

## 2005 Q3 RELIABILITY REPORT

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***Note: The results reported herein are for 3rd Quarter 2005.***



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

This report summarizes Cypress Semiconductor Product Reliability for the period of the 3rd quarter of 2005. It includes data from devices fabricated at the Round Rock, Texas; Minnesota and Fab foundry facilities and packaged-device data from assembly sites at Cypress Philippines and sub-contractors.

Cypress Semiconductor has established aggressive reliability objectives to assure that all products exhibit reliability, which exceeds customer reliability requirements for purchased components. The quality standard at Cypress is zero defects resulting in 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) manufacturing identification of "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.

Copies of the Cypress Semiconductor documents referenced herein are available through your Cypress Semiconductor sales representative. Questions about product reliability may be addressed to the undersigned.

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## 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 steady-state life test under a dynamic bias and at temperatures 125°C or 150°C for the maximum specified use voltage of the product. The duration at these temperatures is 1,000 and 500 hours, respectively.

In Cypress, product reliability tests are performed as part of the qualification processes and as part of the standard reliability monitoring program. Each fab site and technology family from each product line are being sampled for product monitor. 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
B53	6,194	0	Insufficient	0	None
C8	315,230	0	17	0	None
FL28	19,277	0	Insufficient	0	None
P20	6,194	0	Insufficient	0	None
P26	49,920	0	Insufficient	0	None
POWER 165	425,899	0	13	0	None
PROMOS .17	248,903	0	22	0	None
R28	77,568	0	Insufficient	0	None
R42	29,203	0	Insufficient	0	None
R5	582,165	0	9	0	None
R7	1,689,622	0	3	0	None
R8	389,133	0	14	0	None
R9	2,942,855	0	2	0	None
S4	606,573	0	9	0	None
STARM	6,194	0	Insufficient	0	None
TSMC 130	56,578	0	Insufficient	0	None
TSMC 150	73,177	0	Insufficient	0	None
TSMC 180	54,225	0	Insufficient	0	None
<b>Grand Total</b>	<b>7,578,908</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>None</b>

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

## 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.

<b>Test</b>	:	High Temperature Operating Life Test (HTOL)
<b>Conditions</b>	:	Dynamic Operating Conditions, VCC nominal +15% 150°C or 125°C.
<b>Duration</b>	:	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)
<b>Failure</b>	:	A failure is any device that fails to meet data sheet electrical requirements.
<b>Fit Rate</b>	:	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	64,516	0	Insufficient	None
C8	494,171	0	11	None
FL28	138,787	0	Insufficient	None
P20	48,387	0	Insufficient	None
PROMOS .17	48,387	0	Insufficient	None
R28	143,600	0	Insufficient	None
R42	144,625	0	Insufficient	None
R5	876,606	0	6	None
R7	965,025	0	6	None
R8	317,690	0	17	None
R9	1,623,012	0	3	None
S4	859,905	0	6	None
STARM	48,387	0	Insufficient	None
TSMC 130	185,455	0	29	None
<b>Grand Total</b>	<b>185,455</b>	<b>0</b>	<b>29</b>	

Notes: *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 over-all 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 in quality after the stress.

In 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 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 its 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 even 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.

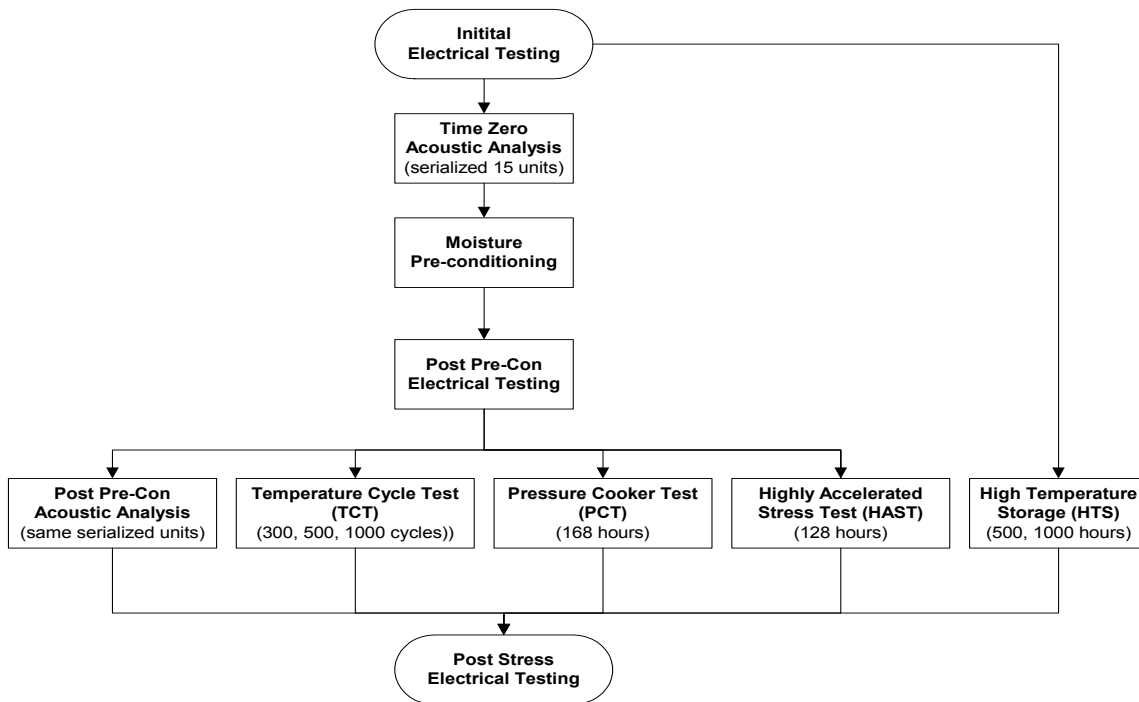


Figure 1. Cypress Package Reliability Stress Flow

### 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 Cycles -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 3. Pressure Cooker Test Failure Rate Summary**

Package	Sample Size	# Failed	Defects %	Failure Mode
TQFP	718	0	0	None
TQFP (10x10)	50	0	0	None
TQFP (Thermal)	245	0	0	None
TQFP (Pb-Free)	394	0	0	None
FBGA (0.75-0.8)	384	0	0	None
FBGA (1.0)	532	0	0	None
PBGA (1.27)	244	0	0	None
PBGA (Cavity/Heatsink, Pb-Free)	95	0	0	None
PBGA (Cavity/Heatsink)	50	0	0	None
FBGA (0.75-0.8, Pb-Free)	46	0	0	None
FVBGA (0.75-0.8, 0.3mm)	149	0	0	None
FBGA (1.0, Pb-Free)	48	0	0	None
PBGA (1.27, Pb-Free)	98	0	0	None
VFBGA (0.75-0.8, Pb-Free)	97	0	0	None
FLIPCHIP (Build-Up Substrate w/ HS)	45	0	0	None
PLCC	198	0	0	None
QFN (Punch Type)	200	0	0	None
QFN (Punch Type, Pb-Free)	449	0	0	None
PQFP	97	0	0	None
SSOP	615	0	0	None
PDIP	625	0	0	None
PDIP (Pb-Free)	100	0	0	None
SOIC (GullWing)	637	0	0	None
SOIC (GullWing, 450 footprint)	240	0	0	None
SSOP (Pb-Free)	755	0	0	None
QSOP (Pb-Free)	99	0	0	None
SOIC (GullWing, 450 footprint, Pb-Free)	100	0	0	None
SOIC (GullWing, Pb-Free)	579	0	0	None
SOIC (J lead)	530	0	0	None
SOIC (J lead, Pb-Free)	149	0	0	None
CERDIP (Windowed)	100	0	0	None
TSOP/ TSSOP	669	0	0	None
TSOP I	194	0	0	None
TSOP (Reverse)	144	0	0	None
TSOP II	434	0	0	None
TSOP (Pb-Free)	50	0	0	None
TSOP II (Pb-Free)	150	0	0	None
TSSOP (Pb-Free)	788	0	0	None
<b>Grand Total</b>	<b>11,097</b>	<b>0</b>	<b>0</b>	<b>None</b>

### 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 than 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 Cycles –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. Highly Accelerated Stress Test (HAST) Failure Rate Summary**

Package	Sample Size	# Failed	Defects %	Failure Mode
TQFP	321	0	0	None
TQFP (Thermal, Pb-Free)	46	0	0	None
TQFP (10x10)	46	0	0	None
TQFP (Thermal)	31	0	0	None
TQFP (Pb-Free)	145	0	0	None
FBGA (0.75-0.8)	183	0	0	None
FBGA (1.0)	192	0	0	None
PBGA (Cavity/Heatsink, Pb-Free)	98	0	0	None
FVBGA (0.75-0.8, 0.3mm)	182	0	0	None
PBGA (1.27, Pb-Free)	285	0	0	None
VFBGA (0.75-0.8, Pb-Free)	238	0	0	None
FLIPCHIP (Build-Up Substrate w/ HS)	133	7	5%	Substrate related problem
PLCC	150	0	0	None
QFN (Punch Type)	87	0	0	None
QFN (Punch Type, Pb-Free)	276	0	0	None
SSOP	185	0	0	None
PDIP	387	0	0	None
PDIP (Pb-Free)	98	0	0	None
SOIC (GullWing)	516	0	0	None
SOIC (GullWing, 450 footprint)	195	0	0	None
SSOP (Pb-Free)	339	0	0	None
QSOP (Pb-Free)	88	0	0	None
SOIC (GullWing, 450 footprint, Pb-Free)	99	0	0	None
SOIC (GullWing, Pb-Free)	528	0	0	None
SOIC (J lead)	472	0	0	None
SOIC (J lead, Pb-Free)	100	0	0	None
CERDIP (Windowed)	47	0	0	None
TSOP/ TSSOP	584	0	0	None
TSOP I	148	0	0	None
TSOP (Reverse)	30	0	0	None
TSOP II	411	0	0	None
TSOP (Pb-Free)	93	0	0	None
TSOP II (Pb-Free)	188	0	0	None
TSSOP (Pb-Free)	429	0	0	None
<b>Grand Total</b>	<b>7,350</b>	<b>7</b>	<b>0.10%</b>	<b>None</b>

### 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 acceleration test.

<b>Condition</b>	:	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)
<b>Pre-Condition</b>	:	5 cycles Temperature Cycles -65/+150, 24 hr Bake 125°C, Moisture loading to qualified MSL level
<b>Duration</b>	:	300 cycles minimum at Condition C, 1000 cycles minimum at Condition B
<b>Failure Mode</b>	:	Parametric shifts and catastrophic failures
<b>Failure Mechanism</b>	:	Wire bond, cracked or lifted die and package failure.

**Table 5. Temperature Cycling Failure Rate Summary**

Package	Sample Size	# Failed	Defects %	Failure Mode
TQFP	975	0	0	None
TQFP (Thermal, Pb-Free)	99	0	0	None
TQFP (10x10)	50	0	0	None
TQFP (Thermal)	244	0	0	None
TQFP (Pb-Free)	394	0	0	None
FBGA (0.75-0.8)	734	0	0	None
FBGA (1.0)	1,219	0	0	None
PBGA (1.27)	244	0	0	None
PBGA (Cavity/Heatsink, Pb-Free)	245	0	0	None
PBGA (Cavity/Heatsink)	50	0	0	None
FBGA (0.75-0.8, Pb-Free)	45	0	0	None
FVBGA (0.75-0.8, 0.3mm)	292	0	0	None
FBGA (1.0, Pb-Free)	100	0	0	None
PBGA (1.27, Pb-Free)	143	0	0	None
VFBGA (0.75-0.8, Pb-Free)	243	0	0	None
DE	135	0	0	None
FLIPCHIP (Build-Up Substrate w/ HS)	751	0	0	None
PLCC	250	0	0	None
PLCC (Pb-Free)	50	0	0	None
QFN (Punch Type)	470	0	0	None
QFN (Punch Type, Pb-Free)	1,072	0	0	None
PQFP	100	0	0	None
SSOP	722	0	0	None
PDIP	535	0	0	None
PDIP (Pb-Free)	148	0	0	None
SOIC (GullWing)	925	0	0	None
SOIC (GullWing, 450 footprint)	240	0	0	None
SSOP (Pb-Free)	914	0	0	None
QSOP (Pb-Free)	100	0	0	None
SOIC (GullWing, 450 footprint, Pb-Free)	100	0	0	None
SOIC (GullWing, Pb-Free)	582	0	0	None
SOIC (J lead)	520	0	0	None
SOIC (J lead, Pb-Free)	150	0	0	None
CERDIP (Windowed)	299	0	0	None
TSOP/ TSSOP	776	0	0	None
TSOP I	194	0	0	None
TSOP (Reverse)	145	0	0	None
TSOP II	486	0	0	None
TSOP (Pb-Free)	149	0	0	None
TSOP II (Pb-Free)	247	0	0	None
TSSOP (Pb-Free)	1,165	0	0	None
<b>Grand Total</b>	<b>16,302</b>	<b>0</b>	<b>0</b>	<b>None</b>



## 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 =  $8.62 \times 10^{-5}$  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.

<b>Failure Mechanism</b>	<b>Activation Energy <math>E_a</math> (eV)</b>
Charge Gain	0.3-0.6
Charge Loss (defects)	0.6
Charge Loss (Ionic contamination, edge bits)	0.9
Charge loss (intrinsic wear out)	0.3-0.6
Electromigration	0.6-1.0
Intermetallic Growth	1.0
Ionic Contamination	1.0-1.4
Silicon Bulk Defects	0.5
Oxide Defects	0.3
Unknown/Non-Visual Defect (NVD)	0.45

## 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 ( $8.62 \times 10^{-5}$  eV/°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 °C (95 °F) and the room relative humidity is 100%. From any Handbook of Chemistry and Physics, the vapor pressure of water VP (water) at 35 °C is 41.175 mm Hg. If we assume that the device will operate with a junction temperature of 70 °C (VP (water) at 70 °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 °C and 17.6% relative humidity.

Our Pressure Cooker Test (PCT) submits the devices to a temperature of 121 °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.

$$VP (130^{\circ}C) = 2026.10 \text{ mm Hg}$$

$$VP (135^{\circ}C) = 2347.26 \text{ mm Hg}$$

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

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

Similarly, for 140°C HAST testing,

$$VP (140^{\circ}C) = 2710.92 \text{ mm Hg}$$

$$VP (145^{\circ}C) = 3116.76 \text{ mm Hg}$$

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

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

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**APPENDIX A: FAILURE RATE CALCULATION (cont.)**

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**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.

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

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 ( $T_{\text{mold}} = 170 \text{ }^\circ\text{C}$ ) and the minimum temperature reached during temperature cycling, ( $T_{\text{min}}$ ).

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

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, ( $T_{\text{mold}}$ ), and a maximum during the lowest temperature reached during temperature cycling, ( $T_{\text{min}}$ ).

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, use the difference between the minimum and maximum temperatures during temperature cycle testing ( $T_{\text{min}}$  and  $T_{\text{max}}$ ) to calculate an acceleration factor.

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

The model constant, ' $m$ ', is again experimentally calculate 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, dislocation 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 cycles, 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 mechanism 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.

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

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

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.

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

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)

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

**APPENDIX D: RELIABILITY DATA**
**Summary Detail -- EFR Performance**
**From:** 10/5/2004

**To:** 10/3/2005

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
<b>B53</b>	125	MR04407	DCD	CY7B993V-5AC	4.0	200	0	96		
Summary for 'Technology' = B53 (1 detail record)						<b>200</b>	<b>0</b>			
<b>C8</b>	125	033805	CCD	7C87740A	2.3	169	0	96		
	125	033805	CCD	7C87741A	2.3	304	0	96		
	125	033805	CCD	CY2SSTU877	2.3	126	0	96		
	125	033805	CCD	7C87741A	2.3	500	0	96		
	125	033805	CCD	7C87741A	2.3	276	0	96		
	125	033805	CCD	7C87741A	2.3	89	0	96		
	125	033805	CCD	CY7C68013A	3.8	514	0	96		
	125	042106	CCD	CY2SSTU877	2.3	505	0	96		
	125	042106	CCD	7C87741A	2.3	196	0	96		
	125	042106	CCD	CY7C68013A	3.8	514	0	96		
	125	042106	CCD	7C87741A	2.3	500	0	96		
	125	042106	CCD	7C87741A	2.3	89	0	96		
	125	042106	CCD	CY2SSTU877	2.3	126	0	96		
	125	042106	CCD	7C87741A	2.3	276	0	96		
	125	042106	CCD	7C87740A	2.3	150	0	96		
	125	042106	CCD	7C87740A	2.3	304	0	96		
	125	044503	CCD	CY7C68013	3.8	645	0	96		
	125	044503	CCD	CY7C68013	3.8	645	0	96		
	125	050305	CCD	CY2SSTU877BVXI	2.3	508	0	96		
	125	050305	CCD	CY2SSTU877BVXI	2.3	510	0	96		
	150	042105	CCD	CY2SSTU32864BFXI	2.3	391	0	48		
	150	042105	CCD	CY2SSTU32864BFXI	2.3	391	0	48		
	150	042105	CCD	CY2SSTU32864BFXI	2.3	296	0	48		
	150	042507	CCD	CY284KOTP	3.8	135	0	48		
	150	042507	CCD	CY284KOTP	3.8	135	0	48		
	150	042507	CCD	CY284KOTP	3.8	135	0	48		
	150	042507	CCD	CY284KOTP	3.8	135	0	48		



Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	150	042507	CCD	CY284KOTP	3.8	135	0	48		
	150	042507	CCD	CY284KOTP	3.8	130	0	48		
	150	042507	CCD	CY284KOTP	3.8	68	0	48		
	150	042507	CCD	CY284KOTP	3.8	135	0	48		
Summary for 'Technology' = C8 (31 detail records)						9032	0			
FL28										
	125	MR04304	DCD	CY7C371I-83JC	5.75	200	0	96		
	125	MR04304	DCD	CY7C371I-83JC	5.75	150	0	72		
	150	MR04405	CCD	CY22392FC	3.8	200	0	48		
Summary for 'Technology' = FL28 (3 detail records)						550	0			
P20										
	125	MR05105	DCD	CY7C343-35JC	5.75	200	0	96H		
Summary for 'Technology' = P20 (1 detail record)						200	0			
P26										
	150	044506	CCD	7C65113ET-OSC	5.75	545	0	48		
	150	044506	CCD	7C65113ET-OSC	5.75	495	0	48		
Summary for 'Technology' = P26 (2 detail records)						1040	0			
POWER 165										
	125	043313	MID	CYK256K16SCCBU	3.8	50	0	96		
	125	051502	MID	CYK512K16SCCAU	3.8	1912	0	96		
	125	051502	MID	CYK512K16SCCAU	3.8	1944	0	96		
	125	051502	MID	CYK512K16SCCAU	3.8	1865	0	96		
	125	052102	MID	CYK128K16MCCBU-70BVIT	3.8	1000	0	96		
	125	052102	MID	CYK128K16MCCBU-70BVIT	3.8	1499	0	96		
	125	052102	MID	CYK128K16MCCBU-70BVIT	3.8	1000	0	96		
	125	052102	MID	CYK128K16MCCBU-70BVIT	3.8	1000	0	96		
	125	052102	MID	CYK128K16MCCBU-70BVIT	3.8	1498	0	96		
	125	052102	MID	CYK128K16MCCBU-70BVIT	3.8	1499	0	96		
	125	MR04405	MID	CYK512K16SCCAU-70BAI	4.5	198	0	96		
	125°C	MR04308	MID	CYK256K16MCCBU-70BVI	3.8	288	0	96		
Summary for 'Technology' = POWER 165 (12 detail records)						13753	0			
PROMOS .17										
	125	044007	MID	U0166TFF7BZ-GBVI	2.1	2718	0	96		
	125	044007	MID	U0166TFF7AZ-GBVI	2.1	491	0	96		
	125	044007	MID	U0166TFF7AZ-GBVI	2.1	578	0	96		
	125	044007	MID	U0166TFF7BZ-GBVI	2.1	1349	0	96		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	125	045001	MID	U0166TFF7AZ-GBVI	2.1	1251	0	96		
	125	045001	MID	U0166TFF7AZ-GBVI	2.1	1238	0	96		
	125	MR04408	MID	U01766TFF7AZ	2.3	300	0	96		
	125	MR04408	MID	U01766TFF7AZ	2.3	150	0	72		
Summary for 'Technology' = PROMOS .17 (8 detail records)						8075	0			
R28										
	150	040606	CCD	7C421DT-MJC	5.75	355	0	48		
	150	040606	CCD	7C136GT-MJC	3.6	799	0	48		
	150	040606	CCD	7C421DT-MJC	5.75	108	0	48		
	150	040606	CCD	7C421DT-MJC	5.75	354	0	48		
Summary for 'Technology' = R28 (4 detail records)						1616	0			
R42										
	125	MR04307	MID	CY62256LL-70SNI	5.75	298	0	96		
	125	MR04307	MID	CY62256LL-70SNI	5.75	150	0	72		
	125	MR05204	DCD	CY7C09389V-9AC	3.8	50	0	48		
	125	MR05204	DCD	CY7C09389V-9AC	3.8	150	0	48		
	125	MR05207	MID	CY62256LL-70SNC	5.75	200	0	96		
	150	MR05301	DCD	CY7C038V-25AC	3.8	150	0	48		
	150	MR05301	DCD	CY7C038V-25AC	3.8		0	48		
Summary for 'Technology' = R42 (7 detail records)						998	0			
R5										
	125	035002	DCD	CY7C0430CV-133BGI	3.8	216	0	24		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	120	0	12		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	216	0	48		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	120	0	48		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	336	0	6		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	258	0	96		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	409	0	48		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	409	0	48		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	336	0	6		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	216	0	24		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	120	0	24		
	125	040903	CCD	CY28437OXC	3.8	260	0	96		
	125	040903	CCD	CY28437OXC	3.8	260	0	110		
	125	040903	CCD	CY28437OXC	3.8	260	0	110		
	125	040903	CCD	CY28437OXC	3.8	182	0	96		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	125	040903	CCD	CY28437OXC	3.8	38	0	96		
	125	042301	DCD	CYISM560BSXC	3.8	1028	0	96		
	125	042301	DCD	CYISM560BSXC	3.8	492	0	96		
	125	042301	DCD	CYISM560BSXC	3.8	160	0	96		
	125	042301	DCD	CYISM560BSXC	3.8	177	0	96		
	125	044401	CCD	CY7C65640C	3.8	504	0	96		
	125	044401	CCD	CY7C65640	3.8	489	0	96		
	125	050303	CCD	CY7C68000-56PVXC	3.8	442	0	96		
	125	MR04406	MID	CY62136VLL-55ZI	3.8	50	0	96		
	125	MR04406	MID	CY62136VLL-55ZI	3.8		0	96		
	125	MR05105	MID	CY7C1399B-12VC	3.8	200	0	48		
	125	MR05105	MID	CY7C1009B-15VC	3.8	200	0	48		
	125	MR05202	MID	CY62136VLL-70ZI	3.8	299	0	96		
	125	MR05300	MID	CG6513AM	2.3	200	0	48		
	125	MR05302	MID	CY62136VLL-70ZXI	2.3	298	0	96		
	150	041303	CCD	CY221R28	2.875	477	0	48		
	150	041303	CCD	CY221R28	2.875	520	0	48		
	150	041303	CCD	CY221R28	2.875	500	0	48		
	150	043801	CCD	CY2309CSXI	3.8	504	0	48		
	150	043801	CCD	CY2309CSXI	3.8	496	0	48		
	150	045102	DCD	CYDC256A16-55AXI	3.45	178	0	48		
	150	045102	DCD	CYDC256A16-55AXI	3.45	628	0	48		
	150	045102	DCD	CYDC256A16-55AXI	3.45	358	0	48		
	150	050303	CCD	CY7C68000-56PVXC	3.8	458	0	48		
	150	050303	CCD	CY7C68000-56PVXC	3.8	457	0	48		
	150	050303	CCD	CY7C68000-56PVXC	3.8	429	0	48		
	150	050303	CCD	CY7C68000-56PVXC	3.8	187	0	48		
	150	050303	CCD	CY7C68000-56PVXC	3.8	155	0	48		
	150	051903	CCD	CY221R28-ZXC	2.875	500	0	48		
	150	051903	CCD	CY221R28-ZXC	2.875	492	0	48		
	150	051903	CCD	CY221R28-ZXC	2.875	500	0	48		
	150	MR04404	MID	CY7C1329-100AC	3.8	200	0	48H		
	150	MR04405	MID	CY7C1021B-15ZI	3.8	150	0	48		
	150	MR04405	MID	CY7C1021B-15ZI	3.8	50	0	48		
	150	MR04407	MID	CY7C1021BV33L-10ZC	3.8	200	0	48		
	150	MR04407	MID	CY7C1021B-15ZC	3.8	200	0	48		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	150	MR05103	MID	CY7C1009B-15VC	3.8	200	0	48		
	150	MR05104	MID	CY7C1399B-12VC	3.8	196	0	48		
Summary for 'Technology' = R5 (53 detail records)						16330	0			
R7										
	125	044102	DCD	CY7C0832	2.3	114	0	48		
	125	044102	DCD	CY7C0832	2.3	114	0	48		
	125	044102	DCD	CY7C0832	2.3	61	0	48		
	125	044102	DCD	CY7C0832	2.3	101	0	48		
	125	044102	DCD	CY7C0832	2.3	720	0	48		
	125	044102	DCD	CY7C0832	2.3	101	0	48		
	125	044102	DCD	CY7C0832	2.3	720	0	48		
	125	044102	DCD	CY7C0832	2.3	61	0	48		
	125	044910	MID	CY7C1313V18	2.07	692	0	48		
	125	044910	MID	CY7C1313V18	2.07	576	0	48		
	125	044910	MID	CY7C1313V18	2.07	615	0	48		
	125	053206	MID	CY7C1313V18	2.07	295	0	96		
	125	053206	MID	CY7C1313V18	2.07	1774	0	96		
	125	053206	MID	CY7C1313V18	2.07	197	0	96		
	125	MR04307	MID	CY62147CV30LL-70BAI	3.45	300	0	96		
	125	MR04404	MID	CY7C1041CV33-12ZI	2.3	150	0	420		
	125	MR04407	MID	CY7C1061AV33-10ZC	2.4		0	116		
	125	MR04407	MID	CY7C1061AV33-10ZC	2.4	200	0	22		
	125	MR05106	MID	CY7C1041CV33-12ZC	2.3	538	0	48		
	125	MR05106	MID	CY7C1021CV33-12ZC	2.3	673	0	48		
	125	MR05106	MID	CY7C1021CV33-15ZC	2.3	337	0	48		
	125	MR05106	MID	CY7C1041CV33-15ZC	2.3	269	0	48		
	125	MR05106	MID	CY7C1021CV33-12ZC	2.3	673	0	48		
	125	MR05107	MID	CY62137CV30LL-55BVI	3.45	999	0	96		
	125	MR05108	MID	CY7C1041CV33-15ZC	2.3	270	0	96		
	150	044203	DCD	CY7C1370	2.3	1390	0	48		
	150	044203	MID	CY7C1021B	2.3	3382	0	48		
	150	MR04306	MID	CY7C1361B-100AC	2.3	149	0	32		
	150	MR04306	MID	CY7C1361B-100AC	2.3	300	0	48		
	150	MR04306	MID	CY7C1347F-133AC	2.3	150	0	32		
	150	MR04306	MID	CY7C1347F-133AC	2.3	299	0	48		
	150	MR04307	MID	CY7C1049CV33-15VI	2.3	300	0	48		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	150	MR04307	MID	CY7C1049CV33-15VI	2.3	150	0	32		
	150	MR04404	MID	CY7C1041CV33-12ZI	2.3	150	0	32		
	150	MR04404	MID	CY7C1041CV33-12ZI	2.3		0	48		
	150	MR04404	MID	CY7C1041CV33-12ZI	2.3	198	0	48		
	150	MR04407	MID	CY7C1372CV25-167AC	2.3	200	0	48		
	150	MR05102	MID	CY7C1041CV33-10ZC	2.3	500	0	48		
	150	MR05102	MID	CY7C1041CV33-10ZC	2.3	200	0	48		
	150	MR05104	MID	CY7C1041CV33-10VC	2.3		0	48		
	150	MR05104	MID	CY7C1041CV33-10VC	2.3	147	0	12		
	150	MR05105	MID	CY7C1041CV33-15ZI	2.3	400	0	48		
	150	MR05106	MID	CY7C1021CV33-8ZC	2.3	296	0	48		
	150	MR05106	MID	CY7C1041CV33-15ZC	2.3	269	0	48		
	150	MR05106	MID	CY7C1021CV33-15ZC	2.3	675	0	48		
	150	MR05107	MID	CY7C1021CV33-15ZC	2.3	675	0	48		
	150	MR05107	MID	CY7C1021CV33-15Z	2.3	675	0	48		
	150	MR05107	MID	CY7C1021CV33-15ZXC	2.3	645	0	48		
	150	MR05108	MID	CY7C1021CV33-8VC	2.3	60	0	48		
	150	MR05204	MID	CY7C1049CV33-10VC	2.3	330	0	48		
	150	MR05204	MID	CY7C1021CV33-8VC	2.3	316	0	48		
	150	MR05205	MID	CY7C1021CV33-8VC	2.3	799	0	48		
	150	MR05209	MID	CY7C1041CV33-15ZC	2.3	493	0	48		
	150	MR05210	MID	CY7C1049CV33-20VC	2.3	200	0	0		
	150	MR05302	MID	CY7C1021CV33-15VC	2.3	200	0	48		
	150	MR05302	MID	CY7C1021CV33-15VXC	2.3	200	0	48		
	150	MR05306	MID	CG5978AT	2.3	8997	0	48		
	150	MR05306	MID	CG5978AT	2.3	2000	0	48		
	150	MR05306	MID	CG5978AT	2.3	5985	0	48		

Summary for 'Technology' = R7 (59 detail records)

41280 0

R8

125	044202	MID	CY62157DV	2.4	2454	0	96		
125	044202	MID	CY62157DV	2.4	1396	0	96		
125	044202	MID	CY62157DV	2.4	1120	0	96		
125	044304	MID	CY62147DV30L	2.4	683	0	96		
125	045103	MID	CY62157DV30L	2.4	1677	0	96		
125	045103	MID	CY62157DV30L	2.4	254	0	96		
125	045103	MID	CY62157DV30L	2.4	2194	0	96		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	125	045103	MID	CY62157DV30L	2.4	1510	0	96		
	125	MR04307	MID	CY62157DV30L-45BVI	2.4	150	0	72		
	125	MR05103	MID	CY62147DV30LL-55BVI	2.4	200	0	96		
	125	MR05104	MID	CY62146DV30LL-70ZSXI	2.4	198	0	96H		
	150	MR05107	MID	CY62128DV30LL-70SI	2.4	195	0	48		
	150	MR05202	MID	CY62128DV30LL-55ZI	2.4	300	0	48		

Summary for 'Technology' = R8 (13 detail records)

12331 0

R9

125	044201	MID	CY7C1413AV18-200BZC	2.25	970	0	96		
125	044201	MID	CY7C1413AV18-200BZC	2.25	144	0	96		
125	044201	MID	CY7C1413AV18-200BZC	2.25	1752	0	96		
125	044201	MID	CY7C1413AV18-200BZC	2.25	265	0	96		
125	051207	MID	CY7C1312BV18-200BZC	2.25	1803	0	96		
125	051505	MID	CY7C1312BV18-250BZC	2.25	764	0	96		
125	051505	MID	CY7C1312BV18-250BZC	2.25	989	0	96		
125	051505	MID	CY7C1312BV18-250BZC	2.25	912	0	96		
125	051901	MID	CY7C1512V18-250BZC	2.25	1613	0	96		
150	032003	MID	CY7C1460AV33	2.25	2597	0	48		
150	044103	MID	CY7C1347G	2.25	2447	0	48		
150	044103	MID	CY7C1350	2.25	1479	0	36		
150	044103	MID	CY7C1350	2.25	3135	0	12		
150	044103	MID	CY7C1350	2.25	1533	0	12		
150	044103	MID	CY7C1347G	2.25	2362	0	48		
150	044103	MID	CY7C1350	2.25	2020	0	48		
150	044403	MID	CY7C1470	2.25	560	0	48		
150	044403	MID	CY7C1470	2.25	833	0	48		
150	044403	MID	CY7C1470	2.25	447	0	48		
150	044911	MID	CY7C1360	2.25	2369	0	48		
150	044911	MID	CY7C1360	2.25	2227	0	48		
150	045003	MID	7C1370EC-RAZC	2.25	1893	0	36		
150	045003	MID	7C1370EC-RAZC	2.25	1618	0	48		
150	045003	MID	7C1370EC-RAZC	2.25	1576	0	48		
150	045003	MID	7C1370EC-RAZC	2.25	1909	0	12		
150	050902	MID	CY7C1347G-166AXC	2.25	4421	0	48		
150	050902	MID	CY7C1347G-166AXC	2.25	1305	0	48		
150	050902	MID	CY7C1347G-166AXC	2.25	1307	0	48		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	150	051006	MID	CY7C1347G	2.25	3478	0	48		
	150	051006	MID	CY7C1347G	2.25	1679	0	48		
	150	051006	MID	CY7C1470	2.25	801	0	48		
	150	051006	MID	CY7C1347G	2.25	1727	0	48		
	150	051103	MID	CY7C1460AV33	2.25	1903	0	48		
	150	051103	MID	CY7C1460AV33	2.25	274	0	48		
	150	051103	MID	CY7C1460AV33	2.25	442	0	48		
	150	052203	MID	CY7C1370	2.25	1285	0	48		
	150	052203	MID	CY7C1370	2.25	1167	0	48		
	150	052203	MID	CY7C1370	2.25	1076	0	48		
	150	052206	MID	CY7C1347G-166AXC	2.25	1242	0	48		
	150	052206	MID	CY7C1347G-166AXC	2.25	1480	0	48		
	150	052206	MID	CY7C1347G-166AXC	2.25	1572	0	48		
	150	053405	MID	CY7C1360C	2.25	1281	0	48		
	150	053405	MID	CY7C1360C	2.25	2851	0	48		
	150	053405	MID	CY7C1360C	2.25	2846	0	48		

Summary for 'Technology' = R9 (44 detail records)

