DV33	125	3.77	96	96	444	0		
	MID	082106	R1	CY7C1021DV33	150	3.7	48	48	3910	0		
	MID	082106	R2	CY7C1021DV33	150	3.7	48	48	3915	0		
	MID	082106	R3	CY7C1021DV33	150	3.7	48	48	3937	2	082106-3E1	No visual defect
	MID	082107	R1A	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1393	0		
	MID	082107	R1B	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1387	0		
	MID	082107	R1C	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1389	0		
	MID	082107	R2A	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1293	0		
	MID	082107	R2B	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1292	0		
	MID	082107	R2C	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1232	0		
	MID	082107	R3A	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1350	0		
	MID	082107	R3B	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1334	0		
	MID	082107	R3C	CY7C1041DV33-10ZSXIT	150	4.5	48	48	1375	0		
	MID	MR081072	R1	CY7C1061DV33	125	3.77	96	96	473	0		
	MID	MR082045	R1	CY7C1021DV30-10ZSXI	150	3.77	48	48	999	0		
	MID	MR082045	R2	CY7C1021DV30-10ZSXI	150	3.77	48	48	999	0		
	MID	MR082045	R3	CY7C1021DV33-10ZSXI	150	3.77	48	48	6748	0		
	MID	MR082045	R3A	CY7C1021DV33-10ZSXI	150	3.77	48	48	6748	0		
	MID	MR082045	R4	CY7C1021DV33-10ZS	150	3.77	48	48	5390	1	MR082045-4E1	No visual defect
	MID	MR083057	R1	CY7C1041DV33-10ZSXI	150	3.77	48	48	12148	27		Tungsten Short
	MID	MR091067	R1	CY7C1041DV33-10ZSXI	150	3.77	48	48	4916	1	MR091067-1E1	No visual defect
	MID	MR091067	R2	CY7C1041DV33-10ZSXI	150	3.77	48	48	3142	0		
Summary for Technology: C9			**24**	**records**								
Sum									**66949**	**31**		
L28												
	DCD	081704	R1G	CY2309ESXI-1H	150	3.8	48	48	504	0		
	DCD	081704	R1H	CY2309ESXI-1H	150	3.8	48	48	504	0		
	DCD	081704	R1H	CY2309ESXI-1H	150	3.8	48	48	159	0		
	DCD	081704	R1I	CY2309ESXC-1H	150	3.8	48	48	504	0		
	DCD	MR082039	R1	CY2292FZX	150	3.8	48	48	298	0		
Summary for Technology: L28			**5**	**records**								
Sum									**1969**	**0**		
B53												
	CCD	MR083072	R1	CYRF6936-40LFXC	125	3.8	96	96	100	0		
	CCD	MR083072	R2	CYRF6936-40LFXC	125	3.8	96	96	197	0		
Summary for Technology: B53			**2**	**records**								
Sum									**297**	**0**		
L8												

Summary for Technology: L8			**#REF!**	**records**								
Sum									**#REF!**	**#REF!**		
R8												
	CCD	073802	R1	CY62167DV30	125	2.4	96	96	4272	0		
	CCD	073802	R2	CY62167DV30	125	2.4	96	96	4515	0		
	CCD	073802	R3	CY62167DV30	125	2.4	96	96	4637	1	073802-3E1	Poor Salicidation
	MID	082005	R1	CY62177DV30	125	2.4	96	96	1756	0		
	MID	082005	R2	CY62167DV30	125	2.4	96	96	1673	1	082005-2E1	Metal2 Damage
	MID	083101	R1	CY62157D930A	150	2.4	96	96	3850	0		
	MID	MR082052	R1	CY62167DV30LL-55BVI	125	2.4	96	96	299	0		
	MID	MR083055	R1	CY62177DV30LL-55BAXI	125	2.4	96	96	299	0		
	MID	MR091063	R1	CY62157DV30LL-55ZSXI	125	2.4	96	96	299	0		
Summary for Technology: R8			**9**	**records**								
Sum									**21600**	**2**		
C8												
	CCD	MR081075	R1	CY7C65630-56LFXA	125	3.8	48	48	890	0		
	CCD	MR081075	R1	CY7C65630-56LFXA	125	3.8	72	24	3	0		
	CCD	MR081075	R1A	CY7C65630-56LFXA	125	3.8	48	48	1754	0		
	CCD	MR081075	R1A	CY7C65630-56LFXA	125	3.8	72	24	28	0		
	CCD	MR081075	R2	CY7C65630-56LFXA	125	3.3	48	48	1097	0		
	CCD	MR081075	R2	CY7C65630-56LFXA	125	3.3	72	24	55	0		
	CCD	MR081075	R2A	CY7C65630-56LFXA	125	3.3	48	48	1563	0		
	CCD	MR081075	R2A	CY7C65630-56LFXA	125	3.3	72	24	78	0		
	CCD	MR081075	R3	CY7C65630-56LFXA	125	3.3	48	48	2681	0		
	CCD	MR081075	R3	CY7C65630-56LFXA	125	3.3	72	24	29	0		
	CCD	MR081075	R4	CY7C65630-56LFXA	125	3.3	48	48	2728	0		
	CCD	MR081075	R4	CY7C65630-56LFXA	125	3.3	72	24	61	0		
	DCD	MR091049	R1	CYWB0124AB-BVXI	125	3.8	96	96	300	0		
Summary for Technology: C8			**13**	**records**								
Sum									**11267**	**0**		
R5												
	MID	080803	R1	CY2305CSXI-1H	150	3.8	24	24	3597	0		
	MID	080803	R4	CY2305CSXI-1H	150	3.8	24	24	1939	0		
	MID	080803	R4A	CY2305CSXI-1H	150	3.8	24	24	1936	0		
	MID	080803	R5	CY2305CSXA-1H	150	3.8	24	24	4000	0		
Summary for Technology: R5			**4**	**records**								
Sum									**11472**	**0**		
R95												
	MID	MR082051	R1	CY62128EV30LL-45ZXI	125	1.85	144	144	674	0		
	MID	MR082051	R2	CY62148ELL-45ZSXI	125	1.85	48	48	4909	0		
	MID	MR083068	R1	CY62157EV30LL-45ZSXI	125	1.85	96	96	8369	0		
	MID	MR083069	R1	CY62157EV30LL-45ZSXI	125	1.85	96	96	8100	0		
Summary for Technology: R95			**4**	**records**								
Sum									**22052**	**0**		
R9												
	MID	090201	R3	7C1450BC-RAZCB	150	2.7	48	48	107	0		
	MID	MR082051	R2	CY62148ELL-45ZSXI	125	1.85	48	48	4909	0		
	MID	MR082068	R1	CY7C1347G-133AXC	150	2.25	48	48	300	0		
	MID	090704	R4	7C15121YC-**GBBCB	150	2.7	96	96	1569	0		

	MID	084502	R2	CY7C1370FC	150	2.25	48	24	1432	0	
	MID	084502	R2	CY7C1370FC	150	2.25	24	24	1433	0	
	MID	084502	R1A	CY7C1370FC	150	2.25	48	24	1585	0	
	MID	084502	R1A	CY7C1370FC	150	2.25	24	24	1594	0	
	MID	084502	R1	CY7C1370D	150	2.25	48	24	7213	0	
	MID	084502	R1	CY7C1370D	150	2.25	24	24	7233	1	084502-1E1 Tungsten Defect
Summary for Technology: R9			**10**	**records**							
Sum									**27375**	**1**	
R7											
	MID	MR083070	R1	CY7C1021CV33-10ZXC	150	2.3	24	24	299	0	
	MID	MR084083	R1	7A132101GC-RZWEB	150	2.3	24	24	10914	0	
Summary for Technology: R7			**2**	**records**							
Sum									**11213**	**0**	
S4											
	CCD	072502	R1A	CY8C294665-24PVXIES	125	5.5	96	96	334	0	
	CCD	072502	R1B	CY8C294665-24PVXIES	125	5.5	96	96	334	0	
	CCD	072502	R1C	CY8C294665AK-24PVXIE	125	5.5	96	96	334	0	
	CCD	072502	R2A	CY8C294665-24PVXIES	125	5.5	96	96	334	0	
	CCD	072502	R2B	CY8C294665-24PVXIES	125	5.5	96	96	334	0	
	CCD	072502	R2C	CY8C294665-24PVXIES	125	5.5	96	96	334	0	
	CCD	074006	R1	CY8C27443-12PVXE	150	5.5	48	48	198	0	
	CCD	081405	R1	CYONS1004L-LBXC	40	4.2	168	168	500	0	
	CCD	081405	R3	CYONS1004L-LBXC	40	4.2	168	168	500	0	
	CCD	081405	R4	CYONS1004L-LBXC	40	4.2	168	168	1000	0	
	CCD	MR082042	R1	CY8C29466-24PVXI	125	5.5	96	96	298	0	
	CCD	MR082043	R1A	CYONS10820-LBXC	40	4.2	192	192	308	0	
	CCD	MR082059	R1	CP6458BM	125	5.5	96	96	300	0	
	CCD	MR082067	R1	CY8C27443-24PVXI	125	5.5	96	96	300	0	
	CCD	MR083046	R1	CY8C24223A-24PVXI	125	5.5	96	96	302	0	
	CCD	MR083056	R1	CY8C244235A-24PVXIES	125	5.5	96	96	2179	0	
	CCD	MR083056	R1B	CY8C244235A-24PVXIES	125	5.5	96	96	681	0	
	CCD	MR083067	R1	CY8C21534-12PVXE	125	5.5	6	6	545	0	
	CCD	MR083067	R1A	CY8C21534-12PVXE	125	5.5	6	6	4229	0	
	CCD	MR083067	R2	CY8C21534-12PVXET	125	5.5	6	6	825	0	
	CCD	MR083067	R2A	CY8C21534-12PVXET	150	5	6	6	3998	0	
	MID	MR083075	R1	CY8C26443-24PVXI	125	5.5	96	96	299	0	
	CCD	MR084048	R1	CY8C24423A-24PVXI	125	5.5	96	96	296	0	
	CCD	MR084051	R1	CY8C26443-24PVXIT	125	5.5	96	96	300	0	
	CCD	MR084076	R1	CS6835AT	125	5.5	96	96	294	0	
	CCD	MR091047	R1	CY8C21334-24PVXI	125	5.5	96	96	300	0	
	CCD	MR091048	R1	CY8C24223A-24PVXI	125	5.5	96	96	299	0	
	DCD	MR091064	R1	CY25100KSXCF	150	3.8	48	48	1497	0	
Summary for Technology: S4			**28**	**records**							
Sum									**21452**	**0**	
S8											
	MID	071304	R10	7C1404B8BC-**RZWCB	150	3.3	48	48	813	0	
	MID	071304	R6A	CY14B104L	150	3	48	48	50	0	
	MID	071304	R8A	CY14B104L	150	2.7	48	48	932	0	

MID	071304	R9	7C1404B6BC-**RZWCB	150	2.7	48	48	1316	0
MID	072403	R1	CYONS2001-LBXC	125	5.5	72	72	45	0
MID	072403	R1A	CYONS2001-LBXC	40	3.8	168	168	330	0
MID	072403	R2	CYONS2100-LBXC	40	3.8	168	168	330	0
MID	072403	R2A	CYONS2100-LBXC	125	3.8	72	72	665	0
MID	072403	R3	CYONS2110-LBXC	40	3.8	168	168	333	0
MID	072403	R3A	CYONS2110-LBXC	125	3.8	72	72	333	0
MID	072403	R3A1	CYONS2110-LBXC	125	3.8	72	72	367	0
CCD	083401	R1A	CY8C20466A	125	5	96	96	45	0
CCD	083401	R2	CY8C20466-24LQXI	150	5	48	48	45	0
CCD	083401	R3	CY8C20566-24PVXI	150	2.1	48	48	375	0
CCD	083401	R3	CY8C20566-24PVXI	150	2.1	48	48	375	0
CCD	083401	R3	CY8C20566-24PVXI	150	2.1	48	48	252	0
CCD	083401	R4A	CY8C20566-24PVXI	150	5.75	48	48	45	0
CCD	MR091065	R4	CY8C20466-24LQXI	150	2.1	48	48	1000	0
CCD	MR091065	R5	CY8C20466-24LQXI	150	2.1	48	48	608	0
CCD	MR091065	R5	CY8C20466-24LQXI	150	2.1	48	48	392	0
Summary for Technology: S8		**20**	**records**						
Sum								**8651**	**0**

Summary Detail -- LFR Performance Over Time

TECHNOLOGY	DIVISION	EVALNUM	TV	DEVICE	TEMP	VOLT	READOUT	DURATION	SS	REJECT	FA	COMMENTS
L8												
Summary for Technology: L8			**#REF!**	**records**								
Sum									**#REF!**	**#REF!**		
B53												
	CCD	MR083072	R1	CYRF6936-40LFXC	125	3.8	168	72	100	0		
	CCD	MR083072	R2	CYRF6936-40LFXC	125	3.8	168	72	196	0		
	CCD	MR084068	R1	CYRF6936-40LFXC	125	3.8	168	72	297	0		
	CCD	MR084068	R1	CYRF6936-40LFXC	125	3.8	1000	832	296	0		
	CCD	MR083072	R2	CYRF6936-40LFXC	125	3.8	1072	904	4	0		
	CCD	MR083072	R2	CYRF6936-40LFXC	125	3.8	1048	880	192	0		
	CCD	MR083072	R1	CYRF6936-40LFXC	125	3.8	1072	904	3	0		
	CCD	MR083072	R1	CYRF6936-40LFXC	125	3.8	1048	880	96	0		
Summary for Technology: B53			**8**	**records**								
Sum									**1184**	**0**		
L28												
	MID	080608	R1	CY2077EFSXC	150	5.75	80	42	118	0		
	MID	080608	R1	CY2077EFSXC	150	5.75	500	420	118	0		
	DCD	MR082039	R1	CY2292FZX	150	3.8	80	42	298	0		
	DCD	MR082039	R1	CY2292FZX	150	3.8	500	420	298	0		
Summary for Technology: L28			**4**	**records**								
Sum									**832**	**0**		
C8												
	DCD	072404	R3C	CYWB0124AB-BVXI	125	3.8	1000	832	59	0		
	DCD	080604	R1	CYWB0124AB-BVXI	125	2.5	1000	832	179	0		
	CCD	MR074065	R1	CY7C68013A-56PVXC	125	3.8	1000	832	300	0		
Summary for Technology: C8			**3**	**records**								
Sum									**538**	**0**		
C9												
	MID	080602	R6D	CY7C1061DV33	125	3.77	168	168	200	0		
	MID	080602	R6D	CY7C1061DV33	125	3.77	1000	832	200	0		
	MID	MR082045	R1	CY7C1021DV30-10ZSXI	150	3.77	80	80	997	0		
	MID	MR082045	R1	CY7C1021DV30-10ZSXI	150	3.77	500	420	995	0		
	MID	MR082045	R2	CY7C1021DV30-10ZSXI	150	3.77	80	80	997	0		
	MID	MR082045	R2	CY7C1021DV30-10ZSXI	150	3.77	500	420	997	0		
	MID	MR083057	R1	CY7C1041DV33-10ZSXI	150	3.77	80	80	498	0		
	MID	MR083057	R1	CY7C1041DV33-10ZSXI	150	3.77	500	420	495	0		
Summary for Technology: C9			**8**	**records**								
Sum									**5379**	**0**		
R5												
	MID	080803	R1	CY2305CSXI-1H	150	3.8	408	408	90	0		
	MID	080803	R2	CY2305CSXI-1H	150	3.8	408	408	90	0		
	MID	080803	R3	CY2305CSXI-1H	150	3.8	408	408	90	0		
Summary for Technology: R5			**3**	**records**								

Sum									**270**	**0**
R8										
	MID	MR081061	R1	CY62167DV30LL-55BVXI	125	2.4	1000	832	299	0
	MID	MR082052	R1	CY62167DV30LL-55BVI	125	2.4	168	72	299	0
	MID	MR082052	R1	CY62167DV30LL-55BVI	125	2.4	1000	832	294	0
	MID	MR083055	R1	CY62177DV30LL-55BAXI	125	2.4	168	72	299	0
	MID	MR083055	R1	CY62177DV30LL-55BAXI	125	2.4	1000	832	299	0
	MID	MR084075	R1	CY62177DV30LL-55BAXIT	125	3.8	168	72	300	0
	MID	MR084075	R1	CY62177DV30LL-55BAXIT	125	3.8	1000	832	300	0
	MID	MR083077	R1	7G62162DK-GBZIB	125	2.4	1024	856	1	0
	MID	MR083077	R1	7G62162DK-GBZIB	125	2.4	1000	832	296	0
	MID	082401	R1	CY62167DV30	125	2.4	1024	856	178	0
	MID	082401	R2	CY62167DV	125	2.4	168	72	177	0
	MID	082401	R1	CY62167DV30	125	2.4	168	72	178	0
	MID	082401	R1	CY62167DV30	125	2.4	1024	856	178	0
Summary for Technology: R8			**13**	**records**						
Sum									**3098**	**0**
TSMC025										
Summary for Technology: TSMC025			**#REF!**	**records**						
Sum									**#REF!**	**#REF!**
R9										
	MID	MR073028	R1	CY7C1313BV18-250BZC	125	2.25	1024	856	30	0
	MID	MR082051	R1	CY62128EV30LL-45ZXI	125	1.85	168	168	674	0
	MID	MR082051	R1	CY62128EV30LL-45ZXI	125	1.85	1000	832	674	0
	MID	MR082068	R1	CY7C1347G-133AXC	150	2.25	80	80	299	0
	MID	MR082068	R1	CY7C1347G-133AXC	150	2.25	500	420	299	0
	MID	MR083068	R1	CY62157EV30LL-45ZSXI	125	1.85	168	168	499	0
	MID	MR083068	R1	CY62157EV30LL-45ZSXI	125	1.85	1000	832	499	0
Summary for Technology: R9			**7**	**records**						
Sum									**2974**	**0**
S4										
	DCD	081401	R1	CY25100KSXCF	150	3.8	80	32	116	0
	DCD	081401	R1	CY25100KSXCF	150	3.8	500	420	115	0
	CCD	081405	R1	CYONS1004L-LBXC	40	4.2	650	150	216	0
	CCD	081405	R1	CYONS1004L-LBXC	40	4.2	500	420	223	0
	CCD	081405	R3	CYONS1004L-LBXC	40	4.2	650	150	218	0
	CCD	081405	R3	CYONS1004L-LBXC	40	4.2	500	420	223	0
	CCD	081405	R4	CYONS1004L-LBXC	40	4.2	650	150	217	0
	CCD	081405	R4	CYONS1004L-LBXC	40	4.2	500	500	221	0
	CBD	082201	R1	CY8C22545-24AXI	125	5.5	168	72	120	0
	CBD	082201	R1	CY8C22545-24AXI	125	5.5	1000	832	120	0
	DCD	082405	R1A	CY22393KFXI	150	3.8	80	32	116	0
	CCD	MR074066	R1	CY8C26443-24PVXI	125	5.5	1000	832	297	0
	CCD	MR074067	R1	CY8C21534-24PVXIT	125	5.5	168	168	149	0
	CCD	MR074067	R1	CY8C21534-24PVXIT	125	5.5	1000	832	148	0
	CCD	MR081062	R1	CY8C21534-24PVXI	125	5.5	1048	880	366	0
	CCD	MR082042	R1	CY8C29466-24PVXI	125	5.5	168	72	296	0
	CCD	MR082042	R1	CY8C29466-24PVXI	125	5.5	1000	832	296	0
	CCD	MR082043	R1A	CYONS10820-LBXC	40	4.2	650	570	290	0

CCD	MR082059	R1	CP6458BM	125	5.5	168	168	300	0
CCD	MR082059	R1	CP6458BM	125	5.5	1024	856	30	0
CCD	MR082059	R1	CP6458BM	125	5.5	1000	832	269	0
CCD	MR082067	R1	CY8C27443-24PVXI	125	5.5	168	72	300	0
CCD	MR082067	R1	CY8C27443-24PVXI	125	5.5	1024	856	300	0
CCD	MR083046	R1	CY8C24223A-24PVXI	125	5.5	168	72	298	0
CCD	MR083046	R1	CY8C24223A-24PVXI	125	5.5	1000	832	298	0
CCD	MR083056	R1	CY8C244235A-24PVXIES	125	5.5	168	72	1000	0
CCD	MR083056	R1	CY8C244235A-24PVXIES	125	5.5	1024	856	1	0
CCD	MR083056	R1	CY8C244235A-24PVXIES	125	5.5	1000	832	997	0
CCD	MR083067	R1	CY8C21534-12PVXE	125	5.5	1000	832	500	0
MID	MR083075	R1	CY8C26443-24PVXI	125	5.5	168	168	299	0
MID	MR083075	R1	CY8C26443-24PVXI	125	5.5	1000	832	299	0
MID	MR083076	R2	CY8C24423A-12PVXE	125	5.5	1000	552	500	0
CCD	MR084048	R1	CY8C24423A-24PVXI	125	5.5	192	96	296	0
CCD	MR084048	R1	CY8C24423A-24PVXI	125	5.5	1000	832	295	0
CCD	MR084051	R1	CY8C26443-24PVXIT	125	5.5	168	72	300	0
CCD	MR084051	R1	CY8C26443-24PVXIT	125	5.5	1000	832	300	0
CCD	MR084076	R1	CS6835AT	125	5.5	168	72	293	0
CCD	MR084076	R1	CS6835AT	125	5.5	1000	832	293	0
CCD	MR091048	R1	CY8C24223A-24PVXI	125	5.5	168	72	299	0
Summary for Technology: S4			**39**	**records**					
Sum								**11214**	**0**