70354 0

S4

125	040901	CCD	CY8C29466	5.5	1002	0	96		
125	040901	CCD	CY8C29466	5.5	1005	0	96		
125	040906	CCD	CY8C29466	5.5	1005	0	96		
125	040906	CCD	CY8C29466	5.5	1000	0	96		
125	040906	CCD	CY8C29466	5.5	1002	0	96		
125	042501	CCD	CY8C21323	5.5	1024	0	96		
125	042505	CCD	CY8C21334	53.5	1007	0	96		
125	042702	CCD	CY8C24423A	5.5	427	0	48		
125	042702	CCD	CY8C24423A	5.5	428	0	48		
125	042702	CCD	CY8C24423A	5.5	428	0	48		
125	042702	CCD	CY8C24423A	5.5	420	0	48		
125	042702	CCD	CY8C24423A	5.5	420	0	48		
125	042702	CCD	CY8C24423A	5.5	420	0	48		
125	042702	CCD	CY8C24423A	5.5	420	0	48		
125	042809	CCD	CY8C24423A	5.5	829	0	48		
125	043804	CCD	CY7C63913	5.75	1015	0	96		
125	044602	CCD	CY8C24494-24PVXI	5.5	1008	0	96		
125	044703	CCD	CY8C24423A-12PVXE	5.5	859	0	12		
125	044703	CCD	CY8C24423A-12PVXE	5.5	653	0	12		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	125	044703	CCD	CY8C24423A-12PVXE	5.5	576	0	12		
	125	044703	CCD	CY8C24423A-12PVXE	5.5	852	0	12		
	125	052004	CCD	CY8C21234-24SXI	5.5	1002	0	120		
	125	053402	CCD	CY8C27443-24PVXI	5.5	1010	0	96		
	125	053403	CCD	CY8C24423A-24PVXI	5.5	1004	0	96		
	125	053603	CCD	CY8C24794-24LFXI	5.5	923	0	96		
	125	MR04307	CCD	CY8C27443-24PVXI	5.5	150	0	72		
	125	MR05104	CCD	CY8C27443-24PXI	5.5	185	0	96		
	125	MR05204	CCD	CY22393ZXC-541	3.8	300	0	48		
	125	MR05208	CCD	CY8C24223A-24PVXI	5.5	200	0	96		
	125	MR05208	CCD	CY8C26443-24PVI	5.5	149	0	96		
	150	042806	CCD	CY5048SXI	3.8	1010	0	48		
	150	050507	CCD	CY22389FZXC	3.8	496	0	48		
	150	050507	CCD	CY22389FZXC	3.8	540	0	48		
	150	MR05107	CCD	CY22392ZC-366	3.8	199	0	48		
Summary for 'Technology' = S4 (33 detail records)						22548	0			
STARM										
	125	MR05103	DCD	CY7B933-JC	6.5	50	0	96		
	125	MR05103	DCD	CY7B933-JC	6.5	75	0	96		
	125	MR05103	DCD	CY7B933-JC	6.5	75	0	96		
Summary for 'Technology' = STARM (3 detail records)						200	0			
TSMC 130										
	125	025107	DCD	CYNSE10512	1.35	135	0	96		
	125	025107	DCD	CYNSE10512B	1.35	50	0	12		
	125	025107	DCD	CYNSE10512	1.38	33	0	96		
	125	025107	DCD	CYNSE10512B	1.35	49	0	48		
	125	025107	DCD	CYNSE10512B	1.35	20	0	48		
	125	025107	DCD	CYNSE10512	1.38	6	0	48		
	125	025107	DCD	CYNSE10512B	1.35	20	0	24		
	125	025107	DCD	CYNSE10512B	1.35	176	0	96		
	125	025107	DCD	CYNSE10512	1.35	62	0	96		
	125	025107	DCD	CYNSE10512B	1.35	28	0	96		
	125	025107	DCD	CYNSE10512B	1.35	20	0	12		
	125	025107	DCD	CYNSE10512	1.38	17	0	48		
	125	025107	DCD	CYNSE10512B	1.35	48	0	96		
	125	025107	DCD	CYNSE10512B	1.35	50	0	24		



Technology	Temp	Eva I Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	125	025107	DCD	CYNSE10512	1.35	72	0	96		
	125	025107	DCD	CYNSE10512	1.38	6	0	48		
	125	025107	DCD	CYNSE10512	1.35	144	0	96		
	125	025107	DCD	CYNSE10512	1.38	5	0	48		
	125	025107	DCD	CYNSE10512	1.38	17	0	48		
	125	025107	DCD	CYNSE10512B	1.35	20	0	12		
	125	025107	DCD	CYNSE10512	1.38	57	0	96		
	125	025107	DCD	CYNSE10512B	1.35	50	0	12		
	125	025107	DCD	CYNSE10512	1.38	5	0	48		
	125	041401	DCD	CYNSE10512	1.38	5	0	48		
	125	041401	DCD	CYNSE10512B	1.35	20	0	24		
	125	041401	DCD	CYNSE10512	1.35	144	0	96		
	125	041401	DCD	CYNSE10512	1.35	62	0	96		
	125	041401	DCD	CYNSE10512B	1.35	48	0	96		
	125	041401	DCD	CYNSE10512B	1.35	50	0	24		
	125	041401	DCD	CYNSE10512	1.38	17	0	48		
	125	041401	DCD	CYNSE10512B	1.35	50	0	12		
	125	041401	DCD	CYNSE10512B	1.35	20	0	12		
	125	041401	DCD	CYNSE10512B	1.35	28	0	96		
	125	041401	DCD	CYNSE10512	1.38	33	0	96		
	125	041401	DCD	CYNSE10512B	1.35	50	0	12		
	125	041401	DCD	CYNSE10512B	1.35	20	0	12		
	125	041401	DCD	CYNSE10512	1.38	6	0	48		
	125	041401	DCD	CYNSE10512	1.35	72	0	96		
	125	041401	DCD	CYNSE10512	1.38	5	0	48		
	125	041401	DCD	CYNSE10512B	1.35	49	0	48		
	125	041401	DCD	CYNSE10512B	1.35	20	0	48		
	125	041401	DCD	CYNSE10512	1.35	135	0	96		
	125	041401	DCD	CYNSE10512	1.38	57	0	96		
	125	041401	DCD	CYNSE10512	1.38	17	0	48		
	125	041401	DCD	CYNSE10512B	1.35	176	0	96		
	125	041401	DCD	CYNSE10512	1.38	6	0	48		
	125	044108	DCD	CYNSE10512A	1.35	28	0	96		
	125	044108	DCD	CYNSE10512A	1.35	31	0	96		
	125	044108	DCD	CYNSE10512A	1.35	36	0	96		
	125	044108	DCD	CYNSE10512A	1.35	27	0	96		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
Summary for 'Technology' = TSMC 130 (50 detail records)						2302	0			
TSMC 150										
	125	044101	DCD	CYNSE70129D	2.1	551	0	96		
	125	044101	DCD	CYNSE70129D	2.1	551	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	101	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	177	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	134	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	184	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	152	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	128	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	196	0	96		
	125	044909	DCD	CYNSE70130B-125BBC	1.8	189	0	96		
Summary for 'Technology' = TSMC 150 (10 detail records)						2363	0			
TSMC 180										
	125	043305	DCD	CYNSE70128	1.725	346	0	96		
	125	043305	DCD	CYNSE70128	1.725	549	0	96		
	125	043305	DCD	CYNSE70128	1.725	395	0	96		
	125	044108	DCD	CYNSE10512A	1.35	70	0	96		
	125	044108	DCD	CYNSE10512A	1.35	32	0	96		
	125	044108	DCD	CYNSE10512A	1.35	85	0	96		
	125	044108	DCD	CYNSE10512A	1.35	144	0	96		
	125	044108	DCD	CYNSE10512A	1.35	130	0	96		
Summary for 'Technology' = TSMC 180 (8 detail records)						1751	0			
<b>Grand Total</b>						<b>204,923</b>	<b>0</b>			

**Summary Detail -- LFR Performance**

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
<b>B53</b>										
	125	MR044075	DCD	CY7B993V-5AC	4.0	200	0	832		
	125	MR044075	DCD	CY7B993V-5AC	4.0	200	0	168		
Summary for 'Technology' = B53 (2 detail records)						400	0			
<b>C8</b>										
	125	033805	CCD	CY7C68013A	2.35	253	0	1000		
	125	033805	CCD	7C87740A	2.35	150	0	168		
	125	033805	CCD	CY7C68013A	3.8	208	0	928		
	125	033805	CCD	7C87741A	2.35	150	0	832		
	125	033805	CCD	CY7C68013A	3.8	200	0	168		
	125	033805	CCD	CY7C68013A	3.8	208	0	72		
	125	042106	CCD	CY7C68013A	3.8	200	0	168		
	125	042106	CCD	7C682005AC-RSPC	3.8	208	0	72		
	125	042106	CCD	7C82877A	2.35	123	0	168		
	125	042106	CCD	CY7C68013A	3.8	208	0	832		
	125	042106	CCD	7C87741A	2.35	196	0	1000		
	125	042106	CCD	7C87741A	2.35	253	0	1000		
	125	042106	CCD	7C87740A	2.35	150	0	832		
	125	042106	CCD	7C87740A	2.35	150	0	168		
	150	042507	CCD	CY284KOTP	3.8	135	0	110		
Summary for 'Technology' = C8 (15 detail records)						2792	0			
<b>FL28</b>										
	125	MR043045	DCD	CY7C371I-83JC	5.75	150	0	168		
	125	MR043045	DCD	CY7C371I-83JC	5.75	150	0	832		
	150	MR044053	CCD	CY22392FC	3.8	200	0	32		
	150	MR044053	CCD	CY22392FC	3.8	200	0	420		
Summary for 'Technology' = FL28 (4 detail records)						700	0			

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
<b>P20</b>										
	125	MR051058	DCD	CY7C343-35JC	5.75	150	0	832		
	125	MR051058	DCD	CY7C343-35JC	5.75	150	0	168		
Summary for 'Technology' = P20 (2 detail records)						<b>300</b>	<b>0</b>			
<b>PROMOS .17</b>										
	125	MR044080	MID	U01766TFF7AZ	2.36	150	0	168		
	125	MR044080	MID	U01766TFF7AZ	2.36	150	0	832		
Summary for 'Technology' = PROMOS .17 (2 detail records)						<b>300</b>	<b>0</b>			
<b>R28</b>										
	150	040606	CCD	7C421DT-MJC	5.75	120	0	420		
	150	040606	CCD	7C136GT-MJC	3.6	120	0	420		
	150	040606	CCD	7C136GT-MJC	3.6	120	0	80		
	150	040606	CCD	7C421DT-MJC	5.75	355	0	80		
	150	MR052086	MID	CY7C185-25VC	0	150	0	32		
Summary for 'Technology' = R28 (5 detail records)						<b>865</b>	<b>0</b>			
<b>R42</b>										
	125	MR043076	MID	CY62256LL-70SNI	5.75	150	0	832		
	125	MR043076	MID	CY62256LL-70SNI	5.75	150	0	168		
	125	MR052043	DCD	CY7C09389V-9AC	3.8	150	0	80		
	125	MR052043	DCD	CY7C09389V-9AC	3.8	150	0	420		
	125	MR052079	MID	CY62256LL-70SNC	5.75	148	0	832		
	125	MR052079	MID	CY62256LL-70SNC	5.75	150	0	168		
	125	MR053011	DCD	CY7C038V-25AC	0	150	0	80		
	125	MR053011	DCD	CY7C038V-25AC	0	150	0	420		
Summary for 'Technology' = R42 (8 detail records)						<b>1198</b>	<b>0</b>			
<b>R5</b>										
	125	035002	DCD	CY7C0430CV-133BGI	3.8	180	0	168		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	179	0	168		
	125	035002	DCD	CY7C0430CV-133BGI	3.8	180	0	464		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
		125 035002	DCD	CY7C0430CV-133BGI	3.8	180	0	36		
		125 035002	DCD	CY7C0430CV-133BGI	3.8	179	0	832		
		125 035002	DCD	CY7C0430CV-133BGI	3.8	180	0	332		
		125 MR051054	MID	CY7C1399B-12VC	3.8	150	0	80		
		125 MR051054	MID	CY7C1399B-12VC	3.8	150	0	420		
		125 MR051055	MID	CY7C1009B-15VC	3.8	150	0	420		
		125 MR051055	MID	CY7C1009B-15VC	3.8	150	0	80		
		125 MR052029	MID	CY62136VLL-70ZI	3.8	150	0	832		
		125 MR052029	MID	CY62136VLL-70ZI	3.8	150	0	168		
		125 MR053007	MID	CG6513AM	2.3	150	0	80		
		125 MR053007	MID	CG6513AM	2.3	150	0	432		
		125 MR053022	MID	CY62136VLL-70ZXI	2.3	150	0	168		
		150 041303	CCD	CY221R28	2.87	120	0	80		
		150 041303	CCD	CY221R28	2.87	119	0	278		
		150 043801	CCD	CY2309CSXI	3.8	120	0	420		
		150 043801	CCD	CY2309CSXI	3.8	120	0	80		
		150 045102	DCD	CYDC256A16-55AXI	3.45	120	0	420		
		150 045102	DCD	CYDC256A16-55AXI	3.45	120	0	80		
		150 050303	CCD	CY7C68000-56PVXC	3.8	116	0	80		
		150 050303	CCD	CY7C68000-56PVXC	3.8	116	0	80		
		150 051903	CCD	CY221R28-ZXC	2.87	116	0	420		
		150 051903	CCD	CY221R28-ZXC	2.87	116	0	80		
		150 051903	CCD	CY221R28-ZXC	2.87	116	0	420		
		150 051903	CCD	CY221R28-ZXC	2.87	116	0	80		
		150 MR044048	MID	CY7C1329-100AC	3.8	200	0	48H		
		150 MR044048	MID	CY7C1329-100AC	3.8	200	0	32		
		150 MR044050	MID	CY7C1021B-15ZI	3.8	149	0	420		
		150 MR044050	MID	CY7C1021B-15ZI	3.8	150	0	80		
		150 MR044071	MID	CY7C1021BV33L-10ZC	3.8	15	0	420		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	150	MR044071	MID	CY7C1021BV33L-10ZC	3.8	150	0	80		
	150	MR044073	MID	CY7C1021B-15ZC	3.8	150	0	80		
	150	MR044073	MID	CY7C1021B-15ZC	3.8	150	0	420		
	150	MR051030	MID	CY7C1009B-15VC	3.8	150	0	80		
	150	MR051030	MID	CY7C1009B-15VC	3.8	150	0	420		
	150	MR051042	MID	CY7C1399B-12VC	3.8	150	0	404		
	150	MR051042	MID	CY7C1399B-12VC	3.8	150	0	96		
Summary for 'Technology' = R5 (39 detail records)						5607	0			

**R7**

125	MR042042	MID	CY7C1061AV33-12ZC	2.45	150	0	832		
125	MR043056	MID	CY7C1069AV33-10ZC	2.45	148	0	832		
125	MR043078	MID	CY62147CV30LL-70BAI	3.45	150	0	181		
125	MR043078	MID	CY62147CV30LL-70BAI	3.45	150	0	819		
125	MR044074	MID	CY7C1061AV33-10ZC	2.45	150	0	179		
125	MR051033	MID	CY62137CV30LL-70BVI	2.4		0	168		
125	MR051061	MID	CY7C1021CV33-12ZC	2.3	150	0	80		
125	MR051061	MID	CY7C1021CV33-12ZC	2.3	150	0	420		
150	MR043063	MID	CY7C1361B-100AC	2.3	149	0	80		
150	MR043063	MID	CY7C1361B-100AC	2.3	149	0	420		
150	MR043064	MID	CY7C1347F-133AC	2.3	150	0	80		
150	MR043073	MID	CY7C1049CV33-15VI	2.3	150	0	80		
150	MR043073	MID	CY7C1049CV33-15VI	2.3	150	0	420		
150	MR044049	MID	CY7C1041CV33-12ZI	2.3	198	0	48		
150	MR044049	MID	CY7C1041CV33-12ZI	2.3	150	0	32		
150	MR044049	MID	CY7C1041CV33-12ZI	2.3	150	0	420		
150	MR044072	MID	CY7C1372CV25-167AC	2.3	200	0	80		
150	MR051025	MID	CY7C1041CV33-10ZC	2.3	150	0	80		
150	MR051025	MID	CY7C1041CV33-10ZC	2.3	150	0	420		
150	MR051025	MID	CY7C1041CV33-10ZC	2.3	150	0	80		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	150	MR051025	MID	CY7C1041CV33-10ZC	2.3	150	0	420		
	150	MR051062	MID	CY7C1021CV33-15ZC	2.3	150	0	80		
	150	MR051062	MID	CY7C1021CV33-15ZC	2.3	150	0	420		
	150	MR052048	MID	CY7C1049CV33-10VC	2.3	150	0	80		
	150	MR052049	MID	CY7C1021CV33-8VC	2.3	150	0	89		
	150	MR052049	MID	CY7C1021CV33-8VC	2.3	150	0	411		
	150	MR052050	MID	CY7C1021CV33-8VC	2.3	150	0	411		
	150	MR052050	MID	CY7C1021CV33-8VC	2.3	150	0	89		
	150	MR053025	MID	CY7C1021CV33-15VC	2.3	150	0	420		
	150	MR053025	MID	CY7C1021CV33-15VC	2.3	150	0	80		
	150	MR053026	MID	CY7C1021CV33-15VXC	2.3	150	0	420		
	150	MR053026	MID	CY7C1021CV33-15VXC	2.3	150	0	80		
	150C	MR051067	MID	CY7C1021CV33-12ZC	2.3	150	0	80		

Summary for 'Technology' = R7 (33 detail records)

4894 0

R8

	125	MR043074	MID	CY62157DV30L-45BVI	2.4	150	0	168		
	125	MR043074	MID	CY62157DV30L-45BVI	2.4	150	0	832		
	125	MR043074	MID	CY62157DV30L-45BVI	2.4	150	0	808		
	125	MR043074	MID	CY62157DV30L-45BVI	2.4	150	0	192		
	125	MR051032	MID	CY62147DV30LL-55BVI	2.4	150	0	168		
	125	MR051032	MID	CY62147DV30LL-55BVI	2.4	150	0	832		
	125	MR051044	MID	CY62146DV30LL-70ZSXI	2.4	150	0	168		
	150	042703	MID	CY62157DV30L	2.4	55	0	408		
	150	MR051077	MID	CY62128DV30LL-70SI	2.4	150	0	80		
	150	MR051077	MID	CY62128DV30LL-70SI	2.4	150	0	420		
	150	MR052028	MID	CY62128DV30LL-55ZI	2.4	150	0	32		
	150	MR052028	MID	CY62128DV30LL-55ZI	2.4	148	0	420		

Summary for 'Technology' = R8 (12 detail records)

1703 0

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
<b>R9</b>										
	150	044403	MID	CY7C1470	2.25	397	0	500		
	150	044403	MID	CY7C1470	2.25	394	0	500		
	150	044403	MID	CY7C1470	2.25	397	0	500		
	150	051103	MID	CY7C1460AV33	2.25	274	0	168		
	150	051103	MID	CY7C1460AV33	2.25	442	0	168		
	150	051103	MID	CY7C1460AV33	2.25	400	0	168		
	150	051103	MID	CY7C1460AV33	2.25	272	0	332		
	150	051103	MID	CY7C1460AV33	2.25	437	0	332		
	150	051103	MID	CY7C1460AV33	2.25	398	0	332		
	150	052203	MID	CY7C1370	2.25	948	0	500		
Summary for 'Technology' = R9 (10 detail records)						<b>4359</b>	<b>0</b>			
<b>S4</b>										
	125	040901	CCD	CY8C29466	5.5	615	0	168		
	125	040901	CCD	CY8C29466	5.5	600	0	168		
	125	040901	CCD	CY8C29466	5.5	600	0	332		
	125	040901	CCD	CY8C29466	5.5	614	0	332		
	125	042702	CCD	CY8C24423A	5.5	82	0	1000		
	125	042702	CCD	CY8C24423A	5.5	78	0	1000		
	125	042702	CCD	CY8C24423A	5.5	80	0	1000		
	125	052004	CCD	CY8C21234-24SXI	5.5	235	0	120		
	125	052004	CCD	CY8C21234-24SXI	5.5	235	0	630		
	125	052004	CCD	CY8C21234-24SXI	5.5	235	0	630		
	125	052004	CCD	CY8C21234-24SXI	5.5	235	0	120		
	125	052004	CCD	CY8C21234-24SXI	5.5	235	0	750		
	125	MR043048	CCD	CY25104ZXC-2	2.45	148	0	832		
	125	MR043048	CCD	CY25104ZXC-2	2.45	148	0	640		
	125	MR043075	CCD	CY8C27443-24PVXI	5.5	150	0	168		
	125	MR051040	CCD	CY8C27443-24PXI	5.5	185	0	832		



Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	125	MR051040	CCD	CY8C27443-24PXI	5.5	185	0	168		
	125	MR052042	CCD	CY22393ZXC-541	3.8	150	0	98		
	125	MR052042	CCD	CY22393ZXC-541	3.8	150	0	402		
	125	MR052082	CCD	CY8C24223A-24PVXI	5.5	143	0	168		
	125	MR052082	CCD	CY8C24223A-24PVXI	5.5	143	0	832		
	125	MR052083	CCD	CY8C26443-24PVI	5.5		0	832		
	125	MR052083	CCD	CY8C26443-24PVI	5.5	149	0	168		
	150	042806	CCD	CY5048SXI	3.8	129	0	420		
	150	042806	CCD	CY5048SXI	3.8	130	0	80		
	150	050507	CCD	CY22389FZXC	3.8	120	0	80		
	150	050507	CCD	CY22389FZXC	3.8	120	0	420		
	150	MR051076	CCD	CY22392ZC-366	3.8	150	0	80		
	150	MR051076	CCD	CY22392ZC-366	3.8	150	0	420		

Summary for 'Technology' = S4 (29 detail records)

6194 0

**STARM**

125	MR051034	DCD	CY7B933-JC	6.5	75	0	832		
125	MR051034	DCD	CY7B933-JC	6.5	75	0	168		
125	MR051034	DCD	CY7B933-JC	6.5	75	0	168		
125	MR051034	DCD	CY7B933-JC	6.5	75	0	832		

Summary for 'Technology' = STARM (4 detail records)

300 0

**TSMC 130**

125	025107	DCD	CYNSE10512	1.35	165	0	168		
125	025107	DCD	CYNSE10512B	1.35	122	0	168		
125	025107	DCD	CYNSE10512B	1.35	119	0	832		
125	025107	DCD	CYNSE10512	1.35	52	0	168		
125	025107	DCD	CYNSE10512	1.35	52	0	200		
125	025107	DCD	CYNSE10512B	1.35	28	0	40		
125	025107	DCD	CYNSE10512	1.38	23	0	168		
125	025107	DCD	CYNSE10512B	1.35	20	0	632		

Technology	Temp	Eval Num	Division	Device	Volt	SS	Rej	Hours	FA	Results
	125	025107	DCD	CYNSE10512B	1.35	20	0	168		
	125	025107	DCD	CYNSE10512	1.38	22	0	500		
	125	025107	DCD	CYNSE10512B	1.35	28	0	168		
	125	025107	DCD	CYNSE10512B	1.35	28	0	792		
	125	025107	DCD	CYNSE10512B	1.35	20	0	200		
	125	025107	DCD	CYNSE10512	1.35	52	0	632		
	125	025107	DCD	CYNSE10512	1.38	23	0	168		
	125	041401	DCD	CYNSE10512B	1.35	28	0	40		
	125	041401	DCD	CYNSE10512	1.38	22	0	500		
	125	041401	DCD	CYNSE10512B	1.35	119	0	832		
	125	041401	DCD	CYNSE10512B	1.35	20	0	632		
	125	041401	DCD	CYNSE10512	1.38	23	0	168		
	125	041401	DCD	CYNSE10512	1.35	52	0	632		
	125	041401	DCD	CYNSE10512	1.35	52	0	200		
	125	041401	DCD	CYNSE10512B	1.35	28	0	792		
	125	041401	DCD	CYNSE10512	1.35	52	0	168		
	125	041401	DCD	CYNSE10512B	1.35	28	0	168		
	125	041401	DCD	CYNSE10512B	1.35	122	0	168		
	125	041401	DCD	CYNSE10512B	1.35	20	0	168		
	125	041401	DCD	CYNSE10512	1.38	23	0	168		
	125	041401	DCD	CYNSE10512	1.35	165	0	168		
	125	041401	DCD	CYNSE10512B	1.35	20	0	200		
	125	044701	DCD	7C71050AJ-GQFGC	1.35	66	0	476		
	125	044701	DCD	7C71050AJ-GQFGC	1.35	69	0	168		
Summary for 'Technology' = TSMC 130 (32 detail records)						1683	0			
<b>Grand Total</b>						<b>31295</b>	<b>0</b>			

**Summary Detail, Package -- PCT Performance**

BldKit	Loc	Eval Num	Device	Readout	SS	Rejects	FA	Results
<b>TQFP</b>								
A100	R-CML	045002	C9TC	168	30	0		
A100	R-CML	045002	C9TC	168	30	0		
A100	R-CML	045002	C9TC	168	40	0		
A100	R-CML	045002	C9TC	168	30	0		
A100	R-CML	045002	C9TC	168	30	0		
A100RKGAB	R-CML	MR043042	CY7C68013-100AC	176	50	0		
A100RKGAB	R-CML	MR044020	CY7C1329-100AC	176	49	0		
A100RKGAB	R-CML	044603	CY7C1339B-133AI	168	65	0		
A100SFAGE	R-CML	MR052002	CY7C0241-25AC	168	50	0		
A128SAGLL	R-CML	050801	CY7C1019CV33-15VC	168	44	0		
A144GGAGE	G-TAIWAN	MR051009	CY7C057V-12AC	168	50	0		
A144GGAGE	G-TAIWAN	MR052033	CY7C057V-15AI	168	50	0		
A32AXGAGE	SI-SIGNETI	MR043085	CY29947AC	176	50	0		
A52AEGAGE	Q-KOREA	MR052004	CY29972AI	176	50	0		
A52ASGAGE	Q-KOREA	MR044009	CY7B9973V-AC	168	50	0		
A52ASGAGE	Q-KOREA	MR051035	CY7B9973V-AC	168	50	0		
Summary for 'Family' = TQFP (16 detail records)					718	0		
<b>TQFP (10x10)</b>								
AS6513GAGB	G-TAIWAN	MR052089	CY7C4215V-15ASC	168	50	0		
Summary for 'Family' = TQFP (10x10) (1 detail record)					50	0		
<b>TQFP (Thermal)</b>								
AT120AAAGE	L-SEOL	MR052023	CYS25G0101DX-ATC	168	50	0		
AT120AGAGE	L-SEOL	MR043058	CYS25G0101DX-ATI	176	50	0		
AT120AGAGE	L-SEOL	MR044077	CYS25G0101DX-ATC	168	45	0		
AT120AGAGE	L-SEOL	MR051082	CYS25G0101DX-ATC	168	50	0		
AT120AHAGE	L-SEOL	041701	7B9532BC-LATC	176	50	0		
Summary for 'Family' = TQFP (Thermal) (5 detail records)					245	0		
<b>TQFP (Pb-Free)</b>								
AZ100RRG	R-CML	044403	CY7C1470	168	50	0		
AZ100RRG	R-CML	044403	CY7C1470	168	51	0		
AZ100RRL	R-CML	032003	7C1460BC-RAZC	168	44	0		
AZ100RRL	R-CML	051006	CY7C1470	168	50	0		
AZ128CGAL	G-TAIWAN	033805	7C681000AC-GAZC	168	50	0		

<b>BldKit</b>	<b>Loc</b>	<b>Eval Num</b>	<b>Device</b>	<b>Readout</b>	<b>SS</b>	<b>Rejects</b>	<b>FA</b>	<b>Results</b>
AZ128CGAL	G-TAIWAN	033805	7C681000AC-GAZC	168	50	0		
AZ144GGAL	G-TAIWAN	MR052074	CY7C056V-12AXC	168	49	0		
AZ52ASGAL	Q-KOREA	051902	CY7B9945V-5AXCT	168	50	0		
Summary for 'Family' = TQFP (Pb-Free) (8 detail records)					<b>394</b>	<b>0</b>		
<b>FBGA (0.75-0.8)</b>								
BA48AAALE	RA-CML	042602	7C621464BC-RABAI	168	44	0		
BA48VALE	RA-CML	MR043061	CY62147CV30LL-70B	168	50	0		
BA48BQAALE	RA-CML	MR041055	CY62137CVSL-70BAI	176	45	0		
BA48BQAALE	RA-CML	MR044068	CY62137CV30LL-70B	168	49	0		
BA48BWALE	G-TAIWAN	MR043025	CY7C1021CV33-15BAI	176	46	0		
BA48CRALE	T-TAIWAN	MR044056	CY62137CVSL-70BAI	168	50	0		
BA48DCALE	G-TAIWAN	045109	7C1069AC-GBAC	168	50	0		
BA48DCALE	G-TAIWAN	045109	7C1061AC-GBAIB	168	50	0		
Summary for 'Family' = FBGA (0.75-0.8) (8 detail records)					<b>384</b>	<b>0</b>		
<b>FBGA (1.0)</b>								
BB100EAGE	G-TAIWAN	MR052032	CYP15G0101DXB-BBI	168	49	0		
BB144DALE	G-TAIWAN	044006	7C08333AC-GBBC	168	48	0		
BB165AALE	G-TAIWAN	044201	7C1414BC-GBBC	168	48	0		
BB165GALE	G-TAIWAN	045107	7R1371CC-GBBCB	168	49	0		
BB165KALE	G-TAIWAN	044501	7C1470AC-GBBC	168	50	0		
BB165KALE	G-TAIWAN	050704	7C1470AC-GBBC	168	48	0		
BB172AAGE	G-TAIWAN	MR051007	CY7C057V-15BBI	168	48	0		
BB172BALE	G-TAIWAN	MR043032	CY7C0852V-133BBC	168	44	0		
BB172BALE	G-TAIWAN	044102	7C08523DC-GBBCB	168	48	0		
BB209BALE	G-TAIWAN	050702	7C1474AC-GBBC	168	50	0		
BB256HALE	RA-CML	043308	CYNSE70130B	168	50	0		
Summary for 'Family' = FBGA (1.0) (11 detail records)					<b>532</b>	<b>0</b>		
<b>PBGA (1.27)</b>								
BG119MALE	G-TAIWAN	MR043086	CY7C1373CV25-100B	168	50	0		
BG119VALE	G-TAIWAN	052602	7C1330DC-GBGC	168	50	0		
BG272BAGE	G-TAIWAN	035002	7C04301CC-GBGI	168	50	0		
BG272BAGE	G-TAIWAN	035002	7C04301CC-GBGI	168	48	0		
BG282BAGE	G-TAIWAN	MR052005	CY37512P256-83BGC	168	46	0		
Summary for 'Family' = PBGA (1.27) (5 detail records)					<b>244</b>	<b>0</b>		
<b>PBGA (Cavity/Heatsink, Pb-Free)</b>								
BJ256L2GL	G-TAIWAN	044507	CY28323BPVC	168	50	0		

BldKit	Loc	Eval Num	Device	Readout	SS	Rejects	FA	Results
BJ256L2GL	G-TAIWN	044507	CY28323BPVC	168	45	0		
Summary for 'Family' = PBGA (Cavity/Heatsink, Pb-Free) (2 detail					95	0		
PBGA (Cavity/Heatsink)								
BL256L2GE	G-TAIWAN	MR051006	CYP15G0401DXB-BGI	176	19	0		
BL256L2GE	G-TAIWAN	MR051006	CYP15G0401DXB-BGI	168	31	0		
Summary for 'Family' = PBGA (Cavity/Heatsink) (2 detail records)					50	0		
FBGA (0.75-0.8, Pb-Free)								
BP96AALL	G-TAIWAN	042105	7C83864AC-GBPC	168	46	0		
Summary for 'Family' = FBGA (0.75-0.8, Pb-Free) (1 detail record)					46	0		
FVBGA (0.75-0.8, 0.3mm)								
BV48AFALE	G-TAIWAN	MR042030	CY62167DV30LL-70B	168	50	0		
BV48HAAL	G-TAIWAN	MR051014	CY62147CV33LL-70B	176	50	0		
BV48NAAL	RA-CML	042801	7R62357DC-RABVI	168	49	0		
Summary for 'Family' = FVBGA (0.75-0.8, 0.3mm) (3 detail records)					149	0		
FBGA (1.0, Pb-Free)								
BW100EAGL	G-TAIWAN	MR051023	CYP15G0101DXB-BB	168	48	0		
Summary for 'Family' = FBGA (1.0, Pb-Free) (1 detail record)					48	0		
PBGA (1.27, Pb-Free)								
BY119MAGL	G-TAIWAN	041103	7R1370CC-GBYCB	168	48	0		
BY119MAGL	G-TAIWAN	041103	7R1370CC-GBYCB	168	50	0		
Summary for 'Family' = PBGA (1.27, Pb-Free) (2 detail records)					98	0		
VFBGA (0.75-0.8, Pb-Free)								
BZ100AALE	G-TAIWAN	050202	CY7C015V18-35AC	168	50	0		
BZ52BGAGL	G-TAIWAN	042106	7C82877A	168	47	0		
Summary for 'Family' = VFBGA (0.75-0.8, Pb-Free) (2 detail records)					97	0		
FLIPCHIP (Build-Up Substrate w/ HS)								
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	168	45	0		
Summary for 'Family' = FLIPCHIP (Build-Up Substrate w/ HS) (1 detail					45	0		
PLCC								
J32RBGAGB	X-THALND	MR051031	CY7B991-2JC	168	50	0		
J32RBGAGB	X-THALND	MR052018	CY7B991-5JC	168	50	0		
J52SFGAGB	M-PHIL	MR051036	CY7C136-25JC	168	50	0		
J84SFGACB	M-PHIL	MR044035	CY7C346B-35JC	176	48	0		
Summary for 'Family' = PLCC (4 detail records)					198	0		

<b>BldKit</b>	<b>Loc</b>	<b>Eval Num</b>	<b>Device</b>	<b>Readout</b>	<b>SS</b>	<b>Rejects</b>	<b>FA</b>	<b>Results</b>
<b>QFN (Punch Type)</b>								
LF56AGAGE	L-SEOL	MR043023	CY7C68013-56LFC	176	50	0		
LF56AGAGE	L-SEOL	MR044081	CY7C65640A-LFC	168	50	0		
LF56AGAGE	L-SEOL	MR051075	CY7C65640A-LFC	176	50	0		
LF56CGAGL	T-TAIWAN	MR043019	CY7C1019CV33-12ZC	168	47	0		
LF56CGAGL	T-TAIWAN	MR043019	CY7C1019CV33-12ZC	176	3	0		
<b>Summary for 'Family' = QFN (Punch Type) (5 detail records)</b>					<b>200</b>	<b>0</b>		
<b>QFN (Punch Type, Pb-Free)</b>								
LY32BGAGL	RA-CML	052610	CY8C21434-24LFXI	168	50	0		
LY48AGAGL	L-SEOL	044307	CYWUSB6934	168	50	0		
LY48D1GAL	L-SEOL	044508	7B6953AC-LLYC	168	49	0		
LY48EGAGL	L-SEOL	052401	7B6953B-LLYC	168	50	0		
LY56AGAGL	L-SEOL	MR044065	CY7C68300A-56LFXC	176	50	0		
LY56DGAGL	L-SEOL	MR051046	CP6241AM	176	50	0		
LY56FGALL	RA-CML	050303	CY7C109B-20VCT	168	50	0		
LY56FGALL	RA-CML	050303	CY7C65640-LFXC	168	50	0		
LY56FGALL	RA-CML	050303	CY7C65640-LFXC	168	50	0		
<b>Summary for 'Family' = QFN (Punch Type, Pb-Free) (9 detail records)</b>					<b>449</b>	<b>0</b>		
<b>PQFP</b>								
N52DXGAGB	G-TAIWAN	MR051005	CY7C136-55NC	168	50	0		
N52DXGAGB	G-TAIWAN	MR052031	CY7C136-55NC	168	47	0		
<b>Summary for 'Family' = PQFP (2 detail records)</b>					<b>97</b>	<b>0</b>		
<b>SSOP</b>								
O2023GAGB	T-TAIWAN	MR044062	CY8C26233-24PVI	168	50	0		
O2026XAGB	T-TAIWAN	053205	IMISM530AYB	168	45	0		
O2026XAGB	T-TAIWAN	053205	IMISM530AYB	168	45	0		
O2028GAGE	T-TAIWAN	MR044066	CY2CC8100I	176	50	0		
O2028GAGE	T-TAIWAN	053205	CY2CC8100I	176	50	0		
O2824GAGB	T-TAIWAN	MR043059	CY28400OC	176	49	0		
O2824GAGB	T-TAIWAN	MR051038	CY28508OC	168	50	0		
O2824GAGB	T-TAIWAN	053205	CY28506OC	168	45	0		
O4816XAGB	T-TAIWAN	053205	CY28342OC	168	45	0		
O56	R-CML	042507	CY284KOTP	168	46	0		
O563AXAGB	R-CML	MR044016	CY28341OC-2T	168	50	0		
O563AXAGN	R-CML	MR052017	CY28419OC	168	40	0		