S8

MID	071304	R10	7C1404B8BC-**RZWCB	150	3.3	80	32	119	0
MID	071304	R6A	CY14B104L	150	2.7	80	32	120	0
MID	071304	R6A	CY14B104L	150	2.7	500	420	120	0
MID	071304	R8A	CY14B104L	150	2.7	500	420	119	0
MID	071304	R9	7C1404B6BC-**RZWCB	150	2.7	500	420	120	0
MID	072403	R1A	CYONS2001-LBXC	125	3.8	180	12	225	0
MID	072403	R1A	CYONS2001-LBXC	125	3.8	300	120	224	0
MID	072403	R2A	CYONS2100-LBXC	125	3.8	180	12	448	0
MID	072403	R3A	CYONS2110-LBXC	125	3.8	180	12	225	0
MID	072403	R3A	CYONS2110-LBXC	125	3.8	300	120	225	0
CCD	083401	R1	CY8C20466A	125	2.1	168	72	180	0
CCD	083401	R2	CY8C20466-24LQXI	150	2.1	80	32	390	0
CCD	083401	R2	CY8C20466-24LQXI	150	2.1	500	420	390	0
CCD	083401	R4	CY8C20466-24LQXI	150	2.1	80	32	390	0
CCD	083401	R4	CY8C20466-24LQXI	150	2.1	500	420	390	0
CCD	083401	R5A	CY8C20466-24LQXI	150	2.1	80	32	390	0
CCD	083401	R5A	CY8C20466-24LQXI	150	2.1	500	420	390	0
CCD	084605	R2	CY8C20566-24PVXI	150	2.1	80	32	390	0
Summary for Technology: S8			**18**	**records**					
Sum								**4855**	**0**

R7

MID	MR083070	R1	CY7C1021CV33-10ZXC	150	2.3	512	432	298	0
MID	MR083070	R1	CY7C1021CV33-10ZXC	150	2.3	1012	844	298	0
MID	MR084083	R1	7A132101GC-**RZWEB	150	2.3	408	384	500	0
Summary for Technology: R7			**3**	**records**					
Sum								**1096**	**0**

R95

MID	MR082051	R1	CY62128EV30LL-45ZXI	125	1.85	168	24	674	0
MID	MR082051	R1	CY62128EV30LL-45ZXI	125	1.85	1000	832	674	0
MID	MR083068	R1	CY62157EV30LL-45ZSXI	125	1.85	168	72	499	0
MID	MR083068	R1	CY62157EV30LL-45ZSXI	125	1.85	1000	832	499	0
Summary for Technology: R95		**4**	**records**						
Sum								**2346**	**0**

Summary Detail -- DRET Performance Over Time

TECHNOLOGY	DIVISION	EVALNUM	TV	DEVICE	TEMP	VOLT	READOUT	DURATION	SS	REJECT	FA	COMMENTS
L28												
	MID	080608	R1	CY2077EFSXC	150	0	500	500	77	0		
	MID	080608	R1	CY2077EFSXC	150	0	1000	500	77	0		
Summary for Technology: L28			**2**	**records**								
Sum									**154**	**0**		
S4												
	DCD	071801	R2	CY22050FZXI	150	0	500	500	80	0	-	
	DCD	071801	R2	CY22050FZXI	150	0	1024	524	80	0		
	CCD	73401	R1A	CY8C21534	150	0	1024	524	30	0		
	CCD	073401	R1B	CY8C21534	150	0	1024	524	30	0		
	CCD	073401	R1C	CY8C21534	150	0	1024	524	30	0		
	CCD	073601	R1A	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R1A	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R1A	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R1B	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R1B	CY8C21534-24PVXI	150	0	2000	1000	25	0		
	CCD	073601	R1B	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R1C	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R1C	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R1C	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R2A	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R2A	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R2A	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R2B	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R2B	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R2B	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R2C	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R2C	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R2C	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R3A	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R3A	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R3A	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R3B	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R3B	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R3B	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	073601	R3C	CY8C21534-24PVXI	150	0	500	500	26	0		
	CCD	073601	R3C	CY8C21534-24PVXI	150	0	2000	1000	26	0		
	CCD	073601	R3C	CY8C21534-24PVXI	150	0	1024	1024	26	0		
	CCD	074908	R2	CY8C21534	150	0	1024	524	77	0		
	CCD	080201	R1A	CY8C24494-24PVXI	150	0	500	500	33	0		
	CCD	080201	R1A	CY8C24494-24PVXI	150	0	1000	500	33	0		
	CCD	080201	R1B	CY8C24494-24PVXI	150	0	500	500	33	0		
	CCD	080201	R1B	CY8C24494-24PVXI	150	0	1000	500	33	0		

CCD	080201	R1C	CY8C24494-24PVXI	150	0	500	500	33	0
CCD	080201	R1C	CY8C24494-24PVXI	150	0	1000	500	33	0
CCD	082001	R1	CY8C294665-24PVXI	150	0	500	500	80	0
CCD	082001	R1	CY8C294665-24PVXI	150	0	1000	500	80	0
CBD	082201	R1	CY8C22545-24AXI	150	0	500	500	85	0
CBD	082201	R1	CY8C22545-24AXI	150	0	1000	500	85	0
CCD	MR081032	R1	CY8C24533-24PVXI	150	0	500	500	78	0
CCD	MR081032	R1	CY8C24533-24PVXI	150	0	1000	500	78	0
CCD	MR082042	R1	CY8C29466-24PVXI	150	0	500	500	80	0
CCD	MR082042	R1	CY8C29466-24PVXI	175	0	408	120	80	0
CCD	MR082042	R1	CY8C29466-24PVXI	175	0	288	144	80	0
CCD	MR082042	R1	CY8C29466-24PVXI	175	0	144	144	80	0
CCD	MR082042	R1	CY8C29466-24PVXI	150	0	1000	500	80	0
CCD	MR082059	R1	CP6458BM	150	0	500	500	80	0
CCD	MR082059	R1	CP6458BM	175	0	408	408	79	0
CCD	MR082059	R1	CP6458BM	175	0	288	144	79	0
CCD	MR082059	R1	CP6458BM	175	0	144	144	79	0
CCD	MR082059	R1	CP6458BM	150	0	1000	500	80	0
CCD	MR082067	R1	CY8C27443-24PVXI	150	0	500	500	80	0
CCD	MR082067	R1	CY8C27443-24PVXI	175	0	288	144	78	0
CCD	MR082067	R1	CY8C27443-24PVXI	175	0	144	144	79	0
CCD	MR082067	R1	CY8C27443-24PVXI	150	0	1000	500	80	0
CCD	MR083046	R1	CY8C24223A-24PVXI	150	0	500	500	80	0
CCD	MR083046	R1	CY8C24223A-24PVXI	175	0	408	408	80	0
CCD	MR083046	R1	CY8C24223A-24PVXI	175	0	288	144	80	0
CCD	MR083046	R1	CY8C24223A-24PVXI	175	0	144	144	80	0
CCD	MR083046	R1	CY8C24223A-24PVXI	150	0	1000	500	80	0
CCD	MR083056	R1A	CY7C64215-28PVXC	150	0	500	500	80	0
CCD	MR083056	R1A	CY7C64215-28PVXC	175	0	408	120	80	0
CCD	MR083056	R1A	CY7C64215-28PVXC	175	0	288	144	80	0
CCD	MR083056	R1A	CY7C64215-28PVXC	175	0	144	144	80	0
CCD	MR083056	R1A	CY7C64215-28PVXC	150	0	1000	500	80	0
MID	MR083075	R1	CY8C26443-24PVXI	150	0	500	500	80	0
MID	MR083075	R1	CY8C26443-24PVXI	175	0	408	120	80	0
MID	MR083075	R1	CY8C26443-24PVXI	175	0	288	288	80	0
MID	MR083075	R1	CY8C26443-24PVXI	150	0	1000	500	80	0
CCD	MR084048	R1	CY8C24423A-24PVXI	150	0	500	500	76	0
CCD	MR084048	R1	CY8C24423A-24PVXI	175	0	408	200	77	0
CCD	MR084048	R1	CY8C24423A-24PVXI	175	0	288	288	77	0
CCD	MR084048	R1	CY8C24423A-24PVXI	150	0	1000	500	76	0
CCD	MR084051	R1	CY8C26443-24PVXIT	150	0	500	500	80	0
CCD	MR084051	R1	CY8C26443-24PVXIT	150	0	1000	500	80	0
CCD	MR084076	R1	CS6835AT	150	0	737	329	80	0
CCD	MR084076	R1	CS6835AT	150	0	500	500	80	0
CCD	MR084076	R1	CS6835AT	150	0	1000	500	80	0
CCD	MR091047	R1	CY8C21334-24PVXI	150	0	500	500	62	0
CCD	MR091047	R1	CY8C21334-24PVXI	175	0	408	200	80	0
CCD	MR091047	R1	CY8C21334-24PVXI	175	0	288	288	80	0
CCD	MR091048	R1	CY8C24223A-24PVXI	150	0	500	500	80	0
CCD	MR091048	R1	CY8C24223A-24PVXI	175	0	408	200	80	0

CCD	MR091048	R1	CY8C24223A-24PVXI	175	0	288	288	80	0
CCD	MR091048	R1	CY8C24223A-24PVXI	150	0	1000	500	80	0
Summary for Technology: S4		**89**	**records**						
Sum								**5194**	**0**
S8									
MID	071304	R11A	7C1404B8BC-**RZWCB	150	0	500	500	80	0
MID	071304	R11A	7C1404B8BC-**RZWCB	150	0	1000	500	80	0
MID	071304	R12A	7C1404B8BC-**RZWC	150	0	500	500	80	0
MID	071304	R12A	7C1404B8BC-**RZWC	150	0	1000	500	80	0
MID	071304	R8	CY14B104L	150	0	500	500	77	0
MID	071304	R8	CY14B104L	150	0	1000	500	77	0
MID	072403	R1	CYONS2001-LBXC	150	0	168	168	77	0
MID	072403	R1	CYONS2001-LBXC	150	0	500	332	77	0
MID	072403	R1	CYONS2001-LBXC	150	0	1000	500	71	0
MID	072403	R2	CYONS2100-LBXC	150	0	500	500	76	0
MID	072403	R2	CYONS2100-LBXC	150	0	1000	500	64	0
MID	072403	R3	CYONS2110-LBXC	150	0	168	168	75	0
MID	072403	R3	CYONS2110-LBXC	150	0	500	332	74	0
MID	072403	R3	CYONS2110-LBXC	150	0	1000	500	61	0
CCD	083401	R1	CY8C20466A	150	0	500	500	76	0
CCD	083401	R1	CY8C20466A	150	0	1000	500	44	0
CCD	083401	R2	CY8C20466-24LQXI	150	0	500	500	77	0
CCD	083401	R2	CY8C20466-24LQXI	150	0	1000	500	77	0
CCD	083401	R4	CY8C20466-24LQXI	150	0	168	168	78	0
CCD	083401	R4	CY8C20466-24LQXI	150	0	400	232	78	0
CCD	083401	R4	CY8C20466-24LQXI	150	0	500	100	78	0
CCD	083401	R4	CY8C20466-24LQXI	150	0	1000	500	78	0
CCD	083401	R4A	CY8C20566-24PVXI	150	0	168	168	77	0
CCD	083401	R4A	CY8C20566-24PVXI	150	0	400	232	77	0
CCD	083401	R4A	CY8C20566-24PVXI	150	0	500	100	77	0
CCD	083401	R4A	CY8C20566-24PVXI	150	0	609	109	75	0
CCD	083401	R4A	CY8C20566-24PVXI	150	0	1000	500	75	0
CCD	083401	R4A	CY8C20566-24PVXI	150	0	1500	500	69	0
CCD	083401	R5	CY8C20566-24PVXI	150	0	500	500	78	0
CCD	083401	R5	CY8C20566-24PVXI	150	0	1000	500	78	0
CCD	084605	R2	CY8C20566-24PVXI	150	0	500	500	80	0
CCD	084605	R2	CY8C20566-24PVXI	150	0	1000	500	80	0
CCD	084605	R2	CY8C20566-24PVXI	150	0	1500	500	80	0
CCD	084605	R3	CY8C20566-24PVXI	150	2.1	500	500	77	0
CCD	084605	R3	CY8C20566-24PVXI	150	2.1	1000	500	77	0
CCD	084605	R3	CY8C20566-24PVXI	150	2.1	1500	500	77	0
Summary for Technology: S8		**36**	**records**						
Sum								**2712**	**0**

Summary Detail -- PCT Performance Over Time

BUILDKIT	ASSY SITE	EVALNUM	TV	DEVICE	TEMP	VOLT	READOUT	SS	REJECT	FA	COMMENTS
FBGA (0.75-0.8, 0.3mm)											
BA48CRALE	T-OSE	MR082018	R1	CY62137CVSL-70BAI	121	0	168	80	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm)			**1**	**records**							
Sum								**80**	**0**		
FBGA (0.75-0.8, 0.3mm, Pb-free)											
BK48BWBLL	G-ASE	MR082010	R1	CY7C1021CV33-10BAXI	121	0	168	75	0		
BK48DJALL	G	MR083050	R1	CY62177DV30LL-55BAXI	121	0	168	79	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm, Pb-free)			**2**	**records**							
Sum								**154**	**0**		
FBGA (1.0-1.27)											
BB100CAALE	G-ASE	MR081067	R1	CYP15G0101DXB-BBI	121	0	168	80	0		
BB100EAALE	G-TAIWAN	MR082041	R1	CY7B994V-2BBI	121	0	168	80	0		
BB144CALE	G-TAIWAN	NR072030	R2	CY7C0830AV-167BBC	121	0	168	48	0		
BB144CALE	G-TAIWAN	NR072030	R3	CY7C0837AV-167BBC	121	0	168	47	0		
Summary for Package Family : FBGA (1.0-1.27)			**4**	**records**							
Sum								**255**	**0**		
FLIPCHIP CSP (Pb-Free)											
FN81AGAN	AU	NR081001	R3	CYWB0124ABX-FNXIT	121	0	96	89	0		
FN81AGAN	AU	NR081001	R4	CYWB0124ABX-FNXIT	121	0	96	87	0		
FN81AGAN	AU	NR081001	R5	CYWB0124ABX-FNXIT	121	0	96	81	0		
FN81AGAN	AU	NR081001	R6	CYWB0124ABX-FDXIT	121	0	96	89	0		
FN81AGAN	AU	NR081001	R7	CYWB0124ABX-FNXIT	121	0	96	90	0		
Summary for Package Family: FLIPCHIP CSP (Pb-Free)			**5**	**records**							
Sum								**436**	**0**		
PBGA (with Heat Spreader)											
BG119SALE	G-ASE	MR082021	R1	CY7C1354C-166BGC	121	0	168	80	18	MR082021-1P1	Cu Bridging
BG119SALE	G-TAIWAN	MR083001	R1	CY7C1354C-166BGC	121	0	168	80	0		
BG119SALE	G	MR084037	R1	CY7C1354C-166BGC	121	0	168	80	0		
Summary for Package Family: PBGA (with Heat Spreader)			**3**	**records**							
Sum								**240**	**18**		
PDIP											
Summary for Package Family: PDIP			**#REF!**	**records**							
Sum								**#REF!**	**#REF!**		
PDIP (Pb-Free)											
PZ183DBGN	RA	MR083022	R1A	CY7C63723C-PXC	121	0	168	80	0		
PZ183DBGN	RA	MR091008	R1	CY7C63723C-PXC	121	0	168	80	0		
Summary for Package Family: PDIP (Pb-Free)			**2**	**records**							
Sum								**160**	**0**		
PLCC											
J32RBGAAGB	X-MMT	MR082017	R1	CY7B9911V-5JCT	121	0	168	80	0		
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	121	0	168	80	0		
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	121	0	336	80	0		
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	121	0	504	80	0		

J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	121	0	672	80	0
Summary for Package Family: PLCC			**5**	**records**					
Sum								**400**	**0**
PLCC (Pb-Free)									
JZ32RBGAN	M-PHILIPPINES	MR081063	R1	CY7B991-5JXC	121	0	168	80	0
Summary for Package Family: PLCC (Pb-Free)			**1**	**records**					
Sum								**80**	**0**
PQFP (Pb-Free)									
NZ52DXGAN	G-ASE	MR082061	R1	CY7C131-25NXC	121	0	168	80	0
Summary for Package Family: PQFP (Pb-Free)			**1**	**records**					
Sum								**80**	**0**
QFN (0.4mm, Saw Type, Pb-free)									
LN32AAAAAL	CA-Malaysia	82008	R1	CY8C21434-24LCXI	121	0	168	77	0
LN32AAAAAL	CA	MR091052	R1	CP7052BTT	121	0	168	80	0
Summary for Package Family: QFN (COL, 0.6mm, Saw Type, Pb-free)			**2**	**records**					
Sum								**157**	**0**
QFN (0.6mm, Punch Type, Pb-Free)									
LQ32DAGLL	CA	083401	R4	CY8C20466-24LQXI	121	0	168	77	0
LK32AABAGL	L-KOREA	MR082022	R1	CY8C20434-12LKXI	121	0	168	80	0
LK32AABAGL	L-KOREA	MR083006	R1	CY8C20424-12LKXI	121	0	168	81	0
Summary for Package Family: QFN (0.6mm, Punch Type, Pb-Free)			**3**	**records**					
Sum								**238**	**0**
QFN (0.6mm, Saw Type, Pb-Free)									
LQ32DAGLL	CA-MALAYSIA	082602	R1	CY8C23533-24LQXI	121	0	168	80	0
LQ32ACAAGL	MB	083909	R1	CY8C204345-12LQXI	121	0	168	80	0
LQ32ACAAGL	MB	083909	R2	CY8C204345-12LQXI	121	0	168	80	0
LQ24AAAAAL	RA	084602	R1	CY8C20324-12LQXI	121	0	168	77	0
LQ24AAAAAL	RA	084602	R4	CY8C20324-12LQXI	121	0	168	80	0
LQ24ADAAGL	CA	084701	R1	CY8CTST200-24LQXI	121	0	168	77	0
LQ24ADAAGL	CA	084701	R1	CY8CTST200-24LQXI	121	0	288	76	0
LQ24ADAAGL	CA	084701	R2	CY8C20366-24LQXI	121	0	168	76	0
LQ24ADAAGL	CA	084701	R3	CY8C20346-24LQXI	121	0	168	75	0
LQ24ABAAL	AT-INDNS	MR082030	R1	CY8C20334-12LQXI	121	0	168	80	0
LQ24ABAAL	AT-THAILAND	MR083053	R1	CY8C20324-12LQXI	121	0	168	80	0
Summary for Package Family: QFN (0.6mm, Saw Type, Pb-Free)			**11**	**records**					
Sum								**861**	**0**
QFN (COL, 0.6mm, Saw Type, Pb-free)									
LG16AAAAL	M-PHILS	MR082028	R1	CY8C20234-12LKXI	121	0	168	80	0
LG16AAAAL	M-PHILS	MR083048	R1	CY8C20122-LDX2I	121	0	168	79	0
LG16AAAAL	M	MR084013	R1	CY8C20234-12LKXI	121	0	168	80	0
Summary for Package Family: QFN (COL, 0.6mm, Saw Type, Pb-free)			**3**	**records**					
Sum								**239**	**0**
QFN (Punch Type, Pb-Free)									
LY32BGAGL	RA	083604	R1	CY8C21434-24LFXI	121	0	168	80	0
LY32BGAGL	RA-CML	083905	R1	CY8C21434-24LFXI	121	0	168	80	0
LY56AGAGL	L-KOREA	MR082031	R1	CY7C65630-56LFXC	121	0	168	80	0
LY32AAAGR	L-KOREA	MR082048	R1	CG6672AMT	121	0	168	80	0
LY68AGABGL	L	MR084009	R1	CS6656AAT	121	0	168	78	0

LY68AGAAGL	L	MR091024	R1	CY8CLED04-68LFXI	121	0	168	80	0
Summary for Package Family: QFN (Punch Type, Pb-Free)			**6**	**records**					
Sum								**478**	**0**
QFN (Saw Type, Pb-free)									
LT32BGAGL	RA-CML	082902	R1	CY8C21434-24LTXI	121	0	168	77	0
LT40ACAAGL	AE	084006	R1	CYRF6936-40LTXC	121	0	168	74	0
LT40ACAAGL	AE	084006	R3	CYRF6936-40LTXC	121	0	168	79	0
LT40ACAAGL	AE	084006	R4	CYRF6936-40LTXC	121	0	168	80	0
LT32BAAAGL	CA-THAILAND	MR083038	R1	CG7032AA	121	0	168	80	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R1	CY8C21434-24LTXI	121	0	168	76	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R2	CY8C21434-24LTXI	121	0	168	77	0
LT32BAAGL	CA-MALAYSIA	NR082002	R3	CY8C21434-24LTXI	121	0	168	77	0
Summary for Package Family: QFN (Saw Type, Pb-free)			**8**	**records**					
Sum								**620**	**0**
QSOP (Pb-Free)									
SQ2414AGN	R-CML	MR082036	R1	CY7C63823-QXC	121	0	168	80	0
SQ2414ABGN	R-CML	MR083023	R1	CY7C63743-QXC	121	0	168	79	0
SQ2414ABGN	R	MR091002	R1	CY7C63743C-QXC	121	0	168	80	0
Summary for Package Family: QSOP (Pb-Free)			**3**	**records**					
Sum								**239**	**0**
RTSOP (Pb-free)									
ZY28R2ALN	R-CML	MR083030	R1	CY62256VNLL-70ZRXIT	121	0	168	81	0
ZY28R2BLN	R	MR091010	R1	CY62256NLL-70ZRXIT	121	0	168	80	0
Summary for Package Family: RTSOP (Pb-free)			**2**	**records**					
Sum								**161**	**0**
SNC (Pb-Free)									
SY2831BBLN	R-CML	MR082037	R1	CY62256NLL-70SNXC	121	0	168	80	0
SY2831BBLN	R-CML	MR083016	R1	CY62256NLL-70SNXCT	121	0	168	79	0
SY2831BBLN	R	MR084004	R1	CG7107AM	121	0	168	52	0
SY2831BBLN	R	MR091007	R1	CY62256NLL-70SNXCT	121	0	168	80	0
Summary for Package Family: SNC (Pb-Free)			**4**	**records**					
Sum								**291**	**0**
SOIC									
S1615EAGB	M-PHILS	MR082014	R1	CY2309SC-1H	121	0	168	80	0
S1615EAGB	M	MR083010	R1A	CY2292SL-1V1	121	0	168	80	0
S1615KBAGN	RA	MR084023	R1	CY2292F	121	0	168	80	0
S0815PBAGN	RA	MR091017	R1	CY2305SI-1HT	121	0	168	80	0
Summary for Package Family: SOIC			**4**	**records**					
Sum								**320**	**0**
SOIC (J-Lead)									
V243GAAAGN	X	090302	R1	CY7C197BN-15VC	121	0	168	77	0
V243GAAAGN	X	090302	R2	CY7C197BN-15VC	121	0	168	71	0
V243GAAGN	X	090302	R4	CY7C197BN-15VC	121	0	168	80	0
Summary for Package Family: SOIC (J-Lead)			**3**	**records**					
Sum								**228**	**0**
SOIC (J-Lead, Pb-Free)									
VZ3646BGLL	R-CML	MR082009	R1	CY7C1049CV33-10VXC	121	0	168	80	0
VZ28313BLN	R-CML	MR082056	R1	CY7C1399BN-12VXC	121	0	168	80	0
VZ28313BLN	R-CML	MR083003	R1	CY7C1399BN-12VXC	121	0	168	80	0
VZ444AABLL	R-CML	MR083035	R1	CY7C1021DV33-10VXI	121	0	168	79	0

VZ28313BLN	R	MR084019	R1	CY7C1399BN-12VXIT	121	0	168	80	0
Summary for Package Family: SOIC (J-Lead, Pb-Free)			**5**	**records**					
Sum								**399**	**0**
SOIC (Pb-Free)									
SZ815CGAN	M - Manila	080803	R1	CY2305CSXI-1H	121	0	168	80	0
SZ815CGAN	M - Manila	080803	R2	CY2305CSXI-1H	121	0	96	80	0
SZ815CGAN	M - Manila	080803	R2	CY2305CSXI-1H	121	0	168	80	0
SZ815CGAN	M - Manila	080803	R3	CY2305CSXI-1H	121	0	168	80	0
SZ1615DGN	M-Amkor	081907	R1	CY2309CSXI-1H	121	0	168	79	0
SZ324513BN	R	082007	R1	CY7C53120E4-40SXIES	121	0	96	77	0
SZ1615NAGN	CA-MALAYSIA	082203	R1	CY8C20180-SX2I	121	0	168	80	0
SZ324516LL	R-CML	MR082005	R1	CY62148ELL-55SXI	121	0	168	80	0
SZ28327BGL	R-CML	MR082006	R1	CY8C27443-24SXI	121	0	168	80	0
SZ183CGAN	RA-CML	MR082012	R1	CY7C63723C-SXC	121	0	168	79	0
SZ1615KGN	RA-CML	MR082015	R1	CY2309SXC-1HT	121	0	168	80	0
SZ1615FAL	T-OSE	MR082016	R1	CY8C201A0-SX2I	121	0	168	80	0
SZ1815CGAN	M-PHILS	MR082023	R1	CY8C24123A-24SXI	121	0	168	80	0 -
SZ1615EGN	M-PHILS	MR082025	R1	CY2309NZSXC-1H	121	0	168	80	0
SZ24312BGN	R-CML	MR082057	R1	CY7C63743C-SXC	121	0	168	80	0
SZ1615DGN	M-PHILS	MR083009	R1	CY2292SXL-1X6T	121	0	168	80	0
SZ324516BL	R-CML	MR083017	R1	CY62148ELL-55SXIT	121	0	168	80	0
SZ28327BGL	R-CML	MR083018	R1	CY8C27443-24SXIT	121	0	168	80	0
SZ183CBGAN	RA-CML	MR083019	R1	CY7C63723C-SXC	121	0	168	80	0
SZ24315BGN	RA-CML	MR083025	R1	CY7C63823-SXC	121	0	168	80	0
SZ815PABGN	RA-CML	MR083034	R1	CY2305SXC-1H	121	0	168	81	0
SZ1615FAL	T-TAIWAN	MR083041	R1	CY23EP09SXC-1H	121	0	168	79	0
SZ815DAGN	M	MR084018	R1	CY2304SXI-2	121	0	168	79	0
SZ183CBGAN	RA	MR084026	R1	CY7C63723C-SXC	121	0	168	80	0
SZ24315BGN	RA	MR084029	R1	CY7C63743C-SXC	121	0	168	80	0
SZ2035BAL	R	MR091001	R1	CY8C27243-24SXI	121	0	168	80	0
SZ32457BLN	R	MR091004	R1	CY62128ELL-45SXIT	121	0	168	80	0
SZ1615BKGN	RA	MR091016	R1	CY2308SXC-2T	121	0	168	80	0
SZ1615EGN	M	MR091020	R1	CY2309SXI-1HT	121	0	168	79	0
SZ815PAGN	RA-CML	NR081002	R14	CY22560SXI	121	0	168	80	0
Summary for Package Family: SOIC (Pb-Free)			**30**	**records**					
Sum								**2393**	**0**
SSOP (Pb-Free)									
SP28215GGL	RA-CML	081213	R1	CY8C24533-24PVXI	121	0	168	77	0
SP483AGAN	R	084703	R1	CY8C20566-24PVXI	121	0	168	77	0
SP483AGAN	R	084703	R1	CY8C20566-24PVXI	121	0	288	76	0
SP483ACGAN	R	084703	R2	CY8CTMG200-48PVXI	121	0	168	77	0
SP483ACGAN	R	084703	R2	CY8CTMG200-48PVXI	121	0	288	75	0
SP483ACGAN	R	084703	R3	CY8C20546-24PVXI	121	0	168	77	0
SP483ACGAN	R	084703	R3	CY8C20546-24PVXI	121	0	288	75	0
SP202AAAGN	RA-CML	MR082007	R1	CP6650AMT	121	0	168	80	0
SP563BBBGL	R-CML	MR082008	R1	CY7C68300C-56PVXC	121	0	168	79	0
SP28214GL	T-OSE	MR082013	R1	CY8C26443-24PVX	121	0	168	80	0
SP2822BGL	M-PHILS	MR082038	R1	CY8C24423A-12PVXE	121	0	168	80	0
SP483HAAGR	M-PHILS	MR082071	R1	CY14B101L-SP45XC	121	0	168	80	0
SP2822BGL	M-PHILS	MR083008	R1	CY8C21534-12PVXET	121	0	96	80	0

SP563BBBG	R-CML	MR083011	R1	CY7C68013-56PVXC	121	0	168	80	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	121	0	168	80	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	121	0	672	80	0
SP28214GL	T-TAIWAN	MR083036	R1	CY8C9520A-24PVXI	121	0	168	80	0
SP2824HAN	T	MR084021	R1	CY8C24533-24PVXI	121	0	168	79	0
SZ183CBGAN	RA	MR091003	R1	CY7C63723C-SXC	121	0	168	80	0
SP483EBBAL	R	MR091005	R1	CY8C27643-24PVXI	121	0	168	80	0
SP2822BGL	M	MR091006	R1	CY8C27443-12PVXE	121	0	96	80	0
SP2822BGL	M	MR091042	R1	CP6801ATT	121	0	96	80	0
A32LXGXGB	Q	MR091043	R1	CY29948ACT	121	0	168	80	0
Summary for Package Family: SSOP (Pb-Free)			**20**	**records**					
Sum								**1572**	**0**
TQFP									
A32LXGXGB	Q-KOREA	MR082024	R1	CY29948AC	121	0	168	80	0
A32LXGXGB	Q-KOREA	MR083012	R1	CY29948AI	121	0	168	80	0
Summary for Package Family: TQFP			**2**	**records**					
Sum								**160**	**0**
TQFP (10mm X 10mm)									
Summary for Package Family: TQFP (10mm X 10mm)			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TQFP (Pb-Free)									
AZ44SGGAN	R	082201	R1	CY8C22545-24AXI	121	0	168	77	0
AZ32BXGAN	Q-KOREA	MR081015	R1A	CY7C4201V-15AXC	121	0	168	80	0
AZ32GXGAN	G-TAIWAN	MR081051	R1A	CY29942AXCT	121	0	168	80	0
AZ128SABLL	R-CML	MR082004	R1	CY7C68013A-128AXC	121	0	168	80	0
AZ32GXGAN	G-ASE	MR082020	R1	CY29942AXI	121	0	168	80	0
AZ44SGGAN	R-CML	MR082040	R1	CS6567AM	121	0	168	80	0
AZ100SFA	R-CML	MR082049	R1	CY7C024-25AXC	121	0	168	80	0
AZ32BXGAN	Q-KOREA	MR082054	R1	CY7C4251V-15AXC	121	0	168	80	0
AZ44SGGAN	R-CML	MR082060	R1	CS6567AM	121	0	168	80	0
AZ44SGGAN	R-CML	MR083014	R1	CS6567AM	121	0	168	80	0
AZ32BXGAN	Q-KOREA	MR083031	R1	CY7C4251V-25AXC	121	0	168	80	0
AZ100SEAL	RA-CML	MR083032	R1	CY7B994V-5AXI	121	0	168	79	0
AZ100RBBLN	R	MR084002	R1	CY7C1370D-167AXI	121	0	168	79	0
AZ44SFGAN	R	MR084010	R1	CY37032P44-125AXC	121	0	168	80	0
AZ32LXGAN	Q	MR084017	R1	CY29948AXC	121	0	168	80	0
AZ120DGAGR	L-KOREA	NR083001	R1	CY0823CC	121	0	168	77	0
Summary for Package Family: TQFP (Pb-Free)			**17**	**records**					
Sum								**1272**	**0**
TQFP (Thermal)									
AT120ABAGE	Q-KOREA	NR072029	R1	CYS25G0101DX-ATXC	121	0	168	80	0
AT120ABAGE	Q-KOREA	NR072029	R2	CYS25G0101DX-ATXC	121	0	168	80	0
AT120ABAGE	Q-KOREA	NR072029	R3	CYS25G0101DX-ATXC	121	0	168	80	0
Summary for Package Family: TQFP (Thermal)			**3**	**records**					
Sum								**240**	**0**
TQFP (Thermal, Pb-Free)									
AG120ABAGR	Q-KOREA	NR072017	R2	CYS25G0101DX-ATXC	121	0	168	50	0
Summary for Package Family: TQFP (Thermal, Pb-Free)			**1**	**records**					
Sum								**50**	**0**
TSOP (Pb-free)									

ZT28R4AGL	R-CML	080302	R3	CY7C1399BNL-12ZXC	121	0	168	80	0
ZT32RABALL	T-OSE	MR082019	R1	CY62128EV30LL-45ZXI	121	0	168	80	0
ZT28R4BGL	R-CML	MR083028	R1	CY7C1399BN-12ZXC	121	0	168	80	0
ZT28R4BGL	R-CML	MR083028	RIA	CY7C1399BN-12ZXC	121	0	168	80	0
ZT32RAEBLN	RA	MR084006	R1	CG6708AMT	121	0	168	80	0
ZT28R2BBLN	R	MR091012	R1	CY62256NLL-55ZXIT	121	0	168	80	0
ZT32RAEBLN	RA	MR091014	R1	CY62128EV30LL-45ZXI	121	0	168	77	0
ZT32RABALL	T	MR091021	R1	CY62128EV30LL-45ZXI	121	0	168	79	0
Summary for Package Family: TSOP (Pb-free)			**8**	**records**					
Sum								**636**	**0**
EXPOSED TSOP (Pb-free)									
Summary for Package Family: EXPOSED TSOP (Pb-free)			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TSOP I (Pb-Free)									
ZB32RHALN	R-CML	MR082003	R1	CY62128EV30LL-45ZAXI	121	0	168	80	0
ZB32RHALL	R-CML	MR082053	R1	CY62128DV30LL-55ZAXI	121	0	168	79	0
ZB32RHBALN	R-CML	MR083042	R1	CY62128ELL-45ZAXI	121	0	168	80	0
Summary for Package Family: TSOP I (Pb-Free)			**3**	**records**					
Sum								**239**	**0**
TSOP II									
Summary for Package Family: TSOP II			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TSOP II (Pb-Free)									
ZW544AALL	G-ASEK	MR081002	R1	CY7C1061AV33-12ZXC	121	0	168	76	0
ZW444AMBLN	R-CML	MR082002	R1	CY62146EV30LL-45SZSX	121	0	168	80	0
ZW324CBLL	T-OSE	MR082026	R1	CY62148ELL-45ZSXI	121	0	168	80	0
ZW544AALL	G-TAIWAN	MR082034	R1	CY7C1069AV33-10ZXC	121	0	168	80	0
ZW544AALL	G-TAIWAN	MR083002	R1	CY7C1069AV33-10ZX	121	0	168	108	0
ZW444AHBLL	R-CML	MR083020	R1	CY7C1021DV33-10ZSXI	121	0	168	80	0
ZW324CBLL	T-OSE	MR083043	R1	CY62148EV30LL-45ZSXI	121	0	168	80	0
ZW444AJBLN	R-CML	MR083071	R1	CY7C1021CV33-10ZXC	121	0	96	80	0
ZW444AJBLN	R-CML	MR083071	R1	CY7C1021CV33-10ZXC	121	0	168	80	0
ZW444AHBLL	R	MR084007	R1	CG6850AM	121	0	168	80	0
ZW324CBLL	T	MR084025	R1	CG7092AM	121	0	168	80	0
ZW544AALL	G	MR084038	R1	CY7C1061AV33-10ZXC	121	0	168	80	0
Summary for Package Family: TSOP II (Pb-Free)			**13**	**records**					
Sum								**984**	**0**
TSSOP									
Z1620GAGN	RA-CML	MR082029	R1	CY2309ZC-1H	121	0	168	80	0
Z1611XAGB	M-PHILS	MR082033	R1	CY2308ZC-1H	121	0	168	80	0
Z1620GAGN	RA-CML	MR083033	R1	CY2309ZC-1H	121	0	168	79	0
Z1620GBAGN	RA	MR084016	R1	CY2309ZC-1HT	121	0	168	80	0
Summary for Package Family: TSSOP			**4**	**records**					
Sum								**319**	**0**
TSSOP (Pb-Free)									
ZZ1620GAN	CML-RA	082004	R1	CY23EP09ZXC-1HT	121	0	168	74	0
ZZ1613HAN	T-OSE	MR082011	R1	CY2308ZXI-1HT	121	0	168	80	0
ZZ1620GAN	RA-CML	MR082032	R1	CY2308ZXI-1H	121	0	168	80	0
ZZ1620GBAN	RA-CML	MR083015	R1	CY22150FZXI	121	0	168	80	0
ZZ0812BGL	T-TAIWAN	MR083044	R1	CY24904ZXC	121	0	168	80	0

ZZ1620GBAN	RA	MR091018	R1	CY2309ZXC-1HT	121	0	168	80	0
ZZ0812BGL	T	MR091019	R1	CY25100ZXC38T	121	0	168	80	0
Summary for Package Family: TSSOP (Pb-Free)			**7**	**records**					
Sum								**554**	**0**
VFBGA (0.75-0.8, 0.3mm)									
BV48AAALE	G-TAIWAN	MR083013	R1	CY62157DV30LL-55BVI	121	0	168	80	0
Summary for Package Family: VFBGA (0.75-0.8, 0.3mm)			**1**	**records**					
Sum								**80**	**0**
VFBGA (0.75-0.8, 0.3mm, Pb-Free)									
BZ48DAGLL	RA-CML	MR082001	R1	CY62137FV30LL-45BVXI	121	0	168	80	0
BZ100CGAL	RA-CML	MR082027	R1	CYWB0124AB-BVXI	121	0	168	80	0
BZ56AGAL	G-TAIWAN	MR082035	R1	CY7C68013A-56BAXC	121	0	168	80	0
BZ48CQAALL	G-TAIWAN	MR082047	R1	CY62137FV30LL-45BVXI	121	0	168	80	0
BZ56IAAAGL	AT-INDS	MR082055	R1	CY7C68053-56BAXI	121	0	168	80	0
BZ48CFAALL	G-TAIWAN	MR083004	R1	CY62157EV30-45BVXIT	121	0	168	80	0
BZ56GABGL	RA-CML	MR083005	R1	CY7C68053-56BAXIT	121	0	168	80	0
BZ100CGAL	RA-CML	MR083029	R1	CYWB0124AB-BVXI	121	0	168	80	0
BZ48ABDALL	AT-CARSEM	MR083060	R1	CY62137EV30LL-45BVXI	121	0	168	77	0
BZ100CGAL	RA	RR083024	R1	CYWB0124AB-BVXIT	121	0	96	80	0
BZ100CGAL	RA	RR083024	R2	CYWB0124AB-BVXIT	121	0	96	80	0
BZ100CGAL	RA	RR083024	R3	CYWB0124AB-BVXIT	121	0	96	80	0
BZ100CGAL	RA	RR083024	R4	CYWB0124AB-BVXIT	121	0	96	80	0
Summary for Package Family: VFBGA (0.75-0.8, 0.3mm, Pb-Free)			**13**	**records**					
Sum								**1037**	**0**

Summary Detail -- HAST Performance Over Time

BUILDKIT	ASSY SITE	EVALNUM	TV	DEVICE	TEMP	VOLT	READOUT	SS	REJECT	FA	COMMENTS
FBGA (0.75-0.8, 0.3mm)											
BA48DJALE	G-TAIWAN	073905	R5	CY62177DV30L	130	3.63	128	45	0		
BA48CRALE	OSE-T	MR081020	R1	CY62137CVSL-70BAI	110	3.3	128	80	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm)			**2**	**records**							
Sum								**125**	**0**		
FBGA (0.75-0.8, 0.3mm, Pb-free)											
BK48BWBLL	G-ASE	MR082010	R1	CY7C1021CV33-10BAXI	130	3.65	128	77	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm, Pb-free)			**1**	**records**							
Sum								**77**	**0**		
FBGA (1.0-1.27)											
Summary for Package Family: FBGA (1.0-1.27)			**#REF!**	**records**							
Sum								**#REF!**	**#REF!**		
FLIPCHIP CSP (Pb-Free)											
FN81AGAN	AU	NR081001	R3	CYWB0124ABX-FNXIT	130	3.63	96	86	0		
FN81AGAN	AU	NR081001	R5	CYWB0124ABX-FNXIT	130	3.63	96	84	0		
FN81AGAN	AU	NR081001	R6	CYWB0124ABX-FDXIT	130	3.63	96	88	0		
Summary for Package Family: FLIPCHIP CSP (Pb-Free)			**3**	**records**							
Sum								**258**	**0**		
PBGA (with Heat Spreader)											
Summary for Package Family: PBGA (with Heat Spreader)			**#REF!**	**records**							
Sum								**#REF!**	**#REF!**		
PDIP											
Summary for Package Family: PDIP			**#REF!**	**records**							
Sum								**#REF!**	**#REF!**		
PDIP (Pb-Free)											
PZ183DAGN	RA-CML	MR081069	R1	CY7C63723C-PXC	130	5.5	128	80	0		
PZ183AXGN	O-OMEDATA	MR083039	R1	CS6632AF	130	3.63	128	80	0		
Summary for Package Family: PDIP (Pb-Free)			**2**	**records**							
Sum								**160**	**0**		
PLCC											
J32RBGAAGB	MMT-X	MR081030	R1	CY7C4231V-15JC	130	3.63	128	40	0		
J32RBGAAGB	X-MMT	MR081030	R1A	CY7C4231V-15JC	130	3.63	128	39	0		
J32RBGAAGB	X-MMT	MR082017	R1	CY7B9911V-5JCT	130	3.6	128	40	0		
J32RBGAAGB	X-MMT	MR082017	R1A	CY7B9911V-5JC	130	3.6	128	40	0		
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	130	3.6	128	40	0		
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	130	3.6	128	40	0		
J32RBGAAGB	X	MR083024	R1A	CY7B991V-5JIT	130	3.6	128	40	0		
Summary for Package Family: PLCC			**7**	**records**							
Sum								**279**	**0**		
PLCC (Pb-Free)											
JZ32RBGAN	M-PHILIPPINES	MR081063	R1	CY7B991-5JXC	130	3.63	128	40	0		
JZ32RBGAN	M-PHILS	MR081063	R1A	CY7B991-5JXC	130	3.63	128	40	0		
Summary for Package Family: PLCC (Pb-Free)			**2**	**records**							
Sum								**80**	**0**		

QFN (0.4mm, Saw Type, Pb-free)

LN32AAAAAL	CA	MR091052	R1	CP7052BTT	130	5.25	128	23	0

Summary for Package Family: QFN (0.4mm, Saw Type, Pb-free) 1 records

Sum 23 0

QFN (0.6mm, Punch Type, Pb-Free)

LK32AABAGL	L-KOREA	MR082022	R1	CY8C20434-12LKXI	130	5.25	128	40	0
LK32AABAGL	AMKOR-L	MR082022	R1A	CY8C20434-12LKXI	130	5.25	128	40	0
LK32AABAGL	L-KOREA	MR083006	R1	CY8C20424-12LKXI	130	5.25	128	77	0
LK32AABAG	L	MR084008	R1	CY8C20434-12LKXI	130	5.25	128	25	0
LK32AABAGL	L	MR091011	R1	CY8C20434-12LKXIT	130	5.25	128	25	0
LK32AABAGL	L-KOREA	NR072004	R3	CP6683AM	130	5.25	128	39	0

Summary for Package Family: QFN (0.6mm, Punch Type, Pb-Free) 6 records

Sum 246 0

QFN (0.6mm, Saw Type, Pb-Free)