BldKit	Loc	Eval Num	Device	Readout	SS	Rejects	FA	Results
O563BXAGE	R-CML	MR051021	CP6221BM	168	50	0		
Summary for 'Family' = SSOP (13 detail records)					615	0		
<b>PDIP</b>								
P1832XAGB	X-THALND	MR043057	CP6238AM	176	50	0		
P243FGAGE	M-PHIL	MR052025	CY7C194-25PC	168	50	0		
P2831GAGB	O-INDNS	MR044033	CY7C185-20PC	168	50	0		
P2839GAGB	X-THALND	MR052061	CY7C466A-10PTC	168	50	0		
P283EGAGE	O-INDNS	MR051001	CY8C26443-24PI	168	45	0		
P2869AAGE	O-INDNS	052406	7C62256EC-OPC	168	45	0		
P286BGAGB	O-INDNS	052406	CY62256LL-70PC	168	45	0		
P286EGAGB	O-INDNS	MR043039	CY62256L-70PC	168	50	0		
P286EGAGB	O-INDNS	052406	CY62256L-70PC	168	50	0		
P286EGAGB	O-INDNS	052406	CY62256LL-70PC	168	50	0		
P286EGAGB	O-INDNS	052406	CY62256LL-70PC	168	50	0		
P286FGAGB	X-THALND	MR044027	CY62256LL-70PC	176	50	0		
P406AGAGB	O-INDNS	052406	CY7C634121C-PC	168	45	0		
P406AGAGB	O-INDNS	052406	CP5748AM	168	45	0		
Summary for 'Family' = PDIP (13 detail records)					625	0		
<b>PDIP (Pb-Free)</b>								
PZ243AAGN	X-THALND	051206	CY7C63743-PXC	168	50	0		
PZ2831GAN	O-INDNS	040901	8C29466AT-OPZI	168	50	0		
Summary for 'Family' = PDIP (Pb-Free) (2 detail records)					100	0		
<b>SOIC (GullWing)</b>								
S0815EAGB	SL-INDIA	MR043080	CY27022SC	176	50	0		
S0815PAGN	RA-CML	MR044055	CY2410SC-1	176	48	0		
S0815PAGN	RA-CML	MR051018	CY2305SC-1H	168	50	0		
S1615DAAGB	M-PHIL	MR051027	CY2292F	168	50	0		
S1615EAGB	M-PHIL	MR044011	CY2309SC-1H	168	50	0		
S1615EAGB	M-PHIL	MR053002	CY2309SC-1H	168	50	0		
S183CGAGN	RA-CML	043303	CY7C63723-SC	168	50	0		
S24314AGL	RA-CML	MR044028	CP6124AM	168	50	0		
S2439GAGB	O-INDNS	MR043029	CY7B9910-2SC	168	45	0		
S283HGAGB	O-INDNS	MR051003	CY2314ANZSC-1	168	45	0		
S283HGAGB	O-INDNS	MR052073	CY7B933-SC	168	49	0		
S324513GB	R-CML	MR051078	CY62128BLL-70SI	168	50	0		
S324513GN	R-CML	MR053003	CY6525AM	168	50	0		
Summary for 'Family' = SOIC (GullWing) (13 detail records)					637	0		

BlkKit	Loc	Eval Num	Device	Readout	SS	Rejects	FA	Results
<b>SOIC (GullWing, 450 footprint)</b>								
SN2831AHB	R-CML	MR043024	CY62256LL-70SNI	168	50	0		
SN2831AHB	R-CML	MR044008	CY62256LL-70SNC	168	45	0		
SN2831AHN	R-CML	MR051008	CY62256LL-70SNC	168	50	0		
SN2831AHN	R-CML	MR052013	CY62256L-70SNC	168	50	0		
SN2833AGB	O-INDNS	MR043031	CY6264-70SNC	168	45	0		
Summary for 'Family' = SOIC (GullWing, 450 footprint) (5 detail records)					240	0		
<b>SSOP (Pb-Free)</b>								
SP1621AGB	M-PHIL	040606	W198BF-MSPC	168	48	0		
SP1621AGB	M-PHIL	040606	W198BF-MSPC	168	50	0		
SP2023GAL	T-TAIWAN	042501	8C21323AT-**TSPI	168	50	0		
SP2023GAL	T-TAIWAN	042505	8C21334AT-TSPI	168	45	0		
SP28214GL	T-TAIWAN	052004	CY8C21234-24SXI	168	45	0		
SP2824GAN	T-TAIWAN	MR044076	CY28353OXC-2	168	50	0		
SP483FAGN	RA-CML	MR044007	CY28405OXC	168	45	0		
SP563AAGN	R-CML	MR043047	CY28RS480OXC	168	47	0		
SP563AAGN	R-CML	MR044010	CY28410OXC	168	45	0		
SP563AAGN	R-CML	MR051019	CY28410OXC	168	50	0		
SP563AAGN	R-CML	040903	7C828437AC-RSPC	168	45	0		
SP563BAGL	R-CML	042101	7C682020AC-RSPC	176	65	0		
SP563BAGL	R-CML	042101	7C682020AC-RSPC	176	63	0		
SP563BAGL	R-CML	042101	7C682005AC-RSPC	176	57	0		
SP563CAGE	T-TAIWAN	053502	CY7C66113A-PVXC	168	50	0		
Summary for 'Family' = SSOP (Pb-Free) (15 detail records)					755	0		
<b>QSOP (Pb-Free)</b>								
SQ2414AGN	R-CML	MR043016	CY7C63743-QXC	176	50	0		
SQ2414AGN	R-CML	MR044042	CY7C63101A-QXC	168	49	0		
Summary for 'Family' = QSOP (Pb-Free) (2 detail records)					99	0		
<b>SOIC (GullWing, 450 footprint, Pb-Free)</b>								
SY2831AHN	R-CML	MR044002	CY62256LL-70SNXC	168	50	0		
SY2831AHN	R-CML	MR052010	CY62256L-70SNXC	168	50	0		
Summary for 'Family' = SOIC (GullWing, 450 footprint, Pb-Free) (2 detail					100	0		
<b>SOIC (GullWing, Pb-Free)</b>								
SZ1615DGN	M-PHIL	043801	7C823C09AC-MSZI	168	48	0		
SZ1615DGN	M-PHIL	043801	7C823C09AC-MSZI	168	48	0		
SZ1615DGN	M-PHIL	052004	CY8C21234-24SXI	168	45	0		



BldKit	Loc	Eval Num	Device	Readout	SS	Rejects	FA	Results
SZ1615DGN	M-PHIL	052004	CY8C21234-24SXI	168	45	0		
SZ1615EGN	M-PHIL	MR044014	CY2309NZSXC-1H	168	50	0		
SZ1615EGN	M-PHIL	MR051029	CY2308SXC-1H	168	50	0		
SZ1615EGN	M-PHIL	MR052046	CY2309SXC-1H	168	50	0		
SZ183AGAN	M-PHIL	044301	CY7C63723-SXC	168	50	0		
SZ183BGAL	RA-CML	MR044082	CY7C65640A-LFC	168	50	0		
SZ324510GL	R-CML	MR051022	CY62128BLL-70SXI	168	50	0		
SZ324514L	R-CML	MR044005	CY62148DV30LL-70S	176	45	0		
SZ815DAGN	M-PHIL	042806	7C80330AT-MSZC	168	48	0		
Summary for 'Family' = SOIC (GullWing, Pb-Free) (12 detail records)					579	0		
<b>SOIC (J lead)</b>								
V243GGALE	O-INDNS	MR043002	CY7C197B-12VC	176	50	0		
V28CGAGB	O-INDNS	MR044064	CY7C106B-20VC	168	50	0		
V324EGAGB	O-INDNS	MR042040	CY7C1019BV33-15VC	168	45	0		
V324EGAGB	O-INDNS	MR051002	CY7C1019B-12VC	168	45	0		
V3644GALE	R-CML	MR042067	CY7C1049B-25VI	176	45	0		
V3646GALE	R-CML	MR043065	CY7C1049CV33-12VC	168	50	0		
V444WGALE	R-CML	MR044022	CY7C1021B-15VC	168	45	0		
V444WGALL	R-CML	MR052019	CY7C1021B-12VI	168	50	0		
V444YAALE	R-CML	MR051015	CY7C1041CV33-12VC	168	50	0		
V444ZGALE	R-CML	MR043007	CY7C1021CV33-10VC	168	50	0		
V444ZGALL	R-CML	MR053004	CY7C1021CV33	168	50	0		
Summary for 'Family' = SOIC (J lead) (11 detail records)					530	0		
<b>SOIC (J lead, Pb-Free)</b>								
VZ444WAGL	R-CML	MR052001	CY7C1021B-15VXC	168	50	0		
VZ444ZAGL	R-CML	MR043067	CY7C1021CV33-12VX	168	50	0		
VZ444ZALL	R-CML	MR053005	CY7C1021CV33-8VXC	168	49	0		
Summary for 'Family' = SOIC (J lead, Pb-Free) (3 detail records)					149	0		
<b>CERDIP (Windowed)</b>								
W129DF-TSC	T-TAIWAN	042114	W129DF-TSC	168	50	0		
W129DF-TSC	T-TAIWAN	050701	CY7C65640-LFXC	168	50	0		
Summary for 'Family' = CERDIP (Windowed) (2 detail records)					100	0		
<b>TSOP/ TSSOP</b>								
Z1611XAGB	M-PHIL	MR044012	CY22392ZC-366	168	50	0		
Z1613GAGB	T-TAIWAN	MR043049	CY2308ZC-1H	168	42	0		
Z1613GAGB	T-TAIWAN	MR051011	CY2309ZI-1H	168	45	0		
Z1613GAGB	T-TAIWAN	MR052039	CY2308ZC-1H	168	46	0		

<b>BldKit</b>	<b>Loc</b>	<b>Eval Num</b>	<b>Device</b>	<b>Readout</b>	<b>SS</b>	<b>Rejects</b>	<b>FA</b>	<b>Results</b>
Z1619GAGN	RA-CML	MR052027	CY22392ZC-366	168	50	0		
Z32RLGAGE	T-TAIWAN	MR044024	CY62128BLL-70ZC	168	50	0		
Z32RYAALE	T-TAIWAN	MR042036	CY62128DV30LL-55ZI	168	50	0		
Z32RYAALE	T-TAIWAN	MR043017	CY62128DV30LL-55ZI	168	49	0		
Z32RYAALE	T-TAIWAN	MR043060	CY62128DV30LL-70ZI	176	49	0		
Z4824BGAN	R-CML	MR043087	CY28339ZC	168	50	0		
Z5624BAGN	R-CML	MR043004	CY28409ZC	168	45	0		
Z5624BAGN	R-CML	MR044015	CY28346ZC	176	43	0		
Z5624BAGN	R-CML	MR051050	CY28346ZI-2T	168	50	0		
Z5624BAGN	R-CML	044903	CY28346ZC-2	176	50	0		
Summary for 'Family' = TSOP/ TSSOP (14 detail records)					669	0		
<b>TSOP I</b>								
ZA32RHAALB	R-CML	MR043044	CY62128DV30LL-70Z	168	50	0		
ZA32RHAALB	R-CML	MR044017	CY62128DV30LL-70Z	176	44	0		
ZA32RHAALB	R-CML	MR051012	CY62128DV30LL-55Z	168	50	0		
ZA32RHAALB	R-CML	MR052020	CY62128DV30LL-55Z	168	50	0		
Summary for 'Family' = TSOP I (4 detail records)					194	0		
<b>TSOP (Reverse)</b>								
ZR28R2AGB	R-CML	MR044018	CY62256LL-70ZRI	168	45	0		
ZR28R2AGN	R-CML	MR051013	CY62256LL-70ZRI	168	50	0		
ZR32RKAGB	T-TAIWAN	MR044023	CY62128BLL-55ZRI	168	49	0		
Summary for 'Family' = TSOP (Reverse) (3 detail records)					144	0		
<b>TSOP II</b>								
ZS324CA3E	T-TAIWAN	MR044070	CY7C1019B-12ZC	176	44	0		
ZS324FAGE	T-TAIWAN	MR043018	CY7C1019CV33-12ZC	176	49	0		
ZS324FAGE	T-TAIWAN	MR051037	CY7C1019CV33-12ZC	168	50	0		
ZS324FAGE	T-TAIWAN	MR052009	CY7C1019CV33-12ZC	168	50	0		
ZS444ABALE	R-CML	MR043041	CY7C1021CV33-12ZC	168	50	0		
ZS444ABALE	R-CML	MR044021	CY7C1021CV33-15ZC	168	45	0		
ZS444AKALN	R-CML	MR052022	CY7C1041CV33-15ZC	168	50	0		
ZS544AALE	G-TAIWAN	MR043062	CY7C1069AV33-10ZC	168	50	0		
ZS544AALE	G-TAIWAN	MR044031	CY7C1069AV33-12ZC	168	46	0		
Summary for 'Family' = TSOP II (9 detail records)					434	0		
<b>TSOP (Pb-Free)</b>								
ZT28R2AGN	R-CML	MR044001	CY62256LL-70ZXC	168	50	0		

BldKit	Loc	Eval Num	Device	Readout	SS	Rejects	FA	Results
Summary for 'Family' = TSOP (Pb-Free) (1 detail record)					50	0		
TSOP II (Pb-Free)								
ZW444AFLL	R-CML	MR044004	CY62146DV30LL-70Z	168	50	0		
ZW444NAGN	R-CML	MR051047	CY62126DV30LL-55Z	168	50	0		
ZW544AALE	G-TAIWAN	042902	7C1069AC-GZWC	168	50	0		
Summary for 'Family' = TSOP II (Pb-Free) (3 detail records)					150	0		
TSSOP (Pb-Free)								
ZZ0812AGL	T-TAIWAN	MR043048	CY25104ZXC-2	176	50	0		
ZZ1613GAN	T-TAIWAN	MR052077	CY2309ZXI-1H	168	50	0		
ZZ2411AGN	T-TAIWAN	MR043020	CY7C1019CV33-12ZC	168	49	0		
ZZ2411AGN	T-TAIWAN	MR043066	CY22313ZXC	176	50	0		
ZZ2411AGN	T-TAIWAN	MR051051	CY22313ZXC	168	50	0		
ZZ2415GAL	RA-CML	MR051028	CY22313ZXC	168	50	0		
ZZ2415GAL	RA-CML	MR052006	CY22313ZXC	168	50	0		
ZZ2813AGN	T-TAIWAN	053006	CY15002ZXC	168	49	0		
ZZ2817AGL	RA-CML	041303	7C89000AC-RAZZC	168	50	0		
ZZ2817AGL	RA-CML	042701	7C89000AC-RAZZC	168	44	0		
ZZ2817AGL	RA-CML	051903	CY221R28-ZXC	168	50	0		
ZZ5624BG	R-CML	052802	CY28411ZXC	168	49	0		
ZZ5624BGN	R-CML	MR051026	CY28442ZXC	176	50	0		
ZZ5624BGN	R-CML	050504	CY28411ZXCT	168	49	0		
ZZ5624BGN	R-CML	050504	CY28411ZXCT	168	48	0		
ZZ5624BGN	R-CML	050504	CY28411ZXCT	168	50	0		
Summary for 'Family' = TSSOP (Pb-Free) (16 detail records)					788	0		
<b>Grand Total</b>					<b>11097</b>	<b>0</b>		

## Summary Detail, Package -- HAST Performance

BldKit	Assy Site	Eval Num	Device	SS	Rej	FA	Results
<b>TQFP</b>							
A100R1AKB	R-CML	033805	7C682001AC-RAC	47	0		
A100R1AKB	R-CML	042106	7C682001AC-RAC	47	0		
A100RKGAB	R-CML	044603	CY7C1339B-133AI	44	0		
A100SFAGE	R-CML	MR052002	CY7C0241-25AC	48	0		
A128SAGLL	R-CML	050801	CY7C1019CV33-15VC	39	0		
A32AXGAGE	SI-SIGNETI	MR043085	CY29947AC	46	0		
A52ASGAGE	Q-KOREA	MR044009	CY7B9973V-AC	50	0		
Summary for 'Family' = A (7 detail records)				<b>321</b>	<b>0</b>		
<b>TQFP (Thermal, Pb-Free)</b>							
AG120AGAL	L-SEOL	041701	7B9532BC-LAGC	46	0		
Summary for 'Family' = AG (1 detail record)				<b>46</b>	<b>0</b>		
<b>TQFP (10x10)</b>							
AS6513GAGB	G-TAIWAN	MR052089	CY7C4215V-15ASC	46	0		
Summary for 'Family' = AS (1 detail record)				<b>46</b>	<b>0</b>		
<b>TQFP (Thermal)</b>							
AT120AHAGE	L-SEOL	041701	7B9532BC-LATC	28	0		
AT120AHAGE	L-SEOL	041701	7B9532BC-LATC	3	0		
Summary for 'Family' = AT (2 detail records)				<b>31</b>	<b>0</b>		
<b>TQFP (Pb-Free)</b>							
AZ100RRG	R-CML	044403	CY7C1470	49	0		
AZ100RRG	R-CML	044403	CY7C1470	46	0		
AZ52ASGAL	Q-KOREA	051902	CY7B9945V-5AXCT	50	0		
Summary for 'Family' = AZ (3 detail records)				<b>145</b>	<b>0</b>		
<b>FBGA (0.75-0.8)</b>							
BA48AAALE	RA-CML	042602	7C621464BC-RABAI	43	0		
BA48CJALE	GO-CHPMS	MR042043	CG6078AA	50	0		
BA48DCALE	G-TAIWAN	045109	7C1069AC-GBAC	45	0		
BA48DJALE	G-TAIWAN	052502	CY62177DV30L	45	0		
Summary for 'Family' = BA (4 detail records)				<b>183</b>	<b>0</b>		