LQ32CAAAL	CA-MALAYSIA	082008	R4	CY8C21434A-24LQXI	130	5.25	128	77	0
LQ32DAGLL	CA-MALAYSIA	082602	R1	CY8C23533-24LQXI	130	3.3	128	78	0
LQ32DAGLL	CA-Malaysia	083401	R1	CY8C20466A	130	5.25	128	77	0
LQ32DAGLL	CA	083401	R2	CY8C20466-24LQXI	130	5.25	128	77	0
LQ32DAGLL	CA	083401	R4	CY8C20466-24LQXI	130	5.25	128	77	0
LQ32ACAAGL	MB	083909	R1	CY8C204345-12LQXI	130	5.35	128	77	0
LQ32ACAAGL	MB	083909	R2	CY8C204345-12LQXI	130	5.35	128	77	0
LQ24AAAAAL	RA	084602	R4	CY8C20324-12LQXI	130	5.25	128	39	0
LQ24AAAAAL	RA	084602	R4	CY8C20324-12LQXI	130	5.25	128	40	0
LQ24ABAAL	AT-INDNS	MR082030	R1	CY8C20334-12LQXI	130	5.25	128	40	0
LQ24ABAAL	AIT-INDONESIA	MR082030	R1A	CY8C20334-12LQXI	130	5.25	128	40	0
LQ24ABAAL	AT-THAILAND	MR083053	R1	CY8C20324-12LQXI	130	5.25	128	39	0
LQ24ABAAL	AT	MR084039	R1	CY8C20324-12LQXI	130	5.25	128	5	0
LQ24ABAAL	AT	MR084039	R1	CY8C20324-12LQXI	130	5.25	128	20	0
LQ24ABAAL	AIT-INDONESIA	NR074003	R2	CY8C20334-12LQXI	130	5.25	128	39	0
LQ24ABAAL	AIT-INDONESIA	NR074003	R3	CP6785AM	130	5.25	128	40	0

Summary for Package Family: QFN (0.6mm, Saw Type, Pb-Free) 16 records

Sum 842 0

QFN (COL, 0.6mm, Saw Type, Pb-free)

LG16AAAAL	M-Manila	080502	R1	CY8C20234-12LKXIT	130	5.25	128	37	0
LG16AAAAL	M-Manila	080502	R1	CY8C20234-12LKXIT	130	5.25	128	40	0
LG16AAAAL	M-PHILS	MR081027	R1A	CY8C20234-12LKXI	130	5.25	128	40	0
LG16AAAAL	M-PHILS	MR081027	R1B	CY8C20234-12LKXI	130	5.25	128	40	0
LG16AAAAL	M-PHILS	MR082028	R1	CY8C20234-12LKXI	130	5.25	128	40	0
LG16AAAAL	M-PHILS	MR082028	R1A	CY8C20234-12LKXI	130	5.25	128	39	0
LG16AAAAL	M-PHILS	MR083048	R1	CY8C20122-LDX2I	130	5.25	128	39	0
LG16AAAAL	M	MR083048	R1A	CY8C20122-LDX2I	130	5.25	128	40	0
LG16AAAAL	M	MR084013	R1	CY8C20234-12LKXI	130	5.25	128	39	0

Summary for Package Family: QFN (COL, 0.6mm, Saw Type, Pb-free) 9 records

Sum 354 0

QFN (Punch Type, Pb-Free)

LY32BGAGL	RA	083604	R1	CY8C21434-24LFXI	130	5.25	128	78	0
LY32BGAGL	RA-CML	083905	R1	CY8C21434-24LFXI	130	5.25	128	77	0

LY56AGAGL	L-KOREA	MR082031	R1	CY7C65630-56LFXC	130	3.63	128	68	0
LY32AAAGR	L-KOREA	MR082048	R1	CG6672AMT	130	5.25	128	77	0
LY32AAAGR	L	MR084015	R1	CY8C21434-24LFXI	130	5.25	128	25	0
LY68AGAAGL	L	MR091024	R1	CY8CLED04-68LFXI	130	5.25	128	25	0
Summary for Package Family: QFN (Punch Type, Pb-Free)			**6**	**records**					
Sum								**350**	**0**
QFN (Saw Type, Pb-free)									
LT32BGAGL	RA-CML	082902	R1	CY8C21434-24LTXI	130	5.25	128	79	0
LT32BAAAGL	CA-THAILAND	MR083038	R1	CG7032AA	130	5.25	128	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R1	CY8C21434-24LTXI	130	5.25	128	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R2	CY8C21434-24LTXI	130	5.25	128	77	0
LT32BAAGL	CA-MALAYSIA	NR082002	R3	CY8C21434-24LTXI	130	5.25	128	40	0
Summary for Package Family: QFN (Saw Type, Pb-free)			**5**	**records**					
Sum								**350**	**0**
QSOP (Pb-Free)									
SQ2414ABGN	R-CML	MR083023	R1	CY7C63743C-QXC	130	5.5	128	80	0
SQ2414ABGN	R	MR091002	R1	CY7C63743C-QXC	130	5.5	128	25	0
Summary for Package Family: QSOP (Pb-Free)			**2**	**records**					
Sum								**105**	**0**
RTSOP (Pb-free)									
ZY28R2ALN	R-CML	MR083030	R1	CY62256VNLL-70ZRXIT	130	3.63	128	39	0
ZY28R2ALN	R	MR083030	R1A	CY62256VNLL-70ZRXIT	130	3.63	128	39	0
ZY28R2BLN	R	MR091010	R1	CY62256NLL-70ZRXIT	130	5.5	128	25	0
Summary for Package Family: RTSOP (Pb-free)			**3**	**records**					
Sum								**103**	**0**
SNC (Pb-Free)									
SY2831BBLN	R-CML	MR082037	R1	CY62256NLL-70SNXC	130	5.5	128	40	0
SY2831BBLN	CML-R	MR082037	R1A	CY62256NLL-70SNXC	130	5.5	128	40	0
SY2831BBLN	R-CML	MR083016	R1	CY62256NLL-70SNXCT	130	5.5	128	40	0
SY2831BBLN	R-CML	MR083016	R1A	CY62256NLL-70SNXCT	130	5.5	128	40	0
SY2831BBLN	R	MR084004	R1	CG7107AM	130	3.63	128	40	0
SY2831BBLN	R	MR084004	R1A	CG7107AM	130	3.63	128	40	0
SY2831BBLN	R	MR091007	R1	CY62256NLL-70SNXCT	130	5.5	128	45	0
Summary for Package Family: SNC (Pb-Free)			**6**	**records**					
Sum								**240**	**0**
SOIC									
S1615EAGB	M-PHILS	MR082014	R1	CY2309SC-1H	130	3.8	128	80	0
S0815BAAGB	O-OMEDATA	MR082062	R1	CY2304SI-1T	130	3.63	128	80	0
S1615EAGB	M	MR083010	R1A	CY2292SL-1V1	130	3.63	128	80	0
S1615KBAGN	RA	MR084023	R1	CY2292F	130	3.8	128	78	0
S0815PBAGN	RA	MR091017	R1	CY2305SI-1HT	130	3.8	128	25	0
Summary for Package Family: SOIC			**5**	**records**					
Sum								**343**	**0**
SOIC (J-Lead)									
V243GAAAGN	X	090302	R1	CY7C197BN-15VC	130	0	128	80	0
V243GAAAGN	X	090302	R2	CY7C197BN-15VC	130	0	128	80	0
V243GAAGN	X	090302	R4	CY7C197BN-15VC	130	0	128	79	0
VZ3646BGLL	R	MR084001	R1	CY7C1049CV33-10VXCT	130	3.65	128	25	0
Summary for Package Family: SOIC (J-Lead)			**4**	**records**					
Sum								**264**	**0**

SOIC (J-Lead, Pb-Free)

VZ32420GLL	R-CML	MR081008	R1	CY7C109D-10VXI	130	5.5	128	40	0
VZ444WAGL	R-CML	MR081050	R1	CY7C1021B-12VXC	130	5.5	128	38	0
VZ444WAGL	R-CML	MR081050	R1A	CY7C1020B-12VXC	130	5.5	128	37	0
VZ3646BGLL	R-CML	MR082009	R1	CY7C1049CV33-10VXC	130	3.65	128	40	0
VZ3646BGLL	R-CML	MR082009	R1A	CY7C1049CV33-10VXC	130	3.65	128	37	0
VZ28313BLN	R-CML	MR083003	R1	CY7C1399BN-12VXC	130	3.3	128	77	0
VZ444AABLL	R-CML	MR083035	R1	CY7C1021DV33-10VXI	130	3.65	128	40	0
VZ444AABLL	R	MR083035	R1A	CY7C1021DV33-10VXI	130	3.65	128	40	0
VZ28313BLN	R	MR084019	R1	CY7C1399BN-12VXIT	130	3.63	128	80	0
Summary for Package Family: SOIC (J-Lead, Pb-Free)			**9**	**records**					
Sum								**429**	**0**

SOIC (Pb-Free)

SZ815CGAN	M - Manila	080803	R1	CY2305CSXI-1H	130	3.3	96	80	0
SZ815CGAN	M - Manila	080803	R1	CY2305CSXI-1H	130	3.3	128	80	0
SZ815CGAN	M - Manila	080803	R2	CY2305CSXI-1H	130	3.3	96	80	0
SZ815CGAN	M - Manila	080803	R2	CY2305CSXI-1H	130	3.3	128	80	0
SZ815CGAN	M - Manila	080803	R3	CY2305CSXI-1H	130	3.3	96	80	0
SZ815CGAN	M - Manila	080803	R3	CY2305CSXI-1H	130	3.3	128	80	0
SZ1615NAGN	CA-MALAYSIA	082203	R1	CY8C20180-SX2I	130	5.25	128	80	0
SZ815PAGN	RA-CML	MR081034	R1	CY2305SXC-1H	130	3.63	128	80	0
SZ324516LL	R-CML	MR082005	R1	CY62148ELL-55SXI	130	3.63	128	78	0
SZ28327BGL	R-CML	MR082006	R1	CY8C27443-24SXI	130	5.25	128	40	0
SZ183CGAN	RA-CML	MR082012	R1	CY7C63723C-SXC	130	5.5	128	40	0
SZ183CGAN	RA-CML	MR082012	R1	CY7C63723C-SXC	130	5.5	256	24	0
SZ1615KGN	RA-CML	MR082015	R1	CY2309SXC-1HT	130	3.8	128	80	0
SZ1815CGAN	M-PHILS	MR082023	R1	CY8C24123A-24SXI	130	5.25	128	80	0
SZ1615EGN	M-PHILS	MR082025	R1	CY2309NZSXC-1H	130	3.8	128	80	0
SZ1615DGN	M-PHILS	MR083009	R1	CY2292SXL-1X6T	130	3.8	128	39	0
SZ1615DGN	M-PHILS	MR083009	R1A	CY2292SXL-1X6T	130	3.8	128	39	0
SZ324516BL	R-CML	MR083017	R1	CY62148ELL-55SXIT	130	3.6	128	78	0
SZ28327BGL	R-CML	MR083018	R1	CY8C27443-24SXIT	130	5.25	128	40	0
SZ28327BGL	R-CML	MR083018	R1A	CY8C27443-24SXIT	130	5.25	128	39	0
SZ183CBGAN	RA-CML	MR083019	R1	CY7C63723C-SXC	130	5.5	128	40	0
SZ183CBGAN	RA	MR083019	R1A	CY7C63723C-SXC	130	5.5	128	40	0
SZ183CBGAN	RA	MR083019	R1A	CY7C63723C-SXC	130	5.5	256	24	0
SZ815PABGN	RA-CML	MR083034	R1	CY2305SXC-1H	130	3.63	128	80	0
SZ815DAGN	M	MR084018	R1	CY2304SXI-2	130	3.63	128	80	0
SZ1615BKGN	RA	MR084020	R1	CY2309SXC-1HT	130	3.8	128	25	0
SZ183CBGAN	RA	MR084026	R1	CY7C63723C-SXC	130	5.5	128	40	0
SZ183CBGAN	RA	MR084026	R1A	CY7C63723C-SXC	130	5.5	128	40	0
SZ24315BGN	RA	MR084029	R1	CY7C63743C-SXC	130	3.63	128	80	0
SZ24315BGN	RA	MR084029	R1	CY7C63743C-SXC	130	5.5	128	46	0
SZ24312BGN	R	MR084033	R1	CY7C63743C-SXC	130	5.5	128	40	0
SZ24312BGN	R	MR084033	R2	CY7C63743C-SXC	130	5.5	128	40	0
SZ1615FAL	T	MR084072	R1	CY2309CSXC-1T	130	3.63	128	25	0
SZ32457BLN	R	MR091004	R1	CY62128ELL-45SXIT	130	3.8	128	25	0
SZ1615BKGN	RA	MR091016	R1	CY2308SXC-2T	130	3.8	128	25	0
SZ1615EGN	M	MR091020	R1	CY2309SXI-1HT	130	3.8	128	25	0
SZ183CBGAN	RA	MR091003	R1	CY7C63723C-SXC	130	5.5	128	25	0

SZ2035BAL	R	MR091001	R1	CY8C27243-24SXI	130	5.25	128	25	0
SZ815PAGN	RA-CML	NR081002	R14	CY22560SXI	130	3.63	128	80	0
Summary for Package Family: SOIC (Pb-Free)			**39**	**records**					
Sum								**2102**	**0**
SSOP (Pb-Free)									
SP483AGAN	R	084703	R1	CY8C20566-24PVXI	130	5.25	128	77	0
SP28215GGL	RA-CML	MR081016	R1A	CY8C21534-24PVXI	130	5.25	128	80	0
SP202AAAGN	RA-CML	MR082007	R1	CP6650AMT	130	5.25	128	39	0
SP202AAAGN	CML-RA	MR082007	R1A	CP6650AMT	130	5.25	128	38	0
SP563BBBGL	R-CML	MR082008	R1	CY7C68300C-56PVXC	130	3.63	128	78	0
SP28214GL	T-OSE	MR082013	R1	CY8C26443-24PVX	110	5.25	264	80	0
SP2822BGL	M-PHILS	MR082038	R1	CY8C24423A-12PVXE	130	5.25	128	39	0
SP2822BGL	M-PHILS	MR082038	R1A	CY8C24423A-12PVXE	130	5.25	128	40	0
SP2822BGL	M-PHILS	MR083008	R1	CY8C21534-12PVXET	130	5.25	96	77	0
SP563BBBG	R-CML	MR083011	R1	CY7C68013-56PVXC	130	3.63	128	38	0
SP563BBBG	R-CML	MR083011	R1A	CY7C68013A-56PVXC	130	3.63	128	39	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	130	5.25	128	40	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	130	5.25	256	80	0
SP28215BGL	RA-CML	MR083021	R1A	CY8C21534-24PVXI	130	5.25	128	40	0
SP2824HAN	T	MR084021	R1	CY8C24533-24PVXI	130	5.25	128	70	0
SP483HAAGR	M	MR084043	R1	CY14B101L-SP45XC	130	3.63	128	77	0
SP483EBBAL	R	MR091005	R1	CY8C27643-24PVXI	130	5.25	128	25	0
A32LXGXGB	Q	MR091043	R1	CY29948ACT	130	3.63	128	25	0
Summary for Package Family: SSOP (Pb-Free)			**17**	**records**					
Sum								**957**	**0**
TQFP									
A32LXGXGB	Q-KOREA	MR082024	R1	CY29948AC	130	3.63	128	40	0
A32LXGXGB	Q	MR082024	R1A	CY29948AC	130	3.63	128	38	0
Summary for Package Family: TQFP			**2**	**records**					
Sum								**78**	**0**
TQFP (10mm X 10mm)									
Summary for Package Family: TQFP (10mm X 10mm)			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TQFP (Pb-Free)									
AZ32BXGAN	Q-KOREA	MR081015	R1	CY7C4201V-15AXC	130	3.63	128	39	0
AZ32BXGAN	Q-KOREA	MR081015	R1A	CY7C4201V-15AXC	130	3.63	128	39	0
AZ100SFAL	R-CML	MR081017	R1	CY7C024-25AXC	130	5.5	128	40	0
AZ100SFAL	R-CML	MR081017	R1A	CY7C024-25AXC	130	5.5	128	40	0
AZ32GXGAN	G-ASE	MR082020	R1	CY29942AXI	130	3.63	128	40	0
AZ32GXGAN	G-TAIWAN	MR082020	R1A	CY22942AXI	130	3.63	128	40	0
AZ100SFA	R-CML	MR082049	R1	CY7C024-25AXC	130	5.5	128	40	0
AZ100SFA	CML-R	MR082049	R1A	CY7C024-25AXC	130	5.5	128	40	0
AZ44SGGAN	R-CML	MR082060	R1	CS6567AM	130	5.25	128	40	0
AZ44SGGAN	R-CML	MR082060	R1A	CS6567AM	130	5.25	128	40	0
AZ32BXGAN	Q-KOREA	MR083031	R1	CY7C4251V-25AXC	130	3.63	128	40	0
AZ32BXGAN	Q	MR083031	R1A	CY7C4251V-25AXC	130	3.63	128	40	0
AZ100SEAL	RA-CML	MR083032	R1	CY7B994V-5AXI	130	3.63	128	35	0
AZ100SEAL	RA	MR083032	R1A	CY7B994V-5AXI	130	3.63	128	39	0
AZ100RBBLN	R	MR084002	R1	CY7C1370D-167AXI	130	3.6	128	79	0
Summary for Package Family: TQFP (Pb-Free)			**14**	**records**					

Sum								**631**	**0**
TQFP (Thermal)									
AT120ABAGE	Q-KOREA	NR072029	R1	CYS25G0101DX-ATXC	130	3.63	128	79	0
AT120ABAGE	Q-KOREA	NR072029	R2	CYS25G0101DX-ATXC	130	3.63	128	79	0
Summary for Package Family: TQFP (Thermal)			**2**	**records**					
Sum								**158**	**0**
TQFP (Thermal, Pb-free)									
AG120ABAGR	Q-KOREA	NR072017	R1	CYS25G0101DX-ATXC	130	3.63	128	46	0
AG120ABAGR	Q-KOREA	NR072017	R2	CYS25G0101DX-ATXC	130	6.63	128	46	0
Summary for Package Family: TQFP (Thermal, Pb-Free)			**2**	**records**					
Sum								**92**	**0**
TSOP (Pb-free)									
ZT32RABALL	T-OSE	MR082019	R1	CY62128EV30LL-45ZXI	130	3.6	128	37	0
ZT32RABALL	T-TAIWAN	MR082019	R1A	CY62128EV30LL-45ZXI	130	3.6	128	40	0
ZT28R4BGL	R-CML	MR083028	RIA	CY7C1399BN-12ZXC	130	3.63	128	39	0
ZT28R4BGL	R-CML	MR083028	RIA	CY7C1399BN-12ZXC	130	3.63	128	39	0
ZT32RAEBLN	RA	MR084006	R1	CG6708AMT	130	3.6	128	39	0
ZT32RAEBLN	RA	MR084006	R1A	CG6708AMT	130	3.6	128	36	0
ZT28R2BBLN	R	MR091012	R1	CY62256NLL-55ZXIT	130	5.5	128	25	0
ZT32RAEBLN	RA	MR091014	R1	CY62128EV30LL-45ZXI	130	3.6	128	25	0
ZT32RABALL	T	MR091021	R1	CY62128EV30LL-45ZXI	130	3.6	264	25	0
Summary for Package Family: TSOP (Pb-free)			**9**	**records**					
Sum								**305**	**0**
TSOP I (Pb-Free)									
ZB32RHALN	R-CML	MR082003	R1	CY62128EV30LL-45ZAXI	130	3.6	128	80	0
ZB32RHALL	R-CML	MR082053	R1	CY62128DV30LL-55ZAXI	130	5.5	128	40	0
ZB32RHBALN	R-CML	MR083042	R1	CY62128ELL-45ZAXI	130	5.5	128	79	0
ZB32RHBALN	R	MR091031	R1	CG7086AM	130	3.6	128	25	0
Summary for Package Family: TSOP I (Pb-Free)			**4**	**records**					
Sum								**224**	**0**
TSOP II									
Summary for Package Family: TSOP II			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TSOP II (Pb-Free)									
ZW444GALL	R	071304	R9	7C1404B6BC-**RZWCB	130	5.5	128	80	0
ZW544AALL	G-ASEK	MR081002	R1	CY7C1061AV33-12ZXC	130	3.65	128	42	0
ZW444AMBLN	R-CML	MR081003	R1	CY62157EV30LL-45ZSXI	130	5.5	128	79	0
ZW444AMBLN	R-CML	MR082002	R1	CY62146EV30LL-45SZSX	130	3.6	128	79	0
ZW324CBLL	T-OSE	MR082026	R1	CY62148ELL-45ZSXI	130	3.6	128	80	0
ZW544AALL	G-TAIWAN	MR082034	R1	CY7C1069AV33-10ZXC	130	3.65	128	40	0
ZW544AALL	G-ASEK	MR082034	R1A	CY7C1069AV33-10ZXC	130	3.65	128	40	0
ZW544AALL	G-TAIWAN	MR083002	R1	CY7C1069AV33-10ZX	130	3.65	128	40	0
ZW444AHBLL	R-CML	MR083020	R1	CY7C1021DV33-10ZSXI	130	3.63	128	80	0
ZW324CBLL	T-OSE	MR083043	R1	CY62148EV30LL-45ZSXI	130	3.6	128	75	0
ZW444AJBLN	R-CML	MR083071	R1	CY7C1021CV33-10ZXC	130	3.65	96	76	0
ZW444AHBLL	R	MR084007	R1	CG6850AM	130	3.6	128	80	0
ZW324CBLL	T	MR084025	R1	CG7092AM	130	3.63	128	75	0
ZW544AALL	G	MR084038	R1	CY7C1061AV33-10ZXC	130	3.65	128	39	0
ZW544AALL	G	MR084038	R1A	CY7C1061AV33-10ZXC	130	3.65	128	39	0
Summary for Package Family: TSOP II (Pb-Free)			**15**	**records**					

Sum								**944**	**0**
TSSOP									
Z1620GAGN	RA-CML	MR081036	R1	CY2309ZC-1H	130	3.8	128	80	0
Z1620GAGN	RA-CML	MR082029	R1	CY2309ZC-1H	130	3.8	128	78	0
Z1611XAGB	M-PHILS	MR082033	R1	CY2308ZC-1H	130	3.8	128	77	0
Z1620GBAGN	RA	MR084016	R1	CY2309ZC-1HT	130	3.8	128	77	0
Summary for Package Family: TSSOP			**3**	**records**					
Sum								**312**	**0**
TSSOP (Pb-Free)									
ZZ1620GAN	RA-CML	MR081046	R1	CY22392ZXI-384	130	3.63	128	77	0
ZZ1613HAN	T-OSE	MR082011	R1	CY2308ZXI-1HT	130	3.63	128	78	0
ZZ1620GAN	RA-CML	MR082032	R1	CY2308ZXI-1H	130	3.8	128	78	0
ZZ1620GBAN	RA-CML	MR083015	R1	CY22150FZXI	130	3.63	128	78	0
ZZ1619GAN	RA	MR084065	R1	CY2309CZXI-1H	130	3.68	128	77	0
ZZ1620GBAN	RA	MR091018	R1	CY2309ZXC-1HT	130	3.8	128	25	0
ZZ0812BGL	T	MR091019	R1	CY25100ZXC38T	130	3.63	128	25	0
Summary for Package Family: TSSOP (Pb-Free)			**7**	**records**					
Sum								**438**	**0**
VFBGA (0.75-0.8, 0.3mm)									
Summary for Package Family: VFBGA (0.75-0.8, 0.3mm)			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
VFBGA (0.75-0.8, 0.3mm, Pb-Free)									
BZ56AGAGL	G-ASE	MR074057	R1	CY7C68013A-56BAXC	130	3.63	128	38	0
BZ56AGAGL	G-ASE	MR074057	R1A	CY7C68013A-56BAXC	130	3.63	128	26	0
BZ56FAALE	ASE-G	MR081037	R1	CY7C68053-56BAX	130	3.63	128	40	0
BZ56FAALE	G-ASE	MR081037	R1A	CY7C68053-56BAX	130	3.63	128	39	0
BZ56BGALL	RA	MR084011	R1	CY7C68013A-56BAXC	130	3.63	128	25	0
BZ48DAGLL	RA	MR084034	R1	CY62137FV30LL-45BVXIT	130	3.6	128	29	0
Summary for Package Family: VFBGA (0.75-0.8, 0.3mm, Pb-Free)			**6**	**records**					
Sum								**197**	**0**

Summary Detail -- TCT Performance Over Time

BUILDKIT	ASSY SITE	EVALNUM	TV	DEVICE	TEMP	VOLT	READOUT	SS	REJECT	FA	COMMENTS
FBGA (0.75-0.8, 0.3mm)											
BA48CRALE	T-OSE	MR082018	R1	CY62137CVSL-70BAI	-65/150	0	500	80	0		
BA48CRALE	T-OSE	MR082018	R1	CY62137CVSL-70BAI	-65/150	0	1000	80	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm)			**2**	**records**							
Sum								**160**	**0**		
FBGA (0.75-0.8, 0.3mm, Pb-free)											
BK48BWBLL	G-ASE	MR082010	R1	CY7C1021CV33-10BAXI	-65/150	0	500	76	0		
BK48BWBLL	G-ASE	MR082010	R1	CY7C1021CV33-10BAXI	-65/150	0	1000	75	0		
BK48DJALL	G	MR083050	R1	CY62177DV30LL-55BAXI	-65/150	0	500	80	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm, Pb-free)			**3**	**records**							
Sum								**231**	**0**		
FBGA (1.0-1.27)											
BB100CAALE	G-ASE	MR081067	R1	CYP15G0101DXB-BBI	-65/150	0	500	80	0		
BB100CAALE	G-ASE	MR081067	R1	CYP15G0101DXB-BBI	-65/150	0	1000	80	0		
BB100EAALE	G-TAIWAN	MR082041	R1	CY7B994V-2BBI	-65/150	0	500	80	0		
BB100EAALE	G-TAIWAN	MR082041	R1	CY7B994V-2BBI	-65/150	0	1000	80	0		
BB144CALE	G-TAIWAN	NR072030	R1	CY7C08313AV-167BBC	-65/150	0	500	50	0		
BB144CALE	G-TAIWAN	NR072030	R1	CY7C08313AV-167BBC	-65/150	0	1000	50	0		
BB144CALE	G-TAIWAN	NR072030	R2	CY7C0830AV-167BBC	-65/150	0	500	50	0		
BB144CALE	G-TAIWAN	NR072030	R2	CY7C0830AV-167BBC	-65/150	0	1000	50	0		
BB144CALE	G-TAIWAN	NR072030	R3	CY7C0837AV-167BBC	-65/150	0	500	48	0		
BB144CALE	G-TAIWAN	NR072030	R3	CY7C0837AV-167BBC	-65/150	0	1000	48	0		
BB172AAGE	G-TAIWAN	NR072027	R1	CY7C057V-15BBC	-65/150	0	500	50	0		
BB172AAGE	G-TAIWAN	NR072027	R1	CY7C057V-15BBC	-65/150	0	1000	50	0		
BB172AAGE	G-TAIWAN	NR072027	R2	CY7C057V-12BBC	-65/150	0	500	50	0		
BB172AAGE	G-TAIWAN	NR072027	R2	CY7C057V-12BBC	-65/150	0	1000	50	0		
BB172AAGE	G-TAIWAN	NR072027	R3	CY7C057V-15BBI	-65/150	0	500	50	0		
BB172AAGE	G-TAIWAN	NR072027	R3	CY7C057V-15BBI	-65/150	0	1000	50	0		
BB209BALE	G-TAIWAN	NR072022	R1	CY7C1474V33-167BGC	-65/150	0	1000	46	0		
Summary for Package Family: FBGA (1.0-1.27)			**17**	**records**							
Sum								**962**	**0**		
FBGA (1.0-1.27, Pb-free)											
BW100EAGL	G	MR084067	R1	CYP15G0101DXB-BBXC	-65/150	0	500	80	0		
BW100EAGL	G	MR084067	R1	CYP15G0101DXB-BBXC	-65/150	0	1000	80	0		
BW100EAGL	G-TAIWAN	NR072018	R3	CYP15G0101DXB-BBXC	-65/150	0	1000	80	0		
BW100EAGLE	G-TAIWAN	NR072033	R1	CYV15G0101DXB-BBXI	-65/150	0	500	45	0		
BW100EAGLE	G-TAIWAN	NR072033	R1	CYV15G0101DXB-BBXI	-65/150	0	1000	45	0		
BW100EAGLE	G-TAIWAN	NR072033	R2	CYV15G0101DXB-BBXC	-65/150	0	500	45	0		
BW100EAGLE	G-TAIWAN	NR072033	R2	CYV15G0101DXB-BBXC	-65/150	0	1000	45	0		
Summary for Package Family: FBGA (1.0-1.27, Pb-free)			**7**	**records**							
Sum								**420**	**0**		
FLIPCHIP CSP (Pb-Free)											
FN81BGAN	AU - Amkor Taiwan	080501	R1	CYWB0124ABX-FDXIT	-65/150	0	500	74	0		
FN81BGAN	AU - Amkor Taiwan	080501	R1	CYWB0124ABX-FDXIT	-65/150	0	1000	74	0		

FN81BGAN	AU - Amkor Taiwan	080501	R2	CYWB0124ABX-FDXIT	-65/150	0	500	82	0		
FN81BGAN	AU - Amkor Taiwan	080501	R2	CYWB0124ABX-FDXIT	-65/150	0	1000	80	0		
FN81BGAN	AU - Amkor Taiwan	080501	R3	CYWB0124ABX-FDXIT	-65/150	0	500	78	0		
FN81BGAN	AU - Amkor Taiwan	080501	R3	CYWB0124ABX-FDXIT	-65/150	0	1000	77	0		
FN81BBGAN	AU	082901	R1	CYWB0226ABSX-FDXIES	-55/125	0	500	83	0		
FN81BBGAN	AU	082901	R1	CYWB0226ABSX-FDXIES	-55/125	0	1000	81	0		
FN81BBGAN	AU	082901	R2	CYWB0226ABSX-FDXIES	-55/125	0	500	110	0		
FN81BBGAN	AU	082901	R2	CYWB0226ABSX-FDXIES	-55/125	0	1000	106	0		
FN81BBGAN	AU	082901	R3	CYWB0226ABSX-FDXIES	-55/125	0	500	112	0		
FN81BBGAN	AU	082901	R3	CYWB0226ABSX-FDXIES	-55/125	0	1000	112	0		
FN81AGAN	AU	NR081001	R3	CYWB0124ABX-FNXIT	-65/150	0	500	89	0		
FN81AGAN	AU	NR081001	R3	CYWB0124ABX-FNXIT	-65/150	0	1000	87	0		
FN81AGAN	AU	NR081001	R4	CYWB0124ABX-FNXIT	-65/150	0	500	84	0		
FN81AGAN	AU	NR081001	R4	CYWB0124ABX-FNXIT	-65/150	0	1000	79	0		
FN81AGAN	AU	NR081001	R5	CYWB0124ABX-FNXIT	-65/150	0	500	84	0		
FN81AGAN	AU	NR081001	R5	CYWB0124ABX-FNXIT	-65/150	0	1000	81	0		
FN81AGAN	AU	NR081001	R6	CYWB0124ABX-FDXIT	-65/150	0	500	90	0		
FN81AGAN	AU	NR081001	R6	CYWB0124ABX-FDXIT	-65/150	0	1000	89	0		
FN81AGAN	AU	NR081001	R6A	CYWB0124ABX-FDXIT	-65/150	0	500	89	0		
FN81AGAN	AU	NR081001	R6A	CYWB0124ABX-FDXIT	-65/150	0	1000	88	0		
FN81AGAN	AU	NR081001	R7	CYWB0124ABX-FNXIT	-65/150	0	500	88	0		
FN81AGAN	AU	NR081001	R7	CYWB0124ABX-FNXIT	-65/150	0	1000	88	0		
FN81AGAN	AU	NR081001	R7A	CYWB0124ABX-FDXIT	-65/150	0	500	90	0		
FN81AGAN	AU	NR081001	R7A	CYWB0124ABX-FDXIT	-65/150	0	1000	89	0		
Summary for Package Family: FLIPCHIP CSP (Pb-Free)			**26**	**records**							
Sum								**2284**	**0**		
PBGA (with Heat Spreader)											
BG119SALE	G-ASE	MR082021	R1	CY7C1354C-166BGC	-65/150	0	500	80	0		
BG119SALE	G-ASE	MR082021	R1	CY7C1354C-166BGC	-65/150	0	1000	80	0		
BG119SALE	G-TAIWAN	MR083001	R1	CY7C1354C-166BGC	-65/150	0	500	80	0		
BG119SALE	G-TAIWAN	MR083001	R1	CY7C1354C-166BGC	-65/150	0	1000	80	0		
BG119SALE	G	MR084037	R1	CY7C1354C-166BGC	-65/150	0	500	80	0		
BG119SALE	G	MR084037	R1	CY7C1354C-166BGC	-65/150	0	1000	78	0		
Summary for Package Family: PBGA (with Heat Spreader)			**6**	**records**							
Sum								**478**	**0**		
PBGA (Cavity/Heat Sink)											
BL256L2GE	G	MR084066	R1	CYP15G0401DXB-BGI	-65/150	0	500	76	0		
BL256L2GE	G	MR084066	R1	CYP15G0401DXB-BGI	-65/150	0	1000	75	0		
Summary for Package Family: PBGA (Cavity/Heat Sink)			**2**	**records**							
Sum								**151**	**0**		
PDIP											
Summary for Package Family: PDIP			**#REF!**	**records**							
Sum								**#REF!**	**#REF!**		
PDIP (Pb-Free)											
PZ183ABAGN	X-MMT	081906	R1	CS6632AF	-65/150	0	500	161	0		
PZ183ABAGN	X-MMT	081906	R1	CS6632AF	-65/150	0	1000	161	0		
PZ183ABAGN	X-MMT	081906	R1A	CS6632AF	-65/150	0	500	80	0		
PZ183DAGN	RA-CML	MR081069	R1	CY7C63723C-PXC	-65/150	0	500	82	0		
PZ183DAGN	RA-CML	MR081069	R1	CY7C63723C-PXC	-65/150	0	1000	82	0		
PZ183DAGN	RA-CML	MR082065	R1	CY7C63723C-PXC	-65/150	0	500	80	1	MR082065-1T1	Lifted ball bond

PZ183DAGN	RA-CML	MR082065	R1	CY7C63723C-PXC	-65/150	0	1000	78	0
PZ183DBGN	RA-CML	MR083022	R1	CY7C63723C-PXC	-65/150	0	500	80	0
PZ183DBGN	RA-CML	MR083022	R1	CY7C63723C-PXC	-65/150	0	1000	80	0
PZ243AAAGN	X	MR084028	R1	CY7C63743C-PXC	-65/150	0	500	80	0
PZ243AAAGN	X	MR084028	R1	CY7C63743C-PXC	-65/150	0	1000	80	0
PZ183DBGN	RA	MR084050	R1	CS6632AF	-65/150	0	500	99	0
PZ183DBGN	RA	MR084050	R1	CS6632AF	-65/150	0	1000	99	0
PZ183DBGN	RA	MR091008	R1	CY7C63723C-PXC	-65/150	0	500	80	0
PZ183DBGN	RA	MR091008	R1	CY7C63723C-PXC	-65/150	0	1000	80	0
PZ183ABBGN	X-THAILAND	NR083005	R1	CY7C63231A-PXC	-65/150	0	500	77	0
PZ183ABBGN	X-THAILAND	NR083005	R1	CY7C63231A-PXC	-65/150	0	1000	77	0
PZ183ABBGN	X-THAILAND	NR083005	R3	CY7C63231A-PXC	-65/150	0	500	77	0
PZ183ABBGN	X-THAILAND	NR083005	R3	CY7C63231A-PXC	-65/150	0	1000	77	0
Summary for Package Family: PDIP (Pb-Free)			**19**	**records**					
Sum								**1710**	**1**
PLCC									
J32RBGAAGB	X-MMT	MR082017	R1	CY7B9911V-5JCT	-65/150	0	500	80	0
J32RBGAAGB	X-MMT	MR082017	R1	CY7B9911V-5JCT	-65/150	0	1000	80	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	-65/150	0	500	81	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	-65/150	0	1000	81	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	-65/150	0	2000	81	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	-65/150	0	2500	80	0
Summary for Package Family: PLCC			**6**	**records**					
Sum								**483**	**0**
PLCC (Pb-Free)									
JZ32RBGAN	M-PHILIPPINES	MR081063	R1	CY7B991-5JXC	-65/150	0	1000	80	0
JZ52SFGAN	M	MR084046	R1	7C136GT-**MJXCT	-65/150	0	500	80	0
JZ52SFGAN	M	MR084046	R1	7C136GT-**MJXCT	-65/150	0	1000	80	0
JZ52SFGAN	M	MR084074	R1	CY7C131-25JXCT	-65/150	0	500	77	0
JZ52SFGAN	M	MR084074	R1	CY7C131-25JXCT	-65/150	0	1000	77	0
Summary for Package Family: PLCC (Pb-Free)			**5**	**records**					
Sum								**394**	**0**
PQFP (Pb-free)									
NZ52DXGAN	G-ASEK	MR081004	R1	CY7C136-55NXC	-65/150	0	500	80	0
NZ52DXGAN	G-ASEK	MR081004	R1	CY7C136-55NXC	-65/150	0	1000	80	0
NZ52DXGAN	G-ASE	MR082061	R1	CY7C131-25NXC	-65/150	0	500	80	0
NZ52DXGAN	G-ASE	MR082061	R1	CY7C131-25NXC	-65/150	0	1000	80	0
NZ52DXGAN	G-TAIWAN	NR072014	R12	CY7C136-55NXC	-65/150	0	1000	15	0
NZ52DXGAN	G-TAIWAN	NR072014	R13	CY7C136-55NXC	-65/150	0	1000	15	0
Summary for Package Family: PQFP (Pb-free)			**6**	**records**					
Sum								**350**	**0**
QFN (Open Cavity, Pb-free)									
LB42ABALL	R-CML	NR081004	R1	CYONS10810-LBXC	-65/150	0	500	77	0
LB42ABALL	R-CML	NR081004	R2	CYONS10810-LBXC	-40		500	77	0
LB42ABALL	R-CML	NR081004	R3	CYONS10810-LBXC	-40		500	76	0
Summary for Package Family: QFN (Open Cavity, Pb-free)			**3**	**records**					
Sum								**230**	**0**
QFN (0.4mm, Saw Type, Pb-free)									
LN32AAAAAL	CA-Malaysia	82008	R1	CY8C21434-24LCXI	-65/150	0	500	77	0
LN32AAAAAL	CA-Malaysia	82008	R1	CY8C21434-24LCXI	-65/150	0	1000	75	0

LN32AAAAAL	CA-Malaysia	82008	R2	CY821434-24LCXI	-65/150	0	500	77	0	
LN32AAAAAL	CA-Malaysia	82008	R2	CY821434-24LCXI	-65/150	0	1000	77	0	
LN32AAAAAL	CA-Malaysia	82008	R3	CY821434-24LCXI	-65/150	0	500	80	0	
LN32AAAAAL	CA-Malaysia	82008	R3	CY821434-24LCXI	-65/150	0	1000	79	0	
LN32AAAAAL	CA	MR091052	R1	CP7052BTT	-65/150	0	500	73	0	
Summary for Package Family : QFN (0.4mm, Saw Type, Pb-free)			**7**	**records**						
Sum								**538**	**0**	
QFN (0.6mm, Punch Type, Pb-Free)										
LK32AABAGL	L-KOREA	MR082022	R1	CY8C20434-12LKXI	-65/150	0	500	80	0	
LK32AABAGL	L-KOREA	MR082022	R1	CY8C20434-12LKXI	-65/150	0	1000	80	0	
LK32AABAGL	L-KOREA	MR083006	R1	CY8C20424-12LKXI	-65/150	0	500	80	0	
LK32AABAGL	L-KOREA	MR083006	R1	CY8C20424-12LKXI	-65/150	0	1000	80	0	
LK32AABAGL	L	MR091011	R1	CY8C20434-12LKXIT	-65/150	0	500	80	0	
LK32AABAGL	L	MR091011	R1	CY8C20434-12LKXIT	-65/150	0	1000	80	0	
LK32AABAGL	L-KOREA	NR072004	R2	CY8C20424-12LKXI	-65/150	0	1000	80	0	
LK32AABAGL	L-KOREA	NR072004	R3	CP6683AM	-65/150	0	1000	79	0	
LK32AABAGL	L-Seoul	RR083004	R1	CY8C20434-12LKXI	-65/150	0	300	192	0	
LK32AABAGL	L-Seoul	RR083004	R1	CY8C20434-12LKXI	-65/150	0	500	192	0	
LK32AABAGL	L-Seoul	RR083004	R1	CY8C20434-12LKXI	-65/150	0	800	192	0	
LK32AABAGL	L-Seoul	RR083004	R2	CY8C20434-12LKXI	-65/150	0	100	200	0	
LK32AABAGL	L-Seoul	RR083004	R2	CY8C20434-12LKXI	-65/150	0	300	200	0	
LK32AABAGL	L-Seoul	RR083004	R2	CY8C20434-12LKXI	-65/150	0	500	198	0	
LK32AABAGL	L-Seoul	RR083004	R2	CY8C20434-12LKXI	-65/150	0	800	188	0	
LK32AABAGL	L-Seoul	RR083004	R2	CY8C20434-12LKXI	-65/150	0	1000	167	0	
LK32AABAGL	L-Seoul	RR083004	R3	CY8C20434-12LKXI	-65/150	0	100	196	0	
LK32AABAGL	L-Seoul	RR083004	R3	CY8C20434-12LKXI	-65/150	0	300	196	0	
LK32AABAGL	L	RR083004	R4	CY8C20434-12LKXI	-65/150	0	100	199	0	
LK32AABAGL	L	RR083004	R4	CY8C20434-12LKXI	-65/150	0	300	199	0	
LK32AABAGL	L-Seoul	RR083004	R6	CY8C20434-12LKXI	-65/150	0	100	200	0	
LK32AABAGL	L-Seoul	RR083004	R6	CY8C20434-12LKXI	-65/150	0	300	199	1	RR083004-6T2 Broken wedge
LK32AABAGL	L-Seoul	RR083004	R6	CY8C20434-12LKXI	-65/150	0	500	194	7	RR083004-6T3 Broken wedge
LK32AABAGL	L-Seoul	RR083004	R6	CY8C20434-12LKXI	-65/150	0	800	149	0	
LK32AABAGL	L-Seoul	RR083004	R6	CY8C20434-12LKXI	-65/150	0	1000	124	0	
LK32AABAGL	L-SEOUL KOREA	RR083009	R1	CY8C20434-12LKXI	-65/150	0	100	398	0	
LK32AABAGL	L-SEOUL KOREA	RR083009	R1	CY8C20434-12LKXI	-65/150	0	300	398	0	
LK32AABAGL	L-SEOUL KOREA	RR083009	R1	CY8C20434-12LKXI	-65/150	0	500	398	0	
LK32AABAGL	L-SEOUL KOREA	RR083009	R1	CY8C20434-12LKXI	-65/150	0	800	388	0	
LK32AABAGL	L-SEOUL KOREA	RR083009	R1	CY8C20434-12LKXI	-65/150	0	1000	372	0	
Summary for Package Family: QFN (0.6mm, Punch Type, Pb-Free)			**30**	**records**						
Sum								**5778**	**8**	
QFN (0.6mm, Saw Type, Pb-Free)										
LQ32DAGLL	CA	082109	R1	CY8C204345-12LQXI	-65/150	0	500	80	0	
LQ32DAGLL	CA	082109	R1	CY8C204345-12LQXI	-65/150	0	1000	80	0	
LQ32DAGLL	CA	082109	R2	CY8C204345-12LQXI	-65/150	0	500	80	0	
LQ32DAGLL	CA	082109	R2	CY8C204345-12LQXI	-65/150	0	1000	80	0	
LQ32DAGLL	CA	082109	R3	CY8C204345-12LQXI	-65/150	0	500	80	0	
LQ32DAGLL	CA	082109	R3	CY8C204345-12LQXI	-65/150	0	1000	80	0	
LQ32DAGLL	CA-MALAYSIA	082602	R1	CY8C23533-24LQXI	-65/150	0	500	80	0	
LQ32DAGLL	CA-MALAYSIA	082602	R1	CY8C23533-24LQXI	-65/150	0	1000	80	0	