BldKit	Assy Site	Eval Num	Device	SS	Rej	FA	Results
<b>FBGA (1.0)</b>							
BB144DALE	G-TAIWAN	044006	7C08333AC-GBBC	50	0		
BB165KALE	G-TAIWAN	044501	7C1470AC-GBBC	48	0		
BB209BALE	G-TAIWAN	050702	7C1474AC-GBBC	47	0		
BB256HALE	RA-CML	043308	7C76040CJ-RABBC	47	0		
Summary for 'Family' = BB (4 detail records)				192	0		
<b>PBGA (Cavity/Heatsink, Pb-Free)</b>							
BJ504AAGL	G-TAIWAN	044507	CY7C9536B-BLXC	28	0		
BJ504AAGL	G-TAIWAN	044507	CY7C9536B-BLXC	39	0		
BJ504AAGL	G-TAIWAN	044507	CY7C9536B-BLXC	20	0		
BJ504AAGL	G-TAIWAN	044507	CY7C9536B-BLXC	11	0		
Summary for 'Family' = BJ (4 detail records)				98	0		
<b>FVBGA (0.75-0.8, 0.3mm)</b>							
BV48ADALE	G-TAIWAN	MR041048	CY62127DV30LL-70BVI	48	0		
BV48AFALE	G-TAIWAN	MR042030	CY62167DV30LL-70BVI	44	0		
BV48HAALE	G-TAIWAN	MR051014	CY62147CV33LL-70BVI	45	0		
BV48NAALE	RA-CML	042801	7R62357DC-RABVI	45	0		
Summary for 'Family' = BV (4 detail records)				182	0		
<b>PBGA (1.27, Pb-Free)</b>							
BY119MAGL	G-TAIWAN	041103	7R1370CC-GBYC	47	0		
BY119MAGL	G-TAIWAN	041103	7R1370CC-GBYC	48	0		
BY119MAGL	G-TAIWAN	044005	7R1370CC-GBYC	48	0		
BY119MAGL	G-TAIWAN	044005	7R1370CC-GBYC	47	0		
BY119MAGL	G-TAIWAN	044005	7R1370CC-GBYC	47	0		
BY388BAGL	G-TAIWAN	041103	7C39485EH-GBYC	12	0		
BY388BAGL	G-TAIWAN	041103	7C39485EH-GBYC	36	0		
Summary for 'Family' = BY (7 detail records)				285	0		
<b>VFBGA (0.75-0.8, Pb-Free)</b>							
BZ100AALE	G-TAIWAN	052002	7C02618AC-GBZI	48	0		
BZ100AALE	G-TAIWAN	052002	7C02618AC-GBZIB	48	0		
BZ100AALE	G-TAIWAN	050202	CY7C015V18-35AC	48	0		
BZ100AALE	G-TAIWAN	050202	7C02618AC-GBZI	48	0		

BldKit	Assy Site	Eval Num	Device	SS	Rej	FA	Results
BZ52BGAGL	G-TAIWAN	042106	C72SSTU877V	46	0		
Summary for 'Family' = BZ (5 detail records)				238	0		
FLIPCHIP (Build-Up Substrate w/ HS)							
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	12	7	025107-5A1	Substrate related defect.
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	12	0		
FG388AGAGE	GQ-KOREA	025107	7C71020AJ-GQFGCB	20	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGC	24	0		
FG388AGAGE	GQ-KOREA	025107	7C71020AJ-GQFGCB	20	0		
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	11	0		
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	22	0		
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	12	0		
Summary for 'Family' = FG (8 detail records)				133	7		
PLCC							
J32RBGAGB	X-THALND	MR051031	CY7B991-2JC	50	0		
J32RBGAGB	X-THALND	MR052018	CY7B991-5JC	50	0		
J52SFGAGB	M-PHIL	MR051036	CY7C136-25JC	50	0		
Summary for 'Family' = J (3 detail records)				150	0		
QFN (Punch Type)							
LF56AGAGE	L-SEOL	MR044081	CY7C65640A-LFC	44	0		
LF56AGAGE	L-SEOL	MR051075	CY7C65640A-LFC	43	0		
Summary for 'Family' = LF (2 detail records)				87	0		
QFN (Punch Type, Pb-Free)							
LY32BGAGL	RA-CML	052610	CY8C21434-24LFXI	47	0		
LY48D1GAL	L-SEOL	044508	7B6953AC-LLYC	49	0		
LY48EGAGL	L-SEOL	052401	7B6953B-LLYC	50	0		
LY56DGAGL	L-SEOL	MR051046	CP6241AM	45	0		
LY56FGALL	RA-CML	050303	CY7C65640-LFXC	28	0		
LY56FGALL	RA-CML	050303	CY7C109B-20VCT	40	0		
LY56FGALL	RA-CML	050303	CY7C65640-LFXC	17	0		
Summary for 'Family' = LY (7 detail records)				276	0		

BldKit	Assy Site	Eval Num	Device	SS	Rej	FA	Results
<b>SSOP</b>							
O2023GAGB	T-TAIWAN	MR044062	CY8C26233-24PVI	49	0		
O2824GAGB	T-TAIWAN	MR043059	CY28400OC	49	0		
O563BXAGE	R-CML	MR051021	CP6221BM	40	0		
O563BXAGE	R-CML	033805	7C682000AC-ROC	47	0		
Summary for 'Family' = O (4 detail records)				185	0		
<b>PDIP</b>							
P1832XAGB	X-THALND	MR043057	CP6238AM	47	0		
P243FGAGE	M-PHIL	MR052025	CY7C194-25PC	46	0		
P2831GAGB	O-INDNS	MR044033	CY7C185-20PC	50	0		
P2839GAGB	X-THALND	MR052061	CY7C466A-10PTC	50	0		
P283EGAGE	O-INDNS	MR051001	CY8C26443-24PI	44	0		
P286EGAGB	O-INDNS	MR043039	CY62256L-70PC	50	0		
P286EGAGB	O-INDNS	052406	CY62256L-70PC	50	0		
P286FGAGB	X-THALND	MR044027	CY62256LL-70PC	50	0		
Summary for 'Family' = P (8 detail records)				387	0		
<b>PDIP (Pb-Free)</b>							
PZ243AAGN	X-THALND	051206	CY7C63743-PXC	48	0		
PZ2831GAN	O-INDNS	040901	8C29466AT-OPZI	50	0		
Summary for 'Family' = PZ (2 detail records)				98	0		
<b>SOIC (GullWing)</b>							
S0815EAGB	SL-INDIA	MR043080	CY27022SC	47	0		
S0815PAGN	RA-CML	MR044055	CY2410SC-1	42	0		
S0815PAGN	RA-CML	MR051018	CY2305SC-1H	46	0		
S1615DAAGB	M-PHIL	MR051027	CY2292F	48	0		
S1615EAGB	M-PHIL	MR044011	CY2309SC-1H	47	0		
S1615EAGB	M-PHIL	MR053002	CY2309SC-1H	41	0		
S24314AGL	RA-CML	MR044028	CP6124AM	50	0		
S2439GAGB	O-INDNS	MR043029	CY7B9910-2SC	45	0		
S283HGAGB	O-INDNS	MR052073	CY7B933-SC	50	0		
S324513GN	R-CML	MR052036	CY62128BLL-70SC	50	0		
S324513GN	R-CML	MR053003	CY6525AM	50	0		
Summary for 'Family' = S (11 detail records)				516	0		

BldKit	Assy Site	Eval Num	Device	SS	Rej	FA	Results
<b>SOIC (GullWing, 450 footprint)</b>							
SN2831AHB	R-CML	MR043024	CY62256LL-70SNI	50	0		
SN2831AHB	R-CML	MR044008	CY62256LL-70SNC	45	0		
SN2831AHN	R-CML	MR051008	CY62256LL-70SNC	50	0		
SN2831AHN	R-CML	MR052013	CY62256L-70SNC	50	0		
Summary for 'Family' = SN (4 detail records)				195	0		
<b>SSOP (Pb-Free)</b>							
SP1621AGB	M-PHIL	040606	W198BF-MSPC	50	0		
SP1621AGB	M-PHIL	040606	W198BF-MSPC	50	0		
SP483FAGN	RA-CML	MR044007	CY28405OXC	44	0		
SP563BAGL	R-CML	042101	7C682020AC-RSPC	50	0		
SP563BAGL	R-CML	042101	7C682020AC-RSPC	50	0		
SP563BAGL	R-CML	042101	7C682005AC-RSPC	45	0		
SP563CAGE	T-TAIWAN	053502	CY7C66113A-PVXC	50	0		
Summary for 'Family' = SP (7 detail records)				339	0		
<b>QSOP (Pb-Free)</b>							
SQ2414AGN	R-CML	MR043016	CY7C63743-QXC	44	0		
SQ2414AGN	R-CML	MR044042	CY7C63101A-QXC	44	0		
Summary for 'Family' = SQ (2 detail records)				88	0		
<b>SOIC (GullWing, 450 footprint, Pb-Free)</b>							
SY2831AHN	R-CML	MR044002	CY62256LL-70SNXC	50	0		
SY2831AHN	R-CML	MR052010	CY62256L-70SNXC	49	0		
Summary for 'Family' = SY (2 detail records)				99	0		
<b>SOIC (GullWing, Pb-Free)</b>							
SZ1615DGN	M-PHIL	052004	CY8C21234-24SXI	44	0		
SZ1615DGN	M-PHIL	052004	CY8C21234-24SXI	49	0		
SZ1615DGN	M-PHIL	052004	CY8C21234-24SXI	44	0		
SZ1615EGN	M-PHIL	MR044014	CY2309NZSXC-1H	48	0		



BldKit	Assy Site	Eval Num	Device	SS	Rej	FA	Results
SZ1615EGN	M-PHIL	MR051029	CY2308SXC-1H	48	0		
SZ1615EGN	M-PHIL	MR052046	CY2309SXC-1H	47	0		
SZ183AGAN	M-PHIL	044301	CY7C63723-SXC	50	0		
SZ183AGAN	M-PHIL	044301	CY7C63723-SXC	49	0		
SZ183BGAL	RA-CML	MR044082	CY7C65640A-LFC	50	0		
SZ324510GL	R-CML	MR051022	CY62128BLL-70SXI	50	0		
SZ324514L	R-CML	MR044005	CY62148DV30LL-70SXI	24	0		
SZ324514L	R-CML	MR044005	CY62148DV30LL-70SXI	25	0		
Summary for 'Family' = SZ (12 detail records)				528	0		
<b>SOIC (J lead)</b>							
V243GGALE	O-INDNS	MR043002	CY7C197B-12VC	42	0		
V28CGAGB	O-INDNS	MR044064	CY7C106B-20VC	50	0		
V324EGAGB	O-INDNS	MR042040	CY7C1019BV33-15VC	45	0		
V3644GALE	R-CML	MR042067	CY7C1049B-25VI	44	0		
V3646GALE	R-CML	MR043065	CY7C1049CV33-12VC	49	0		
V444WGALE	R-CML	MR044022	CY7C1021B-15VC	24	0		
V444WGALE	R-CML	MR044022	CY7C1021B-15VC	19	0		
V444WGALL	R-CML	MR052019	CY7C1021B-12VI	50	0		
V444YAALE	R-CML	MR051015	CY7C1041CV33-12VC	49	0		
V444ZGALE	R-CML	MR043007	CY7C1021CV33-10VC	50	0		
V444ZGALL	R-CML	MR053004	CY7C1021CV33	50	0		
Summary for 'Family' = V (11 detail records)				472	0		
<b>SOIC (J lead, Pb-Free)</b>							
VZ444WAGL	R-CML	MR052001	CY7C1021B-15VXC	50	0		
VZ444ZAGL	R-CML	MR043067	CY7C1021CV33-12VXC	50	0		
Summary for 'Family' = VZ (2 detail records)				100	0		
<b>CERDIP (Windowed)</b>							
W129DF-TSC	T-TAIWAN	042114	W129DF-TSC	47	0		
Summary for 'Family' = W (1 detail record)				47	0		
<b>TSOP/ TSSOP</b>							
Z1613GAGB	T-TAIWAN	MR043049	CY2308ZC-1H	42	0		
Z1613GAGB	T-TAIWAN	MR051011	CY2309ZI-1H	45	0		
Z1613GAGB	T-TAIWAN	MR052039	CY2308ZC-1H	45	0		

<b>BldKit</b>	<b>Assy Site</b>	<b>Eval Num</b>	<b>Device</b>	<b>SS</b>	<b>Rej</b>	<b>FA</b>	<b>Results</b>
Z1619GAGN	RA-CML	MR052027	CY22392ZC-366	47	0		
Z32RLGAGE	T-TAIWAN	MR044024	CY62128BLL-70ZC	49	0		
Z32RYAALE	T-TAIWAN	MR042036	CY62128DV30LL-55ZI	50	0		
Z32RYAALE	T-TAIWAN	MR043017	CY62128DV30LL-55ZI	38	0		
Z32RYAALE	T-TAIWAN	MR043017	CY62128DV30LL-55ZI	4	0		
Z32RYAALE	T-TAIWAN	MR043060	CY62128DV30LL-70ZI	50	0		
Z4824BGAN	R-CML	MR043087	CY28339ZC	50	0		
Z5624BAGN	R-CML	MR043004	CY28409ZC	22	0		
Z5624BAGN	R-CML	MR044015	CY28346ZC	45	0		
Z5624BAGN	R-CML	MR051050	CY28346ZI-2T	49	0		
Z5624BAGN	R-CML	044903	CY28346ZC-2T	48	0		
Summary for 'Family' = Z (14 detail records)				<b>584</b>	<b>0</b>		
<b>TSOP I</b>							
ZA32RHAALB	R-CML	MR043044	CY62128DV30LL-70ZAI	5	0		
ZA32RHAALB	R-CML	MR043044	CY62128DV30LL-70ZAI	45	0		
ZA32RHAALB	R-CML	MR051012	CY62128DV30LL-55ZAI	50	0		
ZA32RHAALB	R-CML	MR052020	CY62128DV30LL-55ZAI	48	0		
Summary for 'Family' = ZA (4 detail records)				<b>148</b>	<b>0</b>		
<b>TSOP (Reverse)</b>							
ZR28R2AGB	R-CML	MR044018	CY62256LL-70ZRI	30	0		
Summary for 'Family' = ZR (1 detail record)				<b>30</b>	<b>0</b>		
<b>TSOP II</b>							
ZS324CA3E	T-TAIWAN	MR044070	CY7C1019B-12ZC	44	0		
ZS324FAGE	T-TAIWAN	MR043018	CY7C1019CV33-12ZC	48	0		
ZS324FAGE	T-TAIWAN	MR051037	CY7C1019CV33-12ZC	50	0		
ZS324FAGE	T-TAIWAN	MR052009	CY7C1019CV33-12ZC	48	0		
ZS444ABALE	R-CML	MR033005	CY7C1021CV33-12ZC	50	0		
ZS444ABALE	R-CML	MR043041	CY7C1021CV33-12ZC	45	0		
ZS444ABALE	R-CML	MR044021	CY7C1021CV33-15ZC	45	0		
ZS544AALE	G-TAIWAN	MR043062	CY7C1069AV33-10ZC	49	0		
ZS544AALE	G-TAIWAN	MR044031	CY7C1069AV33-12ZC	32	0		
Summary for 'Family' = ZS (9 detail records)				<b>411</b>	<b>0</b>		

BldKit	Assy Site	Eval Num	Device	SS	Rej	FA	Results
<b>TSOP (Pb-Free)</b>							
ZT28R2AGN	R-CML	MR044001	CY62256LL-70ZXC	44	0		
ZT32RYAGL	T-TAIWAN	MR051079	CY2308SC-1	49	0		
Summary for 'Family' = ZT (2 detail records)				<b>93</b>	<b>0</b>		
<b>TSOP II (Pb-Free)</b>							
ZW444ADALL	R-CML	MR052003	CY7C1041CV33-15ZXC	45	0		
ZW444AFLL	R-CML	MR044004	CY62146DV30LL-70ZSXI	48	0		
ZW444NAGN	R-CML	MR051047	CY62126DV30LL-55ZXI	45	0		
ZW544AALE	G-TAIWAN	042902	7C1069AC-GZWCB	50	0		
Summary for 'Family' = ZW (4 detail records)				<b>188</b>	<b>0</b>		
<b>TSSOP (Pb-Free)</b>							
ZZ0812AGL	T-TAIWAN	MR043048	CY25104ZXC-2	44	0		
ZZ1613GAN	T-TAIWAN	MR052077	CY2309ZXI-1H	48	0		
ZZ2411AGN	T-TAIWAN	MR043020	CY7C1019CV33-12ZC	50	0		
ZZ2411AGN	T-TAIWAN	MR043066	CY22313ZXC	50	0		
ZZ2411AGN	T-TAIWAN	MR051051	CY22313ZXC	49	0		
ZZ2415GAL	RA-CML	MR051028	CY22313ZXC	50	0		
ZZ2415GAL	RA-CML	MR052006	CY22313ZXC	49	0		
ZZ2813AGN	T-TAIWAN	053006	CYI5002ZXC	48	0		
ZZ2817AGL	RA-CML	042701	7C89000AC-RAZZC	41	0		
Summary for 'Family' = ZZ (9 detail records)				<b>429</b>	<b>0</b>		
<b>Grand Total</b>				<b>7350</b>	<b>7</b>		

**Summary Detail, Package -- TC Performance**

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
<b>TQFP</b>									
A100	R-CML	045002	C9TC	150C -65C	300	21	0		
A100	R-CML	045002	C9TC	150C -65C	300	30	0		
A100	R-CML	045002	C9TC	150C -65C	300	30	0		
A100	R-CML	045002	C9TC	150C -65C	300	30	0		
A100	R-CML	045002	C9TC	150C -65C	300	40	0		
A100RKGAB	R-CML	MR043042	CY7C68013-100AC	150C -65C	300	50	0		
A100RKGAB	R-CML	MR044020	CY7C1329-100AC	150C -65C	300	48	0		
A100RKGAB	R-CML	044603	CY7C1339B-133AI	150C -65C	300	50	0		
A100RKGAB	R-CML	044603	CY7C1339B-133AI	150C -65C	300	45	0		
A100RKGAB	R-CML	044603	CY7C1339B-133AI	150C -65C	300	50	0		
A100RQALE	R-CML	041805	7R1380CC-RACB	150C -65C	300	50	0		
A100SFAGE	R-CML	MR052002	CY7C0241-25AC	150C -65C	300	50	0		
A128SAGLL	R-CML	050801	CY7C1019CV33-15V	150C -65C	300	45	0		
A128SAGLL	R-CML	050801	CY7C1019CV33-15V	150C -65C	300	45	0		
A128SAGLL	R-CML	050801	CY7C1019CV33-15V	150C -65C	300	44	0		
A144GGAGE	G-TAIWAN	MR051009	CY7C057V-12AC	150C -65C	300	47	0		
A144GGAGE	G-TAIWAN	MR052033	CY7C057V-15AI	150C -65C	300	50	0		
A32AXGAGE	SI-SIGNETI	MR043085	CY29947AC	150C -65C	300	50	0		
A44SFGAGB	R-CML	041805	7C37620BF-RAC	150C -65C	300	50	0		
A52AEGAGE	Q-KOREA	MR052004	CY29972AI	150C -65C	300	50	0		
A52ASGAGE	Q-KOREA	MR044009	CY7B9973V-AC	150C -65C	300	50	0		
A64FXGAGE	G-TAIWAN	MR044078	CYS25G0101DX-AT	150C -65C	300	50	0		
Summary for 'Family' = TQFP (22 detail records)						<b>975</b>	<b>0</b>		
<b>TQFP (Thermal, Pb-Free)</b>									
AG120AGAL	L-SEOL	041701	7B9532BC-LAGC	150C -65C	300	49	0		
AG120AGAL	L-SEOL	041701	7B9532BC-LAGC	150C -65C	300	50	0		
Summary for 'Family' = TQFP (Thermal, Pb-Free) (2 detail records)						<b>99</b>	<b>0</b>		
<b>TQFP (10x10)</b>									
AS6513GAGB	G-TAIWAN	MR052089	CY7C4215V-15ASC	150C -65C	300	50	0		
Summary for 'Family' = TQFP (10x10) (1 detail record)						<b>50</b>	<b>0</b>		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
<b>TQFP (Thermal)</b>									
AT120AAAGE	L-SEOL	MR052023	CYS25G0101DX-AT	150C -65C	300	50	0		
AT120AGAGE	L-SEOL	MR043058	CYS25G0101DX-ATI	150C -65C	300	50	0		
AT120AGAGE	L-SEOL	MR044077	CYS25G0101DX-AT	150C -65C	300	45	0		
AT120AGAGE	L-SEOL	MR051082	CYS25G0101DX-AT	150C -65C	300	49	0		
AT120AHAGE	L-SEOL	041701	7B9532BC-LATC	150C -65C	300	50	0		
<b>Summary for 'Family' = TQFP (Thermal) (5 detail records)</b>						<b>244</b>	<b>0</b>		
<b>TQFP (Pb-Free)</b>									
AZ100RRLL	R-CML	MR052096	CY7C1471V25-133A	150C -65C	300	50	0		
AZ100RRLL	R-CML	032003	7C1460BC-RAZC	150C -65C	300	49	0		
AZ128CGAL	G-TAIWAN	033805	7C681000AC-GAZC	150C -65C	300	50	0		
AZ128CGAL	G-TAIWAN	033805	7C681000AC-GAZC	150C -65C	300	50	0		
AZ144GGAL	G-TAIWAN	MR052074	CY7C056V-12AXC	150C -65C	300	49	0		
AZ52ASGAL	Q-KOREA	051902	CY7B9945V-5AXCT	150C -65C	300	50	0		
AZ52ASGAL	Q-KOREA	051902	CY7B9945V-5AXCT	150C -65C	300	50	0		
AZ52ASGAL	Q-KOREA	051902	CY7B9945V-5AXCT	150C -65C	300	46	0		
<b>Summary for 'Family' = TQFP (Pb-Free) (8 detail records)</b>						<b>394</b>	<b>0</b>		
<b>FBGA (0.75-0.8)</b>									
BA48AAALE	RA-CML	042602	7C621464BC-RABAI	150C -65C	300	49	0		
BA48AAALE	RA-CML	042602	7C621464BC-RABAI	150C -65C	300	48	0		
BA48AAALE	RA-CML	042602	7C621464BC-RABAI	150C -65C	300	50	0		
BA48AVALE	RA-CML	MR043061	CY62147CV30LL-70	150C -65C	300	50	0		
BA48BQAAL	RA-CML	MR044068	CY62137CV30LL-70	150C -65C	300	47	0		
BA48BWALE	G-TAIWAN	MR043025	CY7C1021CV33-15B	150C -65C	300	48	0		
BA48CJALE	GO-CHPMS	MR042043	CG6078AA	150C -65C	300	49	0		
BA48CRALE	T-TAIWAN	MR044056	CY62137CVSL-70BA	150C -65C	300	48	0		
BA48DCALE	G-TAIWAN	045109	7C1069AC-GBAC	150C -65C	300	50	0		
BA48DCALE	G-TAIWAN	045109	7C1069AC-GBAC	150C -65C	300	50	0		
BA48DCALE	G-TAIWAN	045109	7C1061AC-GBAIB	150C -65C	300	50	0		
BA48DJALE	G-TAIWAN	052502	CY62177DV30L	150C -65C	300	50	0		
BA48DJALE	G-TAIWAN	052502	CY62177DV30L	150C -65C	300	50	0		
BA48DJALE	G-TAIWAN	052502	CY62177DV30L	150C -65C	300	45	0		
BA48NGALE	G-TAIWAN	041805	7C62147CC-GBAIB	150C -65C	300	50	0		
<b>Summary for 'Family' = FBGA (0.75-0.8) (15 detail records)</b>						<b>734</b>	<b>0</b>		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
<b>FBGA (1.0)</b>									
BB100EAGE	G-TAIWAN	MR052032	CYP15G0101DXB-B	150C -65C	300	50	0		
BB144CALE	G-TAIWAN	044006	7C08323AC-GBBC	150C -65C	300	50	0		
BB144CALE	G-TAIWAN	044006	7C08323AC-GBBC	150C -65C	300	50	0		
BB144DALE	G-TAIWAN	044006	7C08333AC-GBBC	150C -65C	300	48	0		
BB165AALE	G-TAIWAN	044201	7C1414BC-GBBC	150C -65C	300	48	0		
BB165GALE	G-TAIWAN	045107	7R1371CC-GBBCB	150C -65C	300	50	0		
BB165GALE	G-TAIWAN	045107	7R1371CC-GBBCB	150C -65C	300	50	0		
BB165GALE	G-TAIWAN	045107	7R1371CC-GBBCB	150C -65C	300	50	0		
BB165KALE	G-TAIWAN	044501	7C1470AC-GBBC	150C -65C	300	50	0		
BB165KALE	G-TAIWAN	044501	7C1470AC-GBBC	150C -65C	300	45	0		
BB165KALE	G-TAIWAN	050704	7C1470AC-GBBC	150C -65C	300	49	0		
BB165KALE	G-TAIWAN	050704	7C1470AC-GBBC	150C -65C	300	48	0		
BB165KALE	G-TAIWAN	050704	7C1470AC-GBBC	150C -65C	300	48	0		
BB172AAGE	G-TAIWAN	MR051007	CY7C057V-15BBI	150C -65C	300	50	0		
BB172BALE	G-TAIWAN	MR043032	CY7C0852V-133BBC	150C -65C	300	41	0		
BB172BALE	G-TAIWAN	044102	7C08523DC-GBBCB	150C -65C	300	48	0		
BB209BALE	G-TAIWAN	050702	7C1474AC-GBBC	150C -65C	300	46	0		
BB209BALE	G-TAIWAN	050702	7C1474AC-GBBC	150C -65C	300	49	0		
BB209BALE	G-TAIWAN	050702	7C1474AC-GBBC	150C -65C	300	50	0		
BB256HALE	RA-CML	043308	CYNSE70130B	150C -65C	300	50	0		
BB256HALE	RA-CML	043308	CYNSE70130B	150C -65C	300	50	0		
BB256HALE	RA-CML	043308	CYNSE70130B	150C -65C	300	49	0		
BB484SDLE	G-TAIWAN	041505	7C08643AC-GBBCB	150C -65C	300	50	0		
BB484SDLE	G-TAIWAN	044104	CYD18S72AV	150C -65C	300	50	0		
BB484SDLE	G-TAIWAN	044104	CYD18S72AV	150C -65C	300	50	0		
Summary for 'Family' = FBGA (1.0) (25 detail records)						1219	0		
<b>PBGA (1.27)</b>									
BG119MALE	G-TAIWAN	MR043086	CY7C1373CV25-100	150C -65C	300	50	0		
BG119VALE	G-TAIWAN	052602	7C1330DC-GBGC	150C -65C	300	50	0		
BG272BAGE	G-TAIWAN	035002	7C04301CC-GBGI	150C -65C	300	48	0		
BG272BAGE	G-TAIWAN	035002	7C04301CC-GBGI	150C -65C	300	47	0		
BG282BAGE	G-TAIWAN	MR052005	CY37512P256-83BG	150C -65C	300	49	0		
Summary for 'Family' = PBGA (1.27) (5 detail records)						244	0		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
<b>PBGA (Cavity/Heatsink,</b>									
BJ256L2GL	G-TAIWAN	044507	CY28323BPVC	150C -65C	300	49	0		
BJ256L2GL	G-TAIWN	044507	CY28323BPVC	150C -65C	300	47	0		
BJ256L2GL	G-TAIWAN	044507	CY28323BPVC	150C -65C	300	50	0		
BJ504AAGL	G-TAIWAN	044507	CY7C9536B-BLXC	150C -65C	300	50	0		
BJ504AAGL	G-TAIWAN	044507	CY7C9536B-BLXC	150C -65C	300	49	0		
Summary for 'Family' = PBGA (Cavity/Heatsink, Pb-Free) (5 detail records)						<b>245</b>	<b>0</b>		
<b>PBGA (Cavity/Heatsink)</b>									
BL256L2GE	G-TAIWAN	MR051006	CYP15G0401DXB-B	150C -65C	300	50	0		
Summary for 'Family' = PBGA (Cavity/Heatsink) (1 detail record)						<b>50</b>	<b>0</b>		
<b>FBGA (0.75-0.8, Pb-Free)</b>									
BP96AALL	G-TAIWAN	042105	7C83864AC-GBPC	150C -65C	300	45	0		
Summary for 'Family' = FBGA (0.75-0.8, Pb-Free) (1 detail record)						<b>45</b>	<b>0</b>		
<b>FVBGA (0.75-0.8, 0.3mm)</b>									
BV48ADALE	G-TAIWAN	MR041048	CY62127DV30LL-70	150C -65C	300	49	0		
BV48AFALE	G-TAIWAN	MR042030	CY62167DV30LL-70	150C -65C	300	50	0		
BV48HAALE	G-TAIWAN	MR051014	CY62147CV33LL-70	150C -65C	300	50	0		
BV48NAALE	RA-CML	042801	7R62357DC-RABVI	150C -65C	300	50	0		
BV48NAALE	RA-CML	042801	7R62357DC-RABVI	150C -65C	300	48	0		
BV48NAALE	RA-CML	042801	7R62357DC-RABVI	150C -65C	300	45	0		
Summary for 'Family' = FVBGA (0.75-0.8, 0.3mm) (6 detail records)						<b>292</b>	<b>0</b>		
<b>FBGA (1.0, Pb-Free)</b>									
BW100EAGL	G-TAIWAN	MR051023	CYP15G0101DXB-B	150C -65C	300	50	0		
BW484SDLL	G-TAIWAN	044004	7C39782AH-GBWC	150C -65C	300	50	0		
Summary for 'Family' = FBGA (1.0, Pb-Free) (2 detail records)						<b>100</b>	<b>0</b>		
<b>PBGA (1.27, Pb-Free)</b>									
BY119MAGL	G-TAIWAN	041103	7R1370CC-GBYCB	150C -65C	300	45	0		
BY119MAGL	G-TAIWAN	041103	7R1370CC-GBYCB	150C -65C	300	50	0		
BY388BAGL	G-TAIWAN	041103	7C39485EH-GBYC	150C -65C	300	48	0		
Summary for 'Family' = PBGA (1.27, Pb-Free) (3 detail records)						<b>143</b>	<b>0</b>		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
VFBGA (0.75-0.8, Pb-Free)									
BZ100AALE	G-TAIWAN	050202	CY7C015V18-35AC	150C -65C	300	50	0		
BZ100AALE	L-SEOL	050202	CYDM256A16-55BV	150C -65C	300	50	0		
BZ100AALE	G-TAIWAN	050202	CYDM256A16-55BV	150C -65C	300	50	0		
BZ52BGAGL	G-TAIWAN	042106	7C82877A	150C -65C	300	47	0		
BZ52BGAGL	G-TAIWAN	042106	7C82877A	150C -65C	300	46	0		
Summary for 'Family' = VFBGA (0.75-0.8, Pb-Free) (5 detail records)						243	0		

**DE**

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
DE001AAGL	SV-CHINA	052405	7M6341AT-SVDEC	65C -25C	120	45	0		
DE001AAGL	SV-CHINA	052405	7M6341AT-SVDEC	65C -25C	120	45	0		
DE001AAGL	SV-CHINA	052405	7M6341AT-SVDEC	65C -25C	120	45	0		
Summary for 'Family' = DE (3 detail records)						135	0		

**FLIPCHIP (Build-Up)**

FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGC	125C -55C	500	24	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	125C -55C	500	23	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGC	125C -55C	1000	24	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGC	125C -55C	1000	48	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	125C -55C	500	23	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGC	125C -55C	500	48	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	125C -55C	500	22	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	125C -55C	1000	21	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	125C -55C	1000	22	0		
FG388AGAGE	GQ-KOREA	025107	7C71050AJ-GQFGCB	125C -55C	1000	23	0		
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	125C -55C	500	45	0		
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	125C -55C	1000	44	0		
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	125C -55C	500	45	0		
FG388AGAGE	GQ-KOREA	044701	7C71050AJ-GQFGC	125C -55C	500	45	0		
FG388BAGE	GQ-KOREA	043404	7C71050BJ-GQFGCB	125C -55C	1000	48	0		
FG388BAGE	GQ-KOREA	043404	7C71050BJ-GQFGCB	125C -55C	1000	52	0		
FG388BAGE	GQ-KOREA	043404	7C71050BJ-GQFGCB	125C -55C	500	47	0		
FG388BAGE	GQ-KOREA	043404	7C71050BJ-GQFGCB	125C -55C	500	52	0		
FG388BAGE	GQ-KOREA	043404	7C71050BJ-GQFGCB	125C -55C	500	48	0		
FG388BAGE	GQ-KOREA	043404	7C71050BJ-GQFGCB	125C -55C	1000	47	0		
Summary for 'Family' = FLIPCHIP (Build-Up Substrate w/ HS) (20 detail						751	0		



BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
<b>PLCC</b>									
J32RBGAGB	X-THALND	MR051031	CY7B991-2JC	150C -65C	300	50	0		
J32RBGAGB	X-THALND	MR052018	CY7B991-5JC	150C -65C	300	50	0		
J52SFGAGB	M-PHIL	MR051036	CY7C136-25JC	150C -65C	300	50	0		
J84SDGAGB	M-PHIL	041805	7C025DT-MJCB	150C -65C	300	50	0		
J84SFGACB	M-PHIL	MR044035	CY7C346B-35JC	150C -65C	300	50	0		
Summary for 'Family' = PLCC (5 detail records)						250	0		
<b>PLCC (Pb-Free)</b>									
JZ32RBGAN	M-PHIL	MR051056	CY7C421-20JXC	150C -65C	300	50	0		
Summary for 'Family' = PLCC (Pb-Free) (1 detail record)						50	0		
<b>QFN (Punch Type)</b>									
LF48AGAGE	L-SEOL	050404	7B6934AC-LLFC	100C -40C	100	45	0		
LF48AGAGE	L-SEOL	050404	7B6934AC-LLFC	100C -40C	100	45	0		
LF48AGAGE	L-SEOL	050404	7B6934AC-LLFC	100C -40C	500	45	0		
LF48AGAGE	L-SEOL	050404	7B6934AC-LLFC	100C -40C	500	45	0		
LF48AGAGE	L-SEOL	050404	7B6934AC-LLFC	100C -40C	500	45	0		
LF48AGAGE	L-SEOL	050404	7B6934AC-LLFC	100C -40C	100	45	0		
LF56AGAGE	L-SEOL	MR043023	CY7C68013-56LFC	150C -65C	300	50	0		
LF56AGAGE	L-SEOL	MR044081	CY7C65640A-LFC	150C -65C	300	50	0		
LF56AGAGE	L-SEOL	MR051075	CY7C65640A-LFC	150C -65C	300	50	0		
LF56CGAGL	T-TAIWAN	MR043019	CY7C1019CV33-12Z	150C -65C	300	50	0		
Summary for 'Family' = QFN (Punch Type) (10 detail records)						470	0		
<b>QFN (Punch Type, Pb-Free)</b>									
LY32BGAGL	RA-CML	052610	CY8C21434-24LFXI	150C -65C	300	50	0		
LY32BGAGL	RA-CML	052610	CY8C21434-24LFXI	150C -65C	300	50	0		
LY32BGAGL	RA-CML	052610	CY8C21434-24LFXI	150C -65C	300	49	0		
LY48AGAGL	L-SEOL	044307	CYWUSB6934	150C -65C	300	50	0		
LY48AGAGL	L-SEOL	044307	CYWUSB6934	150C -65C	300	50	0		
LY48AGAGL	L-SEOL	044307	CYWUSB6934	150C -65C	300	50	0		
LY48D1GAL	L-SEOL	044508	7B6953AC-LLYC	150C -65C	300	125	0		
LY48D1GAL	L-SEOL	044508	7B6953AC-LLYC	150C -65C	300	125	0		
LY48D1GAL	L-SEOL	044508	7B6953AC-LLYC	150C -65C	300	125	0		
LY48EGAGL	L-SEOL	052401	7B6953B-LLYC	150C -65C	300	50	0		
LY48EGAGL	L-SEOL	052401	7B6953B-LLYC	150C -65C	300	50	0		
LY48EGAGL	L-SEOL	052401	7B6953B-LLYC	150C -65C	300	50	0		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
LY56AGAGL	L-SEOL	MR044065	CY7C68300A-56LFX	150C -65C	300	49	0		
LY56DGAGL	L-SEOL	MR051046	CP6241AM	150C -65C	300	50	0		
LY56FGALL	RA-CML	050303	CY7C109B-20VCT	150C -65C	300	49	0		
LY56FGALL	RA-CML	050303	CY7C65640-LFXC	150C -65C	300	50	0		
LY56FGALL	RA-CML	050303	CY7C65640-LFXC	150C -65C	300	50	0		
Summary for 'Family' = QFN (Punch Type, Pb-Free) (17 detail records)						1072	0		