LQ32DAGLL	CA-MALAYSIA	082602	R2	CY8C23533-24LQXI	-65/150	0	500	80	0
LQ32DAGLL	CA-MALAYSIA	082602	R2	CY8C23533-24LQXI	-65/150	0	1000	80	0
LQ32DAGLL	CA-MALAYSIA	082602	R3	CY8C23533-24LQXI	-65/150	0	500	80	0
LQ32DAGLL	CA-MALAYSIA	082602	R3	CY8C23533-24LQXI	-65/150	0	1000	80	0
LQ32DAGLL	CA	083401	R2	CY8C20466-24LQXI	-65/150	0	500	77	0
LQ32DAGLL	CA	083401	R2	CY8C20466-24LQXI	-65/150	0	1000	77	0
LQ32DAGLL	CA	083401	R4	CY8C20466-24LQXI	-65/150	0	500	77	0
LQ32DAGLL	CA	083401	R4	CY8C20466-24LQXI	-65/150	0	1000	77	0
LQ32ACAAGL	MB	083909	R1	CY8C204345-12LQXI	150	0	500	80	0
LQ32ACAAGL	MB	083909	R1	CY8C204345-12LQXI	150	0	1000	80	0
LQ32ACAAGL	MB	083909	R2	CY8C204345-12LQXI	150	0	500	80	0
LQ32ACAAGL	MB	083909	R2	CY8C204345-12LQXI	150	0	1000	80	0
LQ32ACAAGL	MB	083909	R3	CY8C204345-12LQXI	150	0	500	80	0
LQ32ACAAGL	MB	083909	R3	CY8C204345-12LQXI	150	0	1000	80	0
LQ24AAAAAL	RA	084602	R1	CY8C20324-12LQXI	-65/150	0	500	77	0
LQ24AAAAAL	RA	084602	R1	CY8C20324-12LQXI	-65/150	0	1000	77	0
LQ24AAAAAL	RA	084602	R2	CY8C20324-12LQXI	-65/150	0	500	80	0
LQ24AAAAAL	RA	084602	R2	CY8C20324-12LQXI	-65/150	0	1000	80	0
LQ24AAAAAL	RA	084602	R3	CY8C20324-12LQXI	-65/150	0	500	80	0
LQ24AAAAAL	RA	084602	R3	CY8C20324-12LQXI	-65/150	0	1000	80	0
LQ24AAAAAL	RA	084602	R4	CY8C20324-12LQXI	-65/150	0	500	80	0
LQ24AAAAAL	RA	084602	R4	CY8C20324-12LQXI	-65/150	0	1000	80	0
LQ24AAAAAL	RA	084602	R5	CY8C20324-12LQXI	-65/150	0	500	80	0
LQ24AAAAAL	RA	084602	R5	CY8C20324-12LQXI	-65/150	0	1000	80	0
LQ24AAAAAL	RA	084602	R6	CY8C20324-12LQXI	-65/150	0	500	80	0
LQ24AAAAAL	RA	084602	R6	CY8C20324-12LQXI	-65/150	0	1000	80	0
LQ24ADAAGL	CA	084701	R1	CY8CTST200-24LQXI	125	0	500	77	0
LQ24ADAAGL	CA	084701	R1	CY8CTST200-24LQXI	125	0	1000	77	0
LQ24ADAAGL	CA	084701	R2	CY8C20366-24LQXI	-65/150	0	500	77	0
LQ24ADAAGL	CA	084701	R2	CY8C20366-24LQXI	-65/150	0	1000	77	0
LQ24ADAAGL	CA	084701	R3	CY8C20346-24LQXI	-65/150	0	500	76	0
LQ24ADAAGL	CA	084701	R3	CY8C20346-24LQXI	-65/150	0	1000	76	0
LQ24ABAAL	AT-INDNS	MR082030	R1	CY8C20334-12LQXI	-65/150	0	500	80	0
LQ24ABAAL	AT-INDNS	MR082030	R1	CY8C20334-12LQXI	-65/150	0	1000	80	0
LQ24ABAAL	AT-THAILAND	MR083053	R1	CY8C20324-12LQXI	-65/150	0	500	80	0
Summary for Package Family: QFN (0.6mm, Saw Type, Pb-Free)			**43**	**records**					
Sum								**3402**	**0**
QFN (COL, 0.6mm, Saw Type, Pb-free)									
LG16AAAAL	M-Manila	080502	R1	CY8C20234-12LKXIT	-65/150	0	500	75	0
LG16AAAAL	M-Manila	080502	R1	CY8C20234-12LKXIT	-65/150	0	1000	75	0
LG16AAAAL	M-Manila	080502	R2	CY8C20234-12LKXIT	-65/150	0	500	76	0
LG16AAAAL	M-Manila	080502	R2	CY8C20234-12LKXIT	-65/150	0	1000	76	0
LG16AAAAL	M-Manila	080502	R3	CY8C20234-12LKXIT	-65/150	0	500	77	0
LG16AAAAL	M-Manila	080502	R3	CY8C20234-12LKXIT	-65/150	0	1000	76	0
LG16AAAAL	M-PHILS	MR082028	R1	CY8C20234-12LKXI	-65/150	0	500	80	0
LG16AAAAL	M-PHILS	MR082028	R1	CY8C20234-12LKXI	-65/150	0	1000	80	0
LG16AAAAL	M-PHILS	MR083048	R1	CY8C20122-LDX2I	-65/150	0	500	79	0
LG16AAAAL	M-PHILS	MR083048	R1	CY8C20122-LDX2I	-65/150	0	500	79	0
LG16AAAAL	M-PHILS	MR083048	R1	CY8C20122-LDX2I	-65/150	0	1000	77	0
LG16AAAAL	M	MR084013	R1	CY8C20234-12LKXI	-65/150	0	500	80	0

LG16AAAAL	M	MR084013	R1	CY8C20234-12LKXI	-65/150	0	1000	80	0
LG16AAAAL	M-PHILIPPINES	NR082004	R1	CY8C20234-12LKXIT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R1	CY8C20234-12LKXIT	-65/150	0	1000	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R10	CY8C20122-LDX2IT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R10	CY8C20122-LDX2IT	-65/150	0	1000	76	0
LG16AAAAL	M-PHILIPPINES	NR082004	R11	CP6824ATT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R11	CP6824ATT	-65/150	0	1000	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R2	CY8C20234-12LKXIT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R2	CY8C20234-12LKXIT	-65/150	0	1000	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R3	CY8C20234-12LKXIT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R3	CY8C20234-12LKXIT	-65/150	0	1000	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R4	CY8C20110-LDX2I	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R4	CY8C20110-LDX2I	-65/150	0	1000	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R6	CP6824ATT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R6	CP6824ATT	-65/150	0	1000	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R7	CP6824ATT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R7	CP6824ATT	-65/150	0	1000	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R8	CP6824ATT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R8	CP6824ATT	-65/150	0	1000	74	0
LG16AAAAL	M-PHILIPPINES	NR082004	R9	CP6824ATT	-65/150	0	500	77	0
LG16AAAAL	M-PHILIPPINES	NR082004	R9	CP6824ATT	-65/150	0	1000	77	0
Summary for Package Family: QFN (COL, 0.6mm, Saw Type, Pb-free)			**33**	**records**					
Sum								**2546**	**0**

QFN (Punch Type, Pb-Free)

LY32BGAGL	RA	083604	R1	CY8C21434-24LFXI	-65/150	0	500	80	0
LY32BGAGL	RA	083604	R1	CY8C21434-24LFXI	-65/150	0	1000	79	0
LY32BGAGL	RA	083604	R2	CY8C21434-24LFXI	-65/150	0	500	80	0
LY32BGAGL	RA	083604	R2	CY8C21434-24LFXI	-65/150	0	1000	80	0
LY32BGAGL	RA	083604	R3	CY8C21434-24LFXI	-65/150	0	500	80	0
LY32BGAGL	RA	083604	R3	CY8C21434-24LFXI	-65/150	0	1000	80	0
LY32BGAGL	RA-CML	083905	R1	CY8C21434-24LFXI	-65/150	0	500	80	0
LY32BGAGL	RA-CML	083905	R1	CY8C21434-24LFXI	-65/150	0	1000	80	0
LY32BGAGL	RA-CML	083905	R2	CY8C21434-24LFXI	-65/150	0	500	75	0
LY32BGAGL	RA-CML	083905	R2	CY8C21434-24LFXI	-65/150	0	1000	75	0
LY32BGAGL	RA-CML	083905	R3	CY8C21434-24LFXI	-65/150	0	500	80	0
LY32BGAGL	RA-CML	083905	R3	CY8C21434-24LFXI	-65/150	0	1000	80	0
LY40ABGAGL	L	084603	R1	CYRF6936A-40LFXC	-65/150	0	500	77	0
LY40ABGAGL	L	084603	R1	CYRF6936A-40LFXC	-65/150	0	1000	77	0
LY40ABGAGL	L	084603	R2	CYRF6936A-40LFXC	-65/150	0	500	77	0
LY40ABGAGL	L	084603	R2	CYRF6936A-40LFXC	-65/150	0	1000	77	0
LY40ABGAGL	L	084603	R3	CYRF6936A-40LFXC	-65/150	0	500	77	0
LY40ABGAGL	L	084603	R3	CYRF6936A-40LFXC	-65/150	0	1000	77	0
LY56AGAGL	L-KOREA	MR082031	R1	CY7C65630-56LFXC	-65/150	0	500	80	0
LY56AGAGL	L-KOREA	MR082031	R1	CY7C65630-56LFXC	-65/150	0	1000	80	0
LY32AAAGR	L-KOREA	MR082048	R1	CG6672AMT	-65/150	0	500	80	0
LY32AAAGR	L-KOREA	MR082048	R1	CG6672AMT	-65/150	0	1000	80	0
LY68AGAAGL	L	MR091024	R1	CY8CLED04-68LFXI	-65/150	0	500	80	0
LY68AGAAGL	L	MR091024	R1	CY8CLED04-68LFXI	-65/150	0	1000	80	0
Summary for Package Family: QFN (Punch Type, Pb-Free)			**18**	**records**					

Sum								**1891**	**0**
QFN (Saw Type, Pb-free)									
LT32BGAGL	RA-CML	082902	R1	CY8C21434-24LTXI	-65/150	0	500	79	0
LT32BGAGL	RA-CML	082902	R1	CY8C21434-24LTXI	-65/150	0	1000	79	0
LT32BGAGL	RA-CML	082902	R3	CY8C21434-24LTXI	-65/150	0	500	80	0
LT32BGAGL	RA-CML	082902	R3	CY8C21434-24LTXI	-65/150	0	1000	80	0
LT32BAAGGL	M	083907	R1	CY8C21434-24LTXI	-65/150	0	500	80	0
LT32BAAGGL	M	083907	R1	CY8C21434-24LTXI	-65/150	0	1000	80	0
LT32BAAGGL	M	083907	R2	CY8C21434-24LTXI	-65/150	0	500	80	0
LT32BAAGGL	M	083907	R2	CY8C21434-24LTXI	-65/150	0	1000	80	0
LT40ACAAGL	AE	084006	R1	CYRF6936-40LTXC	150	0	500	80	0
LT40ACAAGL	AE	084006	R1	CYRF6936-40LTXC	150	0	1000	80	0
LT40ACAAGL	AE	084006	R2	CYRF6936-40LTXC	150	0	500	80	0
LT40ACAAGL	AE	084006	R2	CYRF6936-40LTXC	150	0	1000	80	0
LT40ACAAGL	AE	084006	R3	CYRF6936-40LTXC	150	0	500	80	0
LT40ACAAGL	AE	084006	R3	CYRF6936-40LTXC	150	0	1000	80	0
LT40ACAAGL	AE	084006	R4	CYRF6936-40LTXC	150	0	500	80	0
LT40ACAAGL	AE	084006	R4	CYRF6936-40LTXC	150	0	1000	80	0
LT40ACAAGL	AE	084006	R5	CYRF6936-40LTXC	150	0	500	80	0
LT40ACAAGL	AE	084006	R5	CYRF6936-40LTXC	150	0	1000	80	0
LT40ACAAGL	AE	084006	R6	CYRF6936-40LTXC	150	0	1000	80	0
LT32BAAAGL	CA-THAILAND	MR083038	R1	CG7032AA	-65/150	0	500	80	0
LT32BAAAGL	CA-THAILAND	MR083038	R1	CG7032AA	-65/150	0	1000	80	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R1	CY8C21434-24LTXI	-65/150	0	500	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R1	CY8C21434-24LTXI	-65/150	0	1000	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R2	CY8C21434-24LTXI	-65/150	0	500	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R2	CY8C21434-24LTXI	-65/150	0	1000	77	0
LT32BAAGL	CA-MALAYSIA	NR082002	R3	CY8C21434-24LTXI	-65/150	0	500	76	0
LT32BAAGL	CA-MALAYSIA	NR082002	R3	CY8C21434-24LTXI	-65/150	0	1000	76	0
Summary for Package Family: QFN (Saw Type, Pb-free)			**27**	**records**					
Sum								**2138**	**0**
QSOP (Pb-Free)									
SQ2414AGN	R-CML	MR082036	R1	CY7C63823-QXC	-65/150	0	500	73	0
SQ2414AGN	R-CML	MR082036	R1	CY7C63823-QXC	-65/150	0	1000	73	0
SQ2414ABGN	R-CML	MR083023	R1	CY7C63743C-QXC	-65/150	0	500	80	0
SQ2414ABGN	R-CML	MR083023	R1	CY7C63743C-QXC	-65/150	0	1000	79	0
SQ2414ABGN	R	MR091002	R1	CY7C63743C-QXC	-65/150	0	500	80	0
SQ2414ABGN	R	MR091002	R1	CY7C63743C-QXC	-65/150	0	1000	80	0
Summary for Package Family: QSOP (Pb-Free)			**6**	**records**					
Sum								**465**	**0**
RTSOP (Pb-free)									
ZY28R2ALN	R-CML	MR083030	R1	CY62256VNLL-70ZRXIT	-65/150	0	500	79	0
ZY28R2ALN	R-CML	MR083030	R1	CY62256VNLL-70ZRXIT	-65/150	0	1000	79	0
ZY28R2BLN	R	MR091010	R1	CY62256NLL-70ZRXIT	-65/150	0	500	80	0
ZY28R2BLN	R	MR091010	R1	CY62256NLL-70ZRXIT	-65/150	0	1000	80	0
Summary for Package Family: RTSOP (Pb-free)			**4**	**records**					
Sum								**318**	**0**
SNC (Pb-Free)									
SY2831BBLN	R-CML	081203	R1	CY62256LL-55SNXI	-65/150	0	500	112	0

SY2831BBLN	R-CML	081203	R1	CY62256LL-55SNXI	-65/150	0	1000	112	0
SY2831BBLN	R-CML	081203	R1A	CY62256LL-55SNXI	-65/150	0	500	112	0
SY2831BBLN	R-CML	081203	R1A	CY62256LL-55SNXI	-65/150	0	1000	112	0
SY2831BBLN	R-CML	MR082037	R1	CY62256NLL-70SNXC	-65/150	0	500	80	0
SY2831BBLN	R-CML	MR082037	R1	CY62256NLL-70SNXC	-65/150	0	1000	80	0
SY2831BBLN	R-CML	MR083016	R1	CY62256NLL-70SNXCT	-65/150	0	500	81	0
SY2831BBLN	R-CML	MR083016	R1	CY62256NLL-70SNXCT	-65/150	0	1000	81	0
SY2831BBLN	R	MR084004	R1	CG7107AM	-65/150	0	500	80	0
SY2831BBLN	R	MR084004	R1	CG7107AM	-65/150	0	1000	80	0
SY2831BBLN	R	MR091007	R1	CY62256NLL-70SNXCT	-65/150	0	500	80	0
SY2831BBLN	R	MR091007	R1	CY62256NLL-70SNXCT	-65/150	0	1000	75	0
Summary for Package Family: SNC (Pb-Free)			**12**	**records**					
Sum								**1085**	**0**
SOIC									
S1615EAGB	M-PHILS	MR082014	R1	CY2309SC-1H	-65/150	0	500	80	0
S1615EAGB	M-PHILS	MR082014	R1	CY2309SC-1H	-65/150	0	1000	80	0
S1615EAGB	M	MR083010	R1A	CY2292SL-1V1	-65/150	0	100	72	0
S1615EAGB	M	MR083010	R1A	CY2292SL-1V1	-65/150	0	300	70	0
S1615EAGB	M	MR083010	R1A	CY2292SL-1V1	-65/150	0	500	69	0
S1615EAGB	M	MR083010	R1A	CY2292SL-1V1	-65/150	0	800	69	0
S1615EAGB	M	MR083010	R1A	CY2292SL-1V1	-65/150	0	1000	69	0
S1615KBAGN	RA	MR084023	R1	CY2292F	-65/150	0	500	80	0
S1615KBAGN	RA	MR084023	R1	CY2292F	-65/150	0	1000	80	0
S0815PBAGN	RA	MR091017	R1	CY2305SI-1HT	-65/150	0	500	80	0
S0815PBAGN	RA	MR091017	R1	CY2305SI-1HT	-65/150	0	1000	80	0
S1615EAGB	M	RR083025	R1	CY2292SL-1V1T	-65/150	0	100	15	0
S1615EAGB	M	RR083025	R1	CY2292SL-1V1T	-65/150	0	300	15	0
S1615EAGB	M	RR083025	R1	CY2292SL-1V1T	-65/150	0	500	15	0
S1615EAGB	M	RR083025	R1	CY2292SL-1V1T	-65/150	0	800	15	0
S1615EAGB	M	RR083025	R1	CY2292SL-1V1T	-65/150	0	1000	15	0
S1615EAGB	M	RR083025	R2	CY2292SI-705T	-65/150	0	100	18	0
S1615EAGB	M	RR083025	R2	CY2292SI-705T	-65/150	0	300	19	0
S1615EAGB	M	RR083025	R2	CY2292SI-705T	-65/150	0	500	19	0
S1615EAGB	M	RR083025	R2	CY2292SI-705T	-65/150	0	800	19	0
S1615EAGB	M	RR083025	R2	CY2292SI-705T	-65/150	0	1000	19	0
S1615EAGB	M	RR083025	R3	CY2292SC-984T	-65/150	0	100	15	0
S1615EAGB	M	RR083025	R3	CY2292SC-984T	-65/150	0	300	15	0
S1615EAGB	M	RR083025	R3	CY2292SC-984T	-65/150	0	500	15	0
S1615EAGB	M	RR083025	R3	CY2292SC-984T	-65/150	0	800	15	0
S1615EAGB	M	RR083025	R3	CY2292SC-984T	-65/150	0	1000	15	0
S1615EAGB	M	RR083025	R4	CY2292SL-1J4T	-65/150	0	100	17	0
S1615EAGB	M	RR083025	R4	CY2292SL-1J4T	-65/150	0	300	17	0
S1615EAGB	M	RR083025	R4	CY2292SL-1J4T	-65/150	0	500	17	0
S1615EAGB	M	RR083025	R4	CY2292SL-1J4T	-65/150	0	800	17	0
S1615EAGB	M	RR083025	R4	CY2292SL-1J4T	-65/150	0	1000	17	0
Summary for Package Family: SOIC			**31**	**records**					
Sum								**1158**	**0**
SOIC (J-Lead)									
V243GAAAGN	X	090302	R1	CY7C197BN-15VC	125	0	500	80	0
V243GAAAGN	X	090302	R1	CY7C197BN-15VC	125	0	1000	79	0

V243GAAAGN	X	090302	R2	CY7C197BN-15VC	125	0	500	80	0
V243GAAAGN	X	090302	R2	CY7C197BN-15VC	125	0	1000	80	0
V243GAAAGN	X	090302	R3	CY7C197BN-15VC	125	0	500	80	0
V243GAAAGN	X	090302	R3	CY7C197BN-15VC	125	0	1000	78	0
V243GAAGN	X	090302	R4	CY7C197BN-15VC	150	0	500	80	0
V243GAAGN	X	090302	R4	CY7C197BN-15VC	150	0	1000	80	0
Summary for Package Family: SOIC (J-Lead)			**8**	**records**					
Sum								**637**	**0**
SOIC (J-Lead, Pb-Free)									
VZ3646BGLL	R-CML	AR0806003	R1	CY7C1049CV33-10VXCT	-65/150	0	1000	11	0
VZ3648GBLL	R-CML	AR0814004	R1	CY7C1049DV33-10VXI	-65/150	0	500	11	0
VZ3648GBLL	R-CML	AR0814004	R1	CY7C1049DV33-10VXI	-65/150	0	1000	11	0
VZ3646BGLL	R-CML	AR0820004	R1	CY7C1049CV33-10VXC	-65/150	0	426	17	0
VZ3646BGLL	R-CML	AR0820004	R1	CY7C1049CV33-10VXC	-65/150	0	500	17	0
VZ3646BGLL	R-CML	AR0820004	R1	CY7C1049CV33-10VXC	-65/150	0	800	17	0
VZ3646BGLL	R-CML	AR0820004	R1	CY7C1049CV33-10VXC	-65/150	0	1000	17	0
VZ3646BGLL	R-CML	MR082009	R1	CY7C1049CV33-10VXC	-65/150	0	500	80	0
VZ3646BGLL	R-CML	MR082009	R1	CY7C1049CV33-10VXC	-65/150	0	1000	80	0
VZ28313BLN	R-CML	MR082056	R1	CY7C1399BN-12VXC	-65/150	0	500	80	0
VZ28313BLN	R-CML	MR082056	R1	CY7C1399BN-12VXC	-65/150	0	1000	80	0
VZ28313BLN	R-CML	MR083003	R1	CY7C1399BN-12VXC	-65/150	0	500	80	0
VZ28313BLN	R-CML	MR083003	R1	CY7C1399BN-12VXC	-65/150	0	1000	80	0
VZ444AABLL	R-CML	MR083035	R1	CY7C1021DV33-10VXI	-65/150	0	500	78	0
VZ444AABLL	R-CML	MR083035	R1	CY7C1021DV33-10VXI	-65/150	0	1000	77	0
VZ28313BLN	R	MR084019	R1	CY7C1399BN-12VXIT	-65/150	0	500	80	0
VZ28313BLN	R	MR084019	R1	CY7C1399BN-12VXIT	-65/150	0	1000	80	0
Summary for Package Family: SOIC (J-Lead, Pb-Free)			**17**	**records**					
Sum								**896**	**0**

Summary Detail -- HTS Performance Over Time

BUILDKIT	ASSY SITE	EVALNUM	TV	DEVICE	TEMP	VOLT	READOUT	SS	REJECT	FA	COMMENTS
FBGA (0.75-0.8, 0.3mm)											
BA48CRALE	T-OSE	MR082018	R1	CY62137CVSL-70BAI	150	0	500	80	0		
BA48CRALE	T-OSE	MR082018	R1	CY62137CVSL-70BAI	150	0	1000	80	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm)			**2**	**records**							
Sum								**160**	**0**		
FBGA (0.75-0.8, 0.3mm, Pb-free)											
BK48BWBLL	G-ASE	MR082010	R1	CY7C1021CV33-10BAXI	150	0	500	77	0		
BK48BWBLL	G-ASE	MR082010	R1	CY7C1021CV33-10BAXI	150	0	1000	77	0		
BK48DJALL	G	MR083050	R1	CY62177DV30LL-55BAXI	150	0	500	80	0		
Summary for Package Family: FBGA (0.75-0.8, 0.3mm, Pb-free)			**3**	**records**							
Sum								**234**	**0**		
FBGA (1.0-1.27)											
BB165AVLE	CML-RA	MR074047	R1	CY7C1313BV18-250BZC	150	0	500	80	0		
BB165	RA-CML	MR074047	R1	CY7C1313BV18-250BZC	150	0	1000	80	0		
BB100CAALE	G-ASE	MR081067	R1	CYP15G0101DXB-BBI	150	0	500	80	0		
BB100CAALE	G-ASE	MR081067	R1	CYP15G0101DXB-BBI	150	0	1000	80	0		
BB100EAALE	G-TAIWAN	MR082041	R1	CY7B994V-2BBI	150	0	500	80	0		
BB100EAALE	G-TAIWAN	MR082041	R1	CY7B994V-2BBI	150	0	1000	76	0		
BB165AVLE	RA-CML	MR082070	R1	CY7C1313BV18-250BZC	150	0	500	80	0		
BB165AVLE	RA-CML	MR082070	R1	CY7C1313BV18-250BZC	150	0	1000	78	0		
Summary for Package Family: FBGA (1.0-1.27)			**8**	**records**							
Sum								**634**	**0**		
FBGA (1.0-1.27, Pb-free)											
BW100EAGL	G	MR084067	R1	CYP15G0101DXB-BBXC	150	0	500	79	0		
BW100EAGL	G	MR084067	R1	CYP15G0101DXB-BBXC	150	0	1000	79	0		
Summary for Package Family: FBGA (1.0-1.27, Pb-free)			**2**	**records**							
Sum								**158**	**0**		
FLIPCHIP CSP (Pb-Free)											
FN81BGAN	AU - Amkor Taiwan	080501	R1	CYWB0124ABX-FDXIT	150	0	500	90	0		
FN81BGAN	AU - Amkor Taiwan	080501	R1	CYWB0124ABX-FDXIT	150	0	1000	90	0		
Summary for Package Family: FLIPCHIP CSP (Pb-Free)			**2**	**records**							
Sum								**180**	**0**		
PBGA (with Heat Spreader)											
BG119SALE	G-ASE	MR082021	R1	CY7C1354C-166BGC	150	0	500	80	0		
BG119SALE	G-ASE	MR082021	R1	CY7C1354C-166BGC	150	0	1000	80	0		
BG119SALE	G-TAIWAN	MR083001	R1	CY7C1354C-166BGC	150	0	500	80	0		
BG119SALE	G-TAIWAN	MR083001	R1	CY7C1354C-166BGC	150	0	1000	80	0		
BG119SALE	G	MR084037	R1	CY7C1354C-166BGC	150	0	500	80	0		
BG119SALE	G	MR084037	R1	CY7C1354C-166BGC	150	0	1000	80	0		
Summary for Package Family: PBGA (with Heat Spreader)			**6**	**records**							
Sum								**480**	**0**		
PBGA (Cavity/Heat Sink)											
BL256L2GE	G	MR084066	R1	CYP15G0401DXB-BGI	150	0	500	80	0		
BL256L2GE	G	MR084066	R1	CYP15G0401DXB-BGI	150	0	1000	80	0		
Summary for Package Family: PBGA (Cavity/Heat Sink)			**2**	**records**							
Sum								**160**	**0**		

PDIP									
Summary for Package Family: PDIP			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
PDIP (Pb-Free)									
PZ183DAGN	RA-CML	MR081069	R1	CY7C63723C-PXC	150	0	500	80	0
PZ183DAGN	RA-CML	MR081069	R1	CY7C63723C-PXC	150	0	1000	80	0
PZ183DAGN	RA-CML	MR082065	R1	CY7C63723C-PXC	150	0	500	80	0
PZ183DAGN	RA-CML	MR082065	R1	CY7C63723C-PXC	150	0	1000	80	0
PZ183DBGN	RA-CML	MR083022	R1	CY7C63723C-PXC	150	0	500	80	0
PZ183DBGN	RA-CML	MR083022	R1	CY7C63723C-PXC	150	0	1000	80	0
PZ183AXGN	O-OMEDATA	MR083039	R1	CS6632AF	150	0	500	80	0
PZ243AAAGN	X	MR084028	R1	CY7C63743C-PXC	150	0	500	80	0
PZ243AAAGN	X	MR084028	R1	CY7C63743C-PXC	150	0	1000	80	0
PZ183DBGN	RA	MR091008	R1	CY7C63723C-PXC	150	0	500	80	0
PZ183DBGN	RA	MR091008	R1	CY7C63723C-PXC	150	0	1000	80	0
Summary for Package Family: PDIP (Pb-Free)			**11**	**records**					
Sum								**880**	**0**
PLCC									
J32RBGAAGB	X-MMT	MR082017	R1	CY7B9911V-5JCT	150	0	500	80	0
J32RBGAAGB	X-MMT	MR082017	R1	CY7B9911V-5JCT	150	0	1000	80	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	150	0	500	80	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	150	0	1000	78	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	150	0	2000	78	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	150	0	2000	78	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	150	0	2500	78	0
J32RBGAAGB	X-MMT	MR083024	R1	CY7B991V-5JI	150	0	3000	78	0
Summary for Package Family: PLCC			**8**	**records**					
Sum								**630**	**0**
PLCC (Pb-Free)									
Summary for Package Family: PLCC (Pb-Free)			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
PQFP (Pb-free)									
NZ52DXGAN	G-ASE	MR082061	R1	CY7C131-25NXC	150	0	500	80	0
NZ52DXGAN	G-ASE	MR082061	R1	CY7C131-25NXC	150	0	1000	80	0
Summary for Package Family: PQFP (Pb-free)			**2**	**records**					
Sum								**160**	**0**
QFN (Open Cavity, Pb-free)									
LB42ABALL	R-CML	NR081004	R1	CYONS10810-LBXC	100	0	500	77	0
LB42ABALL	R-CML	NR081004	R1	CYONS10810-LBXC	100	0	1000	77	0
LB42ABALL	R-CML	NR081004	R2	CYONS10810-LBXC	100	0	500	77	0
LB42ABALL	R-CML	NR081004	R2	CYONS10810-LBXC	100	0	1000	77	0
LB42ABALL	R-CML	NR081004	R3	CYONS10810-LBXC	100	0	500	77	0
LB42ABALL	R-CML	NR081004	R3	CYONS10810-LBXC	100	0	1000	77	0
Summary for Package Family: QFN (Open Cavity, Pb-free)			**6**	**records**					
Sum								**462**	**0**
QFN (0.4mm, Saw Type, Pb-free)									
LN32AAAAAL	CA-Malaysia	82008	R1	CY8C21434-24LCXI	150	0	500	77	0
LN32AAAAAL	CA	MR091052	R1	CP7052BTT	150	0	500	80	0
LN32AAAAAL	CA	MR091052	R1	CP7052BTT	150	0	1000	80	0
Summary for Package Family: QFN (COL, 0.6mm, Saw Type, Pb-			**3**	**records**					

free)

Sum								**237**	**0**
QFN (0.6mm, Punch Type, Pb-Free)									
LK32AABAGL	L-KOREA	MR082022	R1	CY8C20434-12LKXI	150	0	500	80	0
LK32AABAGL	L-KOREA	MR082022	R1	CY8C20434-12LKXI	150	0	1000	80	0
LK32AABAGL	L-KOREA	MR083006	R1	CY8C20424-12LKXI	150	0	500	80	0
LK32AABAGL	L-KOREA	MR083006	R1	CY8C20424-12LKXI	150	0	1000	79	0
LK32AABAGL	L	MR091011	R1	CY8C20434-12LKXIT	150	0	500	80	0
LK32AABAGL	L	MR091011	R1	CY8C20434-12LKXIT	150	0	1000	80	0
LK32AABAGL	L-KOREA	NR072004	R2	CY8C20424-12LKXI	150	0	1000	77	0
LK32AABAGL	L-KOREA	NR072004	R3	CP6683AM	150	0	1000	80	0
Summary for Package Family: QFN (0.6mm, Punch Type, Pb-Free)			**8**	**records**					
Sum								**636**	**0**
QFN (0.6mm, Saw Type, Pb-Free)									
LQ32DAGLL	CA-MALAYSIA	082602	R1	CY8C23533-24LQXI	150	0	500	80	0
LQ32DAGLL	CA-MALAYSIA	082602	R1	CY8C23533-24LQXI	150	0	1000	80	0
LT32BAABGL	RA	084602	R7	CY8C21434-24LTXIKA	150	0	500	77	0
LT32BAABGL	RA	084602	R7	CY8C21434-24LTXIKA	150	0	1000	77	0
LQ24ADAAGL	CA	084701	R1	CY8CTST200-24LQXI	150	0	500	77	0
LQ24ADAAGL	CA	084701	R1	CY8CTST200-24LQXI	150	0	1000	76	0
LQ24ABAAL	AT-INDNS	MR082030	R1	CY8C20334-12LQXI	150	0	500	80	0
LQ24ABAAL	AT-INDNS	MR082030	R1	CY8C20334-12LQXI	150	0	1000	80	0
LQ24ABAAL	AT-THAILAND	MR083053	R1	CY8C20324-12LQXI	150	0	500	79	0
LQ24ABAAL	AT-THAILAND	MR083053	R1	CY8C20324-12LQXI	150	0	1000	79	0
LQ24ABAAL	AT-INDOENESIA	NR073002	R1A	CY8C20334-12LQXI	150	0	500	80	0
LQ24ABAAL	AT-INDOENESIA	NR073002	R1A	CY8C20334-12LQXI	150	0	1000	80	0
Summary for Package Family: QFN (0.6mm, Saw Type, Pb-Free)			**12**	**records**					
Sum								**945**	**0**
QFN (COL, 0.6mm, Saw Type, Pb-free)									
LG16AAAAL	M-PHILS	MR082028	R1	CY8C20234-12LKXI	150	0	500	80	0
LG16AAAAL	M-PHILS	MR082028	R1	CY8C20234-12LKXI	150	0	1000	80	0
LG16AAAAL	M-PHILS	MR083048	R1	CY8C20122-LDX2I	150	0	500	80	0
LG16AAAAL	M-PHILS	MR083048	R1	CY8C20122-LDX2I	150	0	1000	80	0
LG16AAAAL	M	MR084013	R1	CY8C20234-12LKXI	150	0	500	80	0
LG16AAAAL	M	MR084013	R1	CY8C20234-12LKXI	150	0	1000	80	0
Summary for Package Family: QFN (COL, 0.6mm, Saw Type, Pb-free)			**6**	**records**					
Sum								**480**	**0**
QFN (Punch Type, Pb-Free)									
LY56AGAGL	L-KOREA	MR082031	R1	CY7C65630-56LFXC	150	0	500	80	0
LY56AGAGL	L-KOREA	MR082031	R1	CY7C65630-56LFXC	150	0	1000	80	0
LY32AAAGR	L-KOREA	MR082048	R1	CG6672AMT	150	0	500	80	0
LY32AAAGR	L-KOREA	MR082048	R1	CG6672AMT	150	0	1000	80	0
LY68AGABGL	L	MR084009	R1	CS6656AAT	150	0	500	80	0
LY68AGABGL	L	MR084009	R1	CS6656AAT	150	0	1000	80	0
LY68AGAAGL	L	MR091024	R1	CY8CLED04-68LFXI	150	0	500	80	0
LY68AGAAGL	L	MR091024	R1	CY8CLED04-68LFXI	150	0	1000	80	0
Summary for Package Family: QFN (Punch Type, Pb-Free)			**8**	**records**					
Sum								**640**	**0**
QFN (Saw Type, Pb-free)									

LT32BAAAGL	CA-THAILAND	MR083038	R1	CG7032AA	150	0	500	80	0
LT32BAAAGL	CA-THAILAND	MR083038	R1	CG7032AA	150	0	1000	80	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R1	CY8C21434-24LTXI	150	0	500	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R1	CY8C21434-24LTXI	150	0	1000	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R2	CY8C21434-24LTXI	150	0	500	77	0
LT32BAAAGL	CA-MALAYSIA	NR082002	R2	CY8C21434-24LTXI	150	0	1000	77	0
LT32BAAGL	CA-MALAYSIA	NR082002	R3	CY8C21434-24LTXI	150	0	500	77	0
LT32BAAGL	CA-MALAYSIA	NR082002	R3	CY8C21434-24LTXI	150	0	1000	77	0
Summary for Package Family: QFN (Saw Type, Pb-free)				**8**	**records**				
Sum								**622**	**0**
QSOP (Pb-Free)									
SQ2414AGN	R-CML	MR082036	R1	CY7C63823-QXC	150	0	500	80	0
SQ2414AGN	R-CML	MR082036	R1	CY7C63823-QXC	150	0	1000	80	0
SQ2414ABGN	R-CML	MR083023	R1	CY7C63743-QXC	150	0	500	80	0
SQ2414ABGN	R-CML	MR083023	R1	CY7C63743C-QXC	150	0	500	80	0
SQ2414ABGN	R-CML	MR083023	R1	CY7C63743C-QXC	150	0	1000	80	0
SQ2414ABGN	R	MR091002	R1	CY7C63743C-QXC	150	0	500	80	0
SQ2414ABGN	R	MR091002	R1	CY7C63743C-QXC	150	0	1000	80	0
Summary for Package Family: QSOP (Pb-Free)				**7**	**records**				
Sum								**560**	**0**
RTSOP (Pb-free)									
ZY28R2ALN	R-CML	MR083030	R1	CY62256VNLL-70ZRXIT	150	0	500	80	0
ZY28R2ALN	R-CML	MR083030	R1	CY62256VNLL-70ZRXIT	150	0	1000	80	0
ZY28R2BLN	R	MR091010	R1	CY62256NLL-70ZRXIT	150	0	500	80	0
ZY28R2BLN	R	MR091010	R1	CY62256NLL-70ZRXIT	150	0	1000	80	0
Summary for Package Family: RTSOP (Pb-free)				**4**	**records**				
Sum								**320**	**0**
SNC (Pb-Free)									
SY2831BBLN	R-CML	MR082037	R1	CY62256NLL-70SNXC	150	0	500	80	0
SY2831BBLN	R-CML	MR082037	R1	CY62256NLL-70SNXC	150	0	1000	80	0
SY2831BBLN	R-CML	MR083016	R1	CY62256NLL-70SNXCT	150	0	500	80	0
SY2831BBLN	R-CML	MR083016	R1	CY62256NLL-70SNXCT	150	0	1000	80	0
SY2831BBLN	R	MR084004	R1	CG7107AM	150	0	500	80	0
SY2831BBLN	R	MR084004	R1	CG7107AM	150	0	1000	80	0
SY2831BBLN	R	MR091007	R1	CY62256NLL-70SNXCT	150	0	500	80	0
SY2831BBLN	R	MR091007	R1	CY62256NLL-70SNXCT	150	0	1000	80	0
Summary for Package Family: SNC (Pb-Free)				**8**	**records**				
Sum								**640**	**0**
SOIC									
S1615EAGB	M-PHILS	MR082014	R1	CY2309SC-1H	150	0	500	80	0
S1615EAGB	M-PHILS	MR082014	R1	CY2309SC-1H	150	0	1000	78	0
S1615EGB	M-PHILS	MR083010	R1	CY2308SC-1T	150	0	500	80	0
S1615EGB	M-PHILS	MR083010	R1	CY2308SC-1T	150	0	1000	80	0
S1615KBAGN	RA	MR084023	R1	CY2292F	150	0	500	80	0
S1615KBAGN	RA	MR084023	R1	CY2292F	150	0	1000	80	0
S0815PBAGN	RA	MR091017	R1	CY2305SI-1HT	150	0	500	80	0
S0815PBAGN	RA	MR091017	R1	CY2305SI-1HT	150	0	1000	80	0
Summary for Package Family: SOIC				**8**	**records**				
Sum								**638**	**0**
SOIC (J-Lead)									

V243GAAAGN	X	090302	R1	CY7C197BN-15VC	150	0	500	80	0
V243GAAAGN	X	090302	R1	CY7C197BN-15VC	150	0	1000	80	0
Summary for Package Family: SOIC (J-Lead)			**#REF!**	**records**					
Sum								**160**	**0**
SOIC (J-Lead, Pb-Free)									
VZ3646BGLL	R-CML	MR082009	R1	CY7C1049CV33-10VXC	150	0	500	80	0
VZ3646BGLL	R-CML	MR082009	R1	CY7C1049CV33-10VXC	150	0	1000	80	0
VZ28313BLN	R-CML	MR082056	R1	CY7C1399BN-12VXC	150	0	500	80	0
VZ28313BLN	R-CML	MR082056	R1	CY7C1399BN-12VXC	150	0	1000	80	0
VZ28313BLN	R-CML	MR083003	R1	CY7C1399BN-12VXC	150	0	500	80	0
VZ28313BLN	R-CML	MR083003	R1	CY7C1399BN-12VXC	150	0	1000	80	0
VZ444AABLL	R-CML	MR083035	R1	CY7C1021DV33-10VXI	150	0	500	78	0
VZ444AABLL	R-CML	MR083035	R1	CY7C1021DV33-10VXI	150	0	1000	76	0
VZ28313BLN	R	MR084019	R1	CY7C1399BN-12VXIT	150	0	500	79	0
VZ28313BLN	R	MR084019	R1	CY7C1399BN-12VXIT	150	0	1000	79	0
Summary for Package Family: SOIC (J-Lead, Pb-Free)			**10**	**records**					
Sum								**792**	**0**
SOIC (Pb-Free)									
SZ815CGAN	M - Manila	080803	R1	CY2305CSXI-1H	150	0	1000	80	0
SZ1615DGN	M-Amkor	081907	R1	CY2309CSXI-1H	150	0	500	80	0
SZ1615DGN	M-Amkor	081907	R1	CY2309CSXI-1H	150	0	1000	80	0
SZ1615NAGN	CA-MALAYSIA	082203	R1	CY8C20180-SX2I	150	0	500	77	0
SZ1615NAGN	CA-MALAYSIA	082203	R1	CY8C20180-SX2I	150	0	1000	77	0
SZ324516LL	R-CML	MR082005	R1	CY62148ELL-55SXI	150	0	500	80	0
SZ324516LL	R-CML	MR082005	R1	CY62148ELL-55SXI	150	0	1000	80	0
SZ28327BGL	R-CML	MR082006	R1	CY8C27443-24SXI	150	0	500	80	0
SZ28327BGL	R-CML	MR082006	R1	CY8C27443-24SXI	150	0	1000	80	0
SZ183CGAN	RA-CML	MR082012	R1	CY7C63723C-SXC	150	0	500	80	0
SZ183CGAN	RA-CML	MR082012	R1	CY7C63723C-SXC	150	0	1000	80	0
SZ1615KGN	RA-CML	MR082015	R1	CY2309SXC-1HT	150	0	500	80	0
SZ1615KGN	RA-CML	MR082015	R1	CY2309SXC-1HT	150	0	1000	80	0
SZ1615FAL	T-OSE	MR082016	R1	CY8C201A0-SX2I	150	0	500	80	0
SZ1615FAL	T-OSE	MR082016	R1	CY8C201A0-SX2I	150	0	1000	80	0
SZ1815CGAN	M-PHILS	MR082023	R1	CY8C24123A-24SXI	150	0	500	80	0
SZ1815CGAN	M-PHILS	MR082023	R1	CY8C24123A-24SXI	150	0	1000	80	0
SZ1615EGN	M-PHILS	MR082025	R1	CY2309NZSXC-1H	150	0	500	80	0
SZ1615EGN	M-PHILS	MR082025	R1	CY2309NZSXC-1H	150	0	1000	80	0
SZ24312BGN	R-CML	MR082057	R1	CY7C63743C-SXC	150	0	500	80	0
SZ24312BGN	R-CML	MR082057	R1	CY7C63743C-SXC	150	0	1000	80	0
SZ1615DGN	M-PHILS	MR083009	R1	CY2292SXL-1X6T	150	0	500	80	0
SZ1615DGN	M-PHILS	MR083009	R1	CY2292SXL-1X6T	150	0	1000	80	0
SZ324516BL	R-CML	MR083017	R1	CY62148ELL-55SXIT	150	0	500	80	0
SZ324516BL	R-CML	MR083017	R1	CY62148ELL-55SXIT	150	0	1000	80	0
SZ28327BGL	R-CML	MR083018	R1	CY8C27443-24SXIT	150	0	500	80	0
SZ28327BGL	R-CML	MR083018	R1	CY8C27443-24SXIT	150	0	1000	80	0
SZ183CBGAN	RA-CML	MR083019	R1	CY7C63723C-SXC	150	0	500	80	0
SZ183CBGAN	RA-CML	MR083019	R1	CY7C63723C-SXC	150	0	1000	80	0
SZ183CBGAN	RA-CML	MR083019	R1	CY7C63723C-SXC	150	0	1500	80	0
SZ183CBGAN	RA-CML	MR083019	R1	CY7C63723C-SXC	150	0	2000	80	0