**PQFP**

N52DXGAGB	G-TAIWAN	MR051005	CY7C136-55NC	150C -65C	300	50	0		
N52DXGAGB	G-TAIWAN	MR052031	CY7C136-55NC	150C -65C	300	50	0		
Summary for 'Family' = PQFP (2 detail records)						100	0		

**SSOP**

O2023GAGB	T-TAIWAN	MR044062	CY8C26233-24PVI	150C -65C	300	50	0		
O2024GAGE	M-PHIL	MR044067	CY2DP314OI	150C -65C	300	50	0		
O2026XAGB	T-TAIWAN	053205	IMISM530AYB	150C -65C	300	45	0		
O2026XAGB	T-TAIWAN	053205	IMISM530AYB	150C -65C	300	45	0		
O2028GAGE	T-TAIWAN	MR044066	CY2CC810OI	150C -65C	300	50	0		
O2028GAGE	T-TAIWAN	053205	CY2CC810OI	150C -65C	300	50	0		
O2824GAGB	T-TAIWAN	MR043059	CY28400OC	150C -65C	300	49	0		
O2824GAGB	T-TAIWAN	MR051038	CY28508OC	150C -65C	300	49	0		
O2824GAGB	T-TAIWAN	053205	CY28508OC	150C -65C	300	49	0		
O2824GAGB	T-TAIWAN	053205	CY28506OC	150C -65C	300	45	0		
O4816XAGB	T-TAIWAN	053205	CY28342OC	150C -65C	300	45	0		
O56	R-CML	042507	CY284KOTP	150C -65C	300	46	0		
O563AXAGB	R-CML	MR044016	CY28341OC-2T	150C -65C	300	50	0		
O563AXAGN	R-CML	MR052017	CY28419OC	150C -65C	300	49	0		
O563BXAGE	R-CML	MR051021	CP6221BM	150C -65C	300	50	0		
Summary for 'Family' = SSOP (15 detail records)						722	0		

**PDIP**

P1832XAGB	X-THALND	MR043057	CP6238AM	150C -65C	300	50	0		
P243FGAGE	M-PHIL	MR052025	CY7C194-25PC	150C -65C	300	50	0		
P2831GAGB	O-INDNS	MR044033	CY7C185-20PC	150C -65C	300	50	0		
P2839GAGB	X-THALND	MR052061	CY7C466A-10PTC	150C -65C	300	50	0		
P283EGAGE	O-INDNS	MR051001	CY8C26443-24PI	150C -65C	300	45	0		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
P286BGAGB	O-INDNS	052406	CY62256LL-70PC	150C -65C	300	45	0		
P286EGAGB	O-INDNS	MR043039	CY62256L-70PC	150C -65C	300	50	0		
P286EGAGB	O-INDNS	052406	CY62256LL-70PC	150C -65C	300	50	0		
P286EGAGB	O-INDNS	052406	CY62256L-70PC	150C -65C	300	50	0		
P286FGAGB	X-THALND	MR044027	CY62256LL-70PC	150C -65C	300	50	0		
P406AGAGB	O-INDNS	052406	CP5748AM	150C -65C	300	45	0		
Summary for 'Family' = PDIP (11 detail records)						535	0		
<b>PDIP (Pb-Free)</b>									
PZ243AAGN	X-THALND	051206	CY7C63743-PXC	150C -65C	300	50	0		
PZ243AAGN	X-THALND	051206	CY7C63743-PXC	150C -65C	300	48	0		
PZ243AAGN	X-THALND	051206	CY7C63743-PXC	150C -65C	300	50	0		
Summary for 'Family' = PDIP (Pb-Free) (3 detail records)						148	0		
<b>SOIC (GullWing)</b>									
S0815EAGB	SL-INDIA	MR043080	CY27022SC	150C -65C	300	48	0		
S0815PAGN	RA-CML	MR044055	CY2410SC-1	150C -65C	300	50	0		
S0815PAGN	RA-CML	MR051018	CY2305SC-1H	150C -65C	300	50	0		
S1615DAAGB	M-PHIL	MR051027	CY2292F	150C -65C	300	50	0		
S1615EAGB	M-PHIL	MR044011	CY2309SC-1H	150C -65C	300	48	0		
S1615EAGB	M-PHIL	MR053002	CY2309SC-1H	150C -65C	300	48	0		
S183CGAGN	RA-CML	043303	CY7C63723-SC	150C -65C	300	50	0		
S183CGAGN	RA-CML	043303	CY7C63723-SC	150C -65C	300	50	0		
S183CGAGN	RA-CML	043303	CY7C63723-SC	150C -65C	300	50	0		
S183CGAGN	RA-CML	043303	CY7C63723-SC	150C -65C	300	50	0		
S24314AGL	RA-CML	MR044028	CP6124AM	150C -65C	300	50	0		
S2439GAGB	O-INDNS	MR043029	CY7B9910-2SC	150C -65C	300	45	0		
S2837GAGB	X-THALND	MR044029	CY7C64013-SC	150C -65C	300	50	0		
S283HGAGB	O-INDNS	MR044063	CY8C24423-24SI	150C -65C	300	50	0		
S283HGAGB	O-INDNS	MR051003	CY2314ANZSC-1	150C -65C	300	45	0		
S283HGAGB	O-INDNS	MR052073	CY7B933-SC	150C -65C	300	50	0		
S324513GB	R-CML	MR051078	CY62128BLL-70SI	150C -65C	300	42	0		
S324513GN	R-CML	MR052036	CY62128BLL-70SC	150C -65C	300	49	0		
S324513GN	R-CML	MR053003	CY6525AM	150C -65C	300	50	0		
Summary for 'Family' = SOIC (GullWing) (19 detail records)						925	0		
<b>SOIC (GullWing, 450)</b>									
SN2831AHB	R-CML	MR043024	CY62256LL-70SNI	150C -65C	300	50	0		
SN2831AHB	R-CML	MR044008	CY62256LL-70SNC	150C -65C	300	45	0		



BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
SN2831AHN	R-CML	MR051008	CY62256LL-70SNC	150C -65C	300	50	0		
SN2831AHN	R-CML	MR052013	CY62256L-70SNC	150C -65C	300	50	0		
SN2833AGB	O-INDNS	MR043031	CY6264-70SNC	150C -65C	300	45	0		
Summary for 'Family' = SOIC (GullWing, 450 footprint) (5 detail records)						240	0		
SSOP (Pb-Free)									
SP1621AGB	M-PHIL	040606	W198BF-MSPC	150C -65C	300	49	0		
SP1621AGB	M-PHIL	040606	W198BF-MSPC	150C -65C	300	50	0		
SP2023GAL	T-TAIWAN	042501	8C21323AT-**TSPI	150C -65C	300	50	0		
SP2023GAL	T-TAIWAN	042505	8C21334AT-TSPI	150C -65C	300	45	0		
SP2814GAL	T-TAIWAN	053402	CY8C27443-24PVXI	150C -65C	300	45	0		
SP28214GL	T-TAIWAN	052004	CY8C21234-24SXI	150C -65C	300	50	0		
SP2821AGB	M-PHIL	040606	W40S111DF-MSPC	150C -65C	300	50	0		
SP2824GAN	T-TAIWAN	MR044076	CY28353OXC-2	150C -65C	300	49	0		
SP483FAGN	RA-CML	MR044007	CY28405OXC	150C -65C	300	45	0		
SP563AAGN	R-CML	MR043047	CY28RS480OXC	150C -65C	300	48	0		
SP563AAGN	R-CML	MR044010	CY28410OXC	150C -65C	300	43	0		
SP563AAGN	R-CML	MR051019	CY28410OXC	150C -65C	300	50	0		
SP563AAGN	R-CML	040903	7C828437AC-RSPC	150C -65C	300	45	0		
SP563BAGL	R-CML	042101	7C682020AC-RSPC	150C -65C	300	50	0		
SP563BAGL	R-CML	042101	7C682020AC-RSPC	150C -65C	300	50	0		
SP563BAGL	R-CML	042101	7C682005AC-RSPC	150C -65C	300	45	0		
SP563CAGE	T-TAIWAN	053502	CY7C66113A-PVXC	150C -65C	300	50	0		
SP563CAGE	T-TAIWAN	053502	CY7C66113A-PVXC	150C -65C	300	50	0		
SP563CAGE	T-TAIWAN	053502	CY7C66113A-PVXC	150C -65C	300	50	0		
Summary for 'Family' = SSOP (Pb-Free) (19 detail records)						914	0		
QSOP (Pb-Free)									
SQ2414AGN	R-CML	MR043016	CY7C63743-QXC	150C -65C	300	50	0		
SQ2414AGN	R-CML	MR044042	CY7C63101A-QXC	150C -65C	300	50	0		
Summary for 'Family' = QSOP (Pb-Free) (2 detail records)						100	0		
SOIC (GullWing, 450)									
SY2831AHN	R-CML	MR044002	CY62256LL-70SNXC	150C -65C	300	50	0		
SY2831AHN	R-CML	MR052010	CY62256L-70SNXC	150C -65C	300	50	0		
Summary for 'Family' = SOIC (GullWing, 450 footprint, Pb-Free) (2 detail						100	0		
SOIC (GullWing, Pb-Free)									
SZ1615DGN	M-PHIL	043801	7C823C09AC-MSZI	150C -65C	300	48	0		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
SZ1615DGN	M-PHIL	052004	CY8C21234-24SXI	150C -65C	300	45	0		
SZ1615DGN	M-PHIL	052004	CY8C21234-24SXI	150C -65C	300	45	0		
SZ1615EGN	M-PHIL	MR044014	CY2309NZSXC-1H	150C -65C	300	50	0		
SZ1615EGN	M-PHIL	MR051029	CY2308SXC-1H	150C -65C	300	50	0		
SZ1615EGN	M-PHIL	MR052046	CY2309SXC-1H	150C -65C	300	48	0		
SZ183AGAN	M-PHIL	044301	CY7C63723-SXC	150C -65C	300	50	0		
SZ183AGAN	M-PHIL	044301	CY7C63723-SXC	150C -65C	300	50	0		
SZ183BGAL	RA-CML	MR044082	CY7C65640A-LFC	150C -65C	300	50	0		
SZ324510GL	R-CML	MR051022	CY62128BLL-70SXI	150C -65C	300	48	0		
SZ324514L	R-CML	MR044005	CY62148DV30LL-70	150C -65C	300	50	0		
SZ815DAGN	M-PHIL	042806	7C80330AT-MSZC	150C -65C	300	48	0		
Summary for 'Family' = SOIC (GullWing, Pb-Free) (12 detail records)						582	0		

**SOIC (J lead)**

V243GGALE	O-INDNS	MR043002	CY7C197B-12VC	150C -65C	300	50	0		
V28CGAGB	O-INDNS	MR044064	CY7C106B-20VC	150C -65C	300	48	0		
V32419GLL	R-CML	052803	CY7C1019D	150C -65C	300	45	0		
V324EGAGB	O-INDNS	MR042040	CY7C1019BV33-15V	150C -65C	300	45	0		
V324EGAGB	O-INDNS	MR051002	CY7C1019B-12VC	150C -65C	300	45	0		
V3644GALE	R-CML	MR042067	CY7C1049B-25VI	150C -65C	300	43	0		
V444WGALE	R-CML	MR044022	CY7C1021B-15VC	150C -65C	300	45	0		
V444WGALL	R-CML	MR052019	CY7C1021B-12VI	150C -65C	300	49	0		
V444YAALE	R-CML	MR051015	CY7C1041CV33-12V	150C -65C	300	50	0		
V444ZGALE	R-CML	MR043007	CY7C1021CV33-10V	150C -65C	300	50	0		
V444ZGALL	R-CML	MR053004	CY7C1021CV33	150C -65C	300	50	0		
Summary for 'Family' = SOIC (J lead) (11 detail records)						520	0		

**SOIC (J lead, Pb-Free)**

VZ444WAGL	R-CML	MR052001	CY7C1021B-15VXC	150C -65C	300	50	0		
VZ444ZAGL	R-CML	MR043067	CY7C1021CV33-12V	150C -65C	300	50	0		
VZ444ZALL	R-CML	MR053005	CY7C1021CV33-8VX	150C -65C	300	50	0		
Summary for 'Family' = SOIC (J lead, Pb-Free) (3 detail records)						150	0		

**CERDIP (Windowed)**

W129DF-TSC	T-TAIWAN	042114	W129DF-TSC	150C -65C	300	50	0		
W129DF-TSC	T-TAIWAN	042114	W129DF-TSC	150C -65C	300	50	0		
W129DF-TSC	T-TAIWAN	042114	W129DF-TSC	150C -65C	300	49	0		
W129DF-TSC	T-TAIWAN	050701	CY7C65640-LFXC	150C -65C	300	50	0		
W129DF-TSC	T-TAIWAN	050701	CY7C65640-LFXC	150C -65C	300	50	0		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
W129DF-TSC	T-TAIWAN	050701	CY7C65640-LFXC	150C -65C	300	50	0		
Summary for 'Family' = CERDIP (Windowed) (6 detail records)						299	0		
<b>TSOP/ TSSOP</b>									
Z1611XAGB	M-PHIL	MR044012	CY22392ZC-366	150C -65C	300	50	0		
Z1613GAGB	T-TAIWAN	MR043049	CY2308ZC-1H	150C -65C	300	46	0		
Z1613GAGB	T-TAIWAN	MR051011	CY2309ZI-1H	150C -65C	300	45	0		
Z1613GAGB	T-TAIWAN	MR052039	CY2308ZC-1H	150C -65C	300	50	0		
Z1619GAGN	RA-CML	MR052027	CY22392ZC-366	150C -65C	300	48	0		
Z32RLGAGE	T-TAIWAN	MR044024	CY62128BLL-70ZC	150C -65C	300	50	0		
Z32RYAALE	T-TAIWAN	MR042036	CY62128DV30LL-55	150C -65C	300	50	0		
Z32RYAALE	T-TAIWAN	MR043017	CY62128DV30LL-55	150C -65C	300	49	0		
Z32RYAALE	T-TAIWAN	MR043060	CY62128DV30LL-70	150C -65C	300	50	0		
Z4824BGAN	R-CML	MR043087	CY28339ZC	150C -65C	300	47	0		
Z5624BAGN	R-CML	MR043004	CY28409ZC	150C -65C	300	50	0		
Z5624BAGN	R-CML	MR044015	CY28346ZC	150C -65C	300	43	0		
Z5624BAGN	R-CML	MR051050	CY28346ZI-2T	150C -65C	300	50	0		
Z5624BAGN	R-CML	044903	CY28346ZC-2T	150C -65C	300	50	0		
Z5624BAGN	R-CML	044903	CY28346ZC-2	150C -65C	300	49	0		
Z5624BAGN	R-CML	044903	CY28346ZC-2T	150C -65C	300	49	0		
Summary for 'Family' = TSOP/ TSSOP (16 detail records)						776	0		
<b>TSOP I</b>									
ZA32RHAALB	R-CML	MR043044	CY62128DV30LL-70	150C -65C	300	50	0		
ZA32RHAALB	R-CML	MR044017	CY62128DV30LL-70	150C -65C	300	45	0		
ZA32RHAALB	R-CML	MR051012	CY62128DV30LL-55	150C -65C	300	50	0		
ZA32RHAALB	R-CML	MR052020	CY62128DV30LL-55	150C -65C	300	49	0		
Summary for 'Family' = TSOP I (4 detail records)						194	0		
<b>TSOP (Reverse)</b>									
ZR28R2AGB	R-CML	MR044018	CY62256LL-70ZRI	150C -65C	300	45	0		
ZR28R2AGN	R-CML	MR051013	CY62256LL-70ZRI	150C -65C	300	50	0		
ZR32RKAGB	T-TAIWAN	MR044023	CY62128BLL-55ZRI	150C -65C	300	50	0		
Summary for 'Family' = TSOP (Reverse) (3 detail records)						145	0		
<b>TSOP II</b>									
ZS324CA3E	T-TAIWAN	MR044070	CY7C1019B-12ZC	150C -65C	300	44	0		
ZS324FAGE	T-TAIWAN	MR043018	CY7C1019CV33-12Z	150C -65C	300	49	0		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
ZS324FAGE	T-TAIWAN	MR052009	CY7C1019CV33-12Z	150C -65C	300	50	0		
ZS444ABALE	R-CML	MR033005	CY7C1021CV33-12Z	150C -65C	300	50	0		
ZS