SZ183CBGAN	RA-CML	MR083019	R1	CY7C63723C-SXC	150	0	2500	80	0
SZ24315BGN	RA-CML	MR083025	R1	CY7C63823-SXC	150	0	500	80	0
SZ24315BGN	RA-CML	MR083025	R1	CY7C63823-SXC	150	0	1000	80	0
SZ815PABGN	RA-CML	MR083034	R1	CY2305SXC-1H	150	0	500	78	0
SZ815PABGN	RA-CML	MR083034	R1	CY2305SXC-1H	150	0	1000	78	0
SZ1615FAL	T-TAIWAN	MR083041	R1	CY23EP09SXC-1H	150	0	500	80	0
SZ1615FAL	T-TAIWAN	MR083041	R1	CY23EP09SXC-1H	150	0	1000	80	0
SZ815DAGN	M	MR084018	R1	CY2304SXI-2	150	0	500	80	0
SZ815DAGN	M	MR084018	R1	CY2304SXI-2	150	0	1000	80	0
SZ183CBGAN	RA	MR084026	R1	CY7C63723C-SXC	150	0	500	80	0
SZ183CBGAN	RA	MR084026	R1	CY7C63723C-SXC	150	0	1000	80	0
SZ24315BGN	RA	MR084029	R1	CY7C63743C-SXC	150	0	500	80	0
SZ24315BGN	RA	MR084029	R1	CY7C63743C-SXC	150	0	1000	80	0
SZ1615FAL	T	MR084072	R1	CY2309CSXC-1T	150	0	500	80	0
SZ1615FAL	T	MR084072	R1	CY2309CSXC-1T	150	0	1000	80	0
SZ32457BLN	R	MR091004	R1	CY62128ELL-45SXIT	150	0	500	80	0
SZ32457BLN	R	MR091004	R1	CY62128ELL-45SXIT	150	0	1000	80	0
SZ1615BKGN	RA	MR091016	R1	CY2308SXC-2T	150	0	500	80	0
SZ1615BKGN	RA	MR091016	R1	CY2308SXC-2T	150	0	1000	80	0
SZ1615EGN	M	MR091020	R1	CY2309SXI-1HT	150	0	500	80	0
SZ1615EGN	M	MR091020	R1	CY2309SXI-1HT	150	0	1000	80	0
SZ2035BAL	R	MR091001	R1	CY8C27243-24SXI	150	0	1000	80	0
SZ2035BAL	R	MR091001	R1	CY8C27243-24SXI	150	0	500	80	0
SZ183CBGAN	RA	MR091003	R1	CY7C63723C-SXC	150	0	500	80	0
SZ815PAGN	RA-CML	NR081002	R14	CY22560SXI	150	0	500	80	0
SZ815PAGN	RA-CML	NR081002	R14	CY22560SXI	150	0	1000	80	0
SZ815PAGN	RA-CML	NR081002	R2	CY25560SXC	150	0	1000	80	0
Summary for Package Family: SOIC (Pb-Free)			**58**	**records**					
Sum								**4630**	**0**
SSOP (Pb-Free)									
A32LXGXGB	Q	MR091043	R1	CY29948ACT	150	0	500	80	0
A32LXGXGB	Q	MR091043	R1	CY29948ACT	150	0	1000	80	0
SP202AAAGN	RA-CML	MR082007	R1	CP6650AMT	150	0	500	80	0
SP202AAAGN	RA-CML	MR082007	R1	CP6650AMT	150	0	1000	80	0
SP28214GL	T-OSE	MR082013	R1	CY8C26443-24PVX	150	0	500	80	0
SP28214GL	T-OSE	MR082013	R1	CY8C26443-24PVX	150	0	1000	80	0
SP28214GL	T-TAIWAN	MR083036	R1	CY8C9520A-24PVXI	150	0	500	80	0
SP28214GL	T-TAIWAN	MR083036	R1	CY8C9520A-24PVXI	150	0	1000	80	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	150	0	500	80	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	150	0	1000	80	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	150	0	1500	80	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	150	0	2000	80	0
SP28215BGL	RA-CML	MR083021	R1	CY8C21534-24PVXI	150	0	2500	80	0
SP28215GGL	RA-CML	MR081016	R1A	CY8C21534-24PVXI	150	0	1000	80	0
SP2822BGL	M-PHILS	MR082038	R1	CY8C24423A-12PVXE	150	0	500	80	0
SP2822BGL	M-PHILS	MR082038	R1	CY8C24423A-12PVXE	150	0	1000	80	0
SP2822BGL	M-PHILS	MR083008	R1	CY8C21534-12PVXET	150	0	500	80	0
SP2822BGL	M-PHILS	MR083008	R1	CY8C21534-12PVXET	150	0	1000	80	0
SP2822BGL	M	MR091006	R1	CY8C27443-12PVXE	150	0	1000	80	0
SP2822BGL	M	MR091042	R1	CP6801ATT	150	0	1000	80	0

SP2824HAN	T	MR084021	R1	CY8C24533-24PVXI	150	0	500	80	0
SP2824HAN	T	MR084021	R1	CY8C24533-24PVXI	150	0	1000	80	0
SP483AGAN	R	084703	R1	CY8C20566-24PVXI	150	0	1000	75	0
SP483AGAN	R	084703	R1	CY8C20566-24PVXI	150	0	1500	74	0
SP483EBBAL	R	MR091005	R1	CY8C27643-24PVXI	150	0	500	80	0
SP483EBBAL	R	MR091005	R1	CY8C27643-24PVXI	150	0	1000	80	0
SP483HAAGR	M-PHILS	MR082071	R1	CY14B101L-SP45XC	150	0	500	80	0
SP483HAAGR	M-PHILS	MR082071	R1	CY14B101L-SP45XC	150	0	1000	79	0
SP483HAAGR	M-PHILS	MR082071	R1	CY14B101L-SP45XC	150	0	1500	72	0
SP563BBBG	R-CML	MR083011	R1	CY7C68013-56PVXC	150	0	500	80	0
SP563BBBG	R-CML	MR083011	R1	CY7C68013-56PVXC	150	0	1000	79	0
SP563BBBGL	R-CML	MR082008	R1	CY7C68300C-56PVXC	150	0	500	80	0
SP563BBBGL	R-CML	MR082008	R1	CY7C68300C-56PVXC	150	0	1000	80	0
Summary for Package Family: SSOP (Pb-Free)			**29**	**records**					
Sum								**2300**	**0**
TQFP									
A32LXGXGB	Q-KOREA	MR082024	R1	CY29948AC	150	0	500	80	0
A32LXGXGB	Q-KOREA	MR082024	R1	CY29948AC	150	0	1000	79	0
A32LXGXGB	Q-KOREA	MR083012	R1	CY29948AI	150	0	500	80	0
A32LXGXGB	Q-KOREA	MR083012	R1	CY29948AI	150	0	1000	80	0
Summary for Package Family: TQFP			**4**	**records**					
Sum								**319**	**0**
TQFP (10mm X 10mm)									
Summary for Package Family: TQFP (10mm X 10mm)			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TQFP (Pb-Free)									
AZ128SABLL	R-CML	MR082004	R1	CY7C68013A-128AXC	150	0	500	80	0
AZ128SABLL	R-CML	MR082004	R1	CY7C68013A-128AXC	150	0	1000	80	0
AZ32GXGAN	G-ASE	MR082020	R1	CY29942AXI	150	0	500	80	0
AZ32GXGAN	G-ASE	MR082020	R1	CY29942AXI	150	0	1000	80	0
AZ32GXGAN	G-TAIWAN	MR082020	R1A	CY22942AXI	150	0	500	78	0
AZ32GXGAN	G-TAIWAN	MR082020	R1A	CY22942AXI	150	0	1000	78	0
AZ44SGGAN	R-CML	MR082040	R1	CS6567AM	150	0	500	80	0
AZ44SGGAN	R-CML	MR082040	R1	CS6567AM	150	0	1000	80	0
AZ100SFA	R-CML	MR082049	R1	CY7C024-25AXC	150	0	500	80	0
AZ100SFA	R-CML	MR082049	R1	CY7C024-25AXC	150	0	1000	79	0
AZ32BXGAN	Q-KOREA	MR082054	R1	CY7C4251V-15AXC	150	0	500	80	0
AZ32BXGAN	Q-KOREA	MR082054	R1	CY7C4251V-15AXC	150	0	1000	80	0
AZ44SGGAN	R-CML	MR082060	R1	CS6567AM	150	0	500	80	0
AZ44SGGAN	R-CML	MR082060	R1	CS6567AM	150	0	1000	80	0
AZ44SGGAN	R-CML	MR083014	R1	CS6567AM	150	0	500	80	0
AZ44SGGAN	R-CML	MR083014	R1	CS6567AM	150	0	1000	80	0
AZ32BXGAN	Q-KOREA	MR083031	R1	CY7C4251V-25AXC	150	0	500	80	0
AZ32BXGAN	Q-KOREA	MR083031	R1	CY7C4251V-25AXC	150	0	1000	80	0
AZ100SEAL	RA-CML	MR083032	R1	CY7B994V-5AXI	150	0	500	80	0
AZ100SEAL	RA-CML	MR083032	R1	CY7B994V-5AXI	150	0	1000	80	0
AZ100RBBLN	R	MR084002	R1	CY7C1370D-167AXI	150	0	500	80	0
AZ100RBBLN	R	MR084002	R1	CY7C1370D-167AXI	150	0	1000	80	0
AZ44SFGAN	R	MR084010	R1	CY37032P44-125AXC	150	0	500	80	0
AZ44SFGAN	R	MR084010	R1	CY37032P44-125AXC	150	0	1000	80	0

AZ32LXGAN	Q	MR084017	R1	CY29948AXC	150	0	500	80	0
AZ32LXGAN	Q	MR084017	R1	CY29948AXC	150	0	1000	80	0
Summary for Package Family: TQFP (Pb-Free)			**26**	**records**					
Sum								**2075**	**0**
EXPOSED TSOP (Pb-free)									
Summary for Package Family : EXPOSED TSOP (Pb-free)			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TSOP (Pb-free)									
ZT32RABALL	T-OSE	MR082019	R1	CY62128EV30LL-45ZXI	150	0	500	80	0
ZT32RABALL	T-OSE	MR082019	R1	CY62128EV30LL-45ZXI	150	0	1000	80	0
ZT28R4BGL	R-CML	MR083028	RIA	CY7C1399BN-12ZXC	150	0	500	80	0
ZT28R4BGL	R-CML	MR083028	RIA	CY7C1399BN-12ZXC	150	0	500	78	0
ZT28R4BGL	R-CML	MR083028	RIA	CY7C1399BN-12ZXC	150	0	1000	80	0
ZT28R4BGL	R-CML	MR083028	RIA	CY7C1399BN-12ZXC	150	0	1000	76	0
ZT32RABALL	T-OSE	MR083051	R1	CY62128BLL-70ZXC	150	0	500	80	0
ZT32RABALL	T-OSE	MR083051	R1	CY62128BLL-70ZXC	150	0	1000	80	0
ZT32RAEBLN	RA	MR084006	R1	CG6708AMT	150	0	500	80	0
ZT32RAEBLN	RA	MR084006	R1	CG6708AMT	150	0	1000	80	0
ZT28R2BBLN	R	MR084060	R1	CY62256VNLL-70ZXC	150	0	500	80	0
ZT28R2BBLN	R	MR084060	R1	CY62256VNLL-70ZXC	150	0	1000	80	0
ZT28R2BBLN	R	MR091012	R1	CY62256NLL-55ZXIT	150	0	500	80	0
ZT28R2BBLN	R	MR091012	R1	CY62256NLL-55ZXIT	150	0	1000	80	0
ZT32RAEBLN	RA	MR091014	R1	CY62128EV30LL-45ZXI	150	0	500	80	0
ZT32RAEBLN	RA	MR091014	R1	CY62128EV30LL-45ZXI	150	0	1000	80	0
ZT32RABALL	T	MR091021	R1	CY62128EV30LL-45ZXI	150	0	500	80	0
ZT32RABALL	T	MR091021	R1	CY62128EV30LL-45ZXI	150	0	1000	80	0
Summary for Package Family: TSOP (Pb-free)			**18**	**records**					
Sum								**1434**	**0**
TSOP I (Pb-Free)									
ZB32RHALN	R-CML	MR082003	R1	CY62128EV30LL-45ZAXI	150	0	500	80	0
ZB32RHALN	R-CML	MR082003	R1	CY62128EV30LL-45ZAXI	150	0	1000	80	0
ZB32RHALL	R-CML	MR082053	R1	CY62128DV30LL-55ZAXI	150	0	500	80	0
ZB32RHALL	R-CML	MR082053	R1	CY62128DV30LL-55ZAXI	150	0	1000	80	0
ZB32RHBALN	R-CML	MR083042	R1	CY62128ELL-45ZAXI	150	0	500	80	0
ZB32RHBALN	R-CML	MR083042	R1	CY62128ELL-45ZAXI	150	0	1000	80	0
ZB32RHBALN	R	MR091031	R1	CG7086AM	150	0	500	80	0
ZB32RHBALN	R	MR091031	R1	CG7086AM	150	0	1000	80	0
Summary for Package Family: TSOP I (Pb-Free)			**8**	**records**					
Sum								**640**	**0**
TSOP II									
Summary for Package Family: TSOP II			**#REF!**	**records**					
Sum								**#REF!**	**#REF!**
TSOP II (Pb-Free)									
ZW444AMBLN	R-CML	MR082002	R1	CY62146EV30LL-45SZSX	150	0	500	80	0
ZW444AMBLN	R-CML	MR082002	R1	CY62146EV30LL-45SZSX	150	0	1000	80	0
ZW324CBLL	T-OSE	MR082026	R1	CY62148ELL-45ZSXI	150	0	500	80	0
ZW324CBLL	T-OSE	MR082026	R1	CY62148ELL-45ZSXI	150	0	1000	80	0
ZW544AALL	G-ASEK	MR082034	R1A	CY7C1069AV33-10ZXC	150	0	500	79	0
ZW544AALL	G-ASEK	MR082034	R1A	CY7C1069AV33-10ZXC	150	0	1000	78	0

ZW544AALL	G-TAIWAN	MR083002	R1	CY7C1069AV33-10ZX	150	0	500	80	0
ZW544AALL	G-TAIWAN	MR083002	R1	CY7C1069AV33-10ZX	150	0	1000	80	0
ZW444AHBLL	R-CML	MR083020	R1	CY7C1021DV33-10ZSXI	150	0	500	80	0
ZW444AHBLL	R-CML	MR083020	R1	CY7C1021DV33-10ZSXI	150	0	1000	80	0
ZW324CBLL	T-OSE	MR083043	R1	CY62148EV30LL-45ZSXI	150	0	500	80	0
ZW324CBLL	T-OSE	MR083043	R1	CY62148EV30LL-45ZSXI	150	0	1000	80	0
ZW444AJBLN	R-CML	MR083071	R1	CY7C1021CV33-10ZXC	150	0	1000	80	0
ZW444AHBLL	R	MR084007	R1	CG6850AM	150	0	500	80	0
ZW444AHBLL	R	MR084007	R1	CG6850AM	150	0	1000	80	0
ZW324CBLL	T	MR084025	R1	CG7092AM	150	0	500	80	0
ZW324CBLL	T	MR084025	R1	CG7092AM	150	0	1000	79	0
ZW544AALL	G	MR084038	R1	CY7C1061AV33-10ZXC	150	0	500	80	0
ZW544AALL	G	MR084038	R1	CY7C1061AV33-10ZXC	150	0	1000	80	0
Summary for Package Family: TSOP II (Pb-Free)			**19**	**records**					
Sum								**1516**	**0**
TSSOP									
Z1620GAGN	RA-CML	MR082029	R1	CY2309ZC-1H	150	0	500	79	0
Z1620GAGN	RA-CML	MR082029	R1	CY2309ZC-1H	150	0	1000	79	0
Z1611XAGB	M-PHILS	MR082033	R1	CY2308ZC-1H	150	0	500	80	0
Z1611XAGB	M-PHILS	MR082033	R1	CY2308ZC-1H	150	0	1000	80	0
Z1620GAGN	RA-CML	MR083033	R1	CY2309ZC-1H	150	0	500	80	0
Z1620GAGN	RA-CML	MR083033	R1	CY2309ZC-1H	150	0	1000	80	0
Z1620GBAGN	RA	MR084016	R1	CY2309ZC-1HT	150	0	500	79	0
Z1620GBAGN	RA	MR084016	R1	CY2309ZC-1HT	150	0	1000	78	0
Summary for Package Family: TSSOP			**8**	**records**					
Sum									**635** **0**
TSSOP (Pb-Free)									
ZZ1613HAN	T-OSE	MR082011	R1	CY2308ZXI-1HT	150	0	500	80	0
ZZ1613HAN	T-OSE	MR082011	R1	CY2308ZXI-1HT	150	0	1000	80	0
ZZ1620GAN	RA-CML	MR082032	R1	CY2308ZXI-1H	150	0	500	80	0
ZZ1620GAN	RA-CML	MR082032	R1	CY2308ZXI-1H	150	0	1000	80	0
ZZ1620GBAN	RA-CML	MR083015	R1	CY22150FZXI	150	0	500	80	0
ZZ1620GBAN	RA-CML	MR083015	R1	CY22150FZXI	150	0	1000	80	0
ZZ0812BGL	T-TAIWAN	MR083044	R1	CY24904ZXC	150	0	500	80	0
ZZ0812BGL	T-TAIWAN	MR083044	R1	CY24904ZXC	150	0	1000	80	0
ZZ1619GAN	RA	MR084065	R1	CY2309CZXI-1H	150	0	500	80	0
ZZ1619GAN	RA	MR084065	R1	CY2309CZXI-1H	150	0	1000	80	0
ZZ1620GBAN	RA	MR091018	R1	CY2309ZXC-1HT	150	0	500	80	0
ZZ1620GBAN	RA	MR091018	R1	CY2309ZXC-1HT	150	0	1000	80	0
ZZ0812BGL	T	MR091019	R1	CY25100ZXC38T	150	0	500	80	0
ZZ0812BGL	T	MR091019	R1	CY25100ZXC38T	150	0	1000	80	0
Summary for Package Family: TSSOP (Pb-Free)			**14**	**records**					
Sum									**1120** **0**
VFBGA (0.75-0.8, 0.3mm)									
BV48AAALE	G-TAIWAN	MR083013	R1	CY62157DV30LL-55BVI	150	0	500	80	0
BV48AAALE	G-TAIWAN	MR083013	R1	CY62157DV30LL-55BVI	150	0	1000	80	0
Summary for Package Family: VFBGA (0.75-0.8, 0.3mm)			**2**	**records**					
Sum									**160** **0**
VFBGA (0.75-0.8, 0.3mm, Pb-Free)									
BZ48DAGLL	RA-CML	MR082001	R1	CY62137FV30LL-45BVXI	150	0	500	79	0

BZ48DAGLL	RA-CML	MR082001	R1	CY62137FV30LL-45BVXI	150	0	1000	79	0
BZ100CGAL	RA-CML	MR082027	R1	CYWB0124AB-BVXI	150	0	500	80	0
BZ100CGAL	RA-CML	MR082027	R1	CYWB0124AB-BVXI	150	0	1000	79	0
BZ56AGAL	G-TAIWAN	MR082035	R1	CY7C68013A-56BAXC	150	0	500	80	0
BZ56AGAL	G-TAIWAN	MR082035	R1	CY7C68013A-56BAXC	150	0	1000	80	0
BZ48CQAALL	G-TAIWAN	MR082047	R1	CY62137FV30LL-45BVXI	150	0	500	80	0
BZ48CQAALL	G-TAIWAN	MR082047	R1	CY62137FV30LL-45BVXI	150	0	1000	79	0
BZ56IAAAGL	AT-INDS	MR082055	R1	CY7C68053-56BAXI	150	0	500	80	0
BZ56IAAAGL	AT-INDS	MR082055	R1	CY7C68053-56BAXI	150	0	1000	79	0
BZ48CFAALL	G-TAIWAN	MR083004	R1	CY62157EV30-45BVXIT	150	0	500	80	0
BZ48CFAALL	G-TAIWAN	MR083004	R1	CY62157EV30-45BVXIT	150	0	1000	79	0
BZ56GABGL	RA-CML	MR083005	R1	CY7C68053-56BAXIT	150	0	500	80	0
BZ56GABGL	RA-CML	MR083005	R1	CY7C68053-56BAXIT	150	0	1000	80	0
BZ100CGAL	RA-CML	MR083029	R1	CYWB0124AB-BVXI	150	0	500	80	0
BZ100CGAL	RA-CML	MR083029	R1	CYWB0124AB-BVXI	150	0	1000	80	0
BZ48ABDALL	AT-CARSEM	MR083060	R1	CY62137EV30LL-45BVXI	150	0	500	80	0
Summary for Package Family: VFBGA (0.75-0.8, 0.3mm, Pb-Free)			**17**	**records**					
Sum								**1354**	**0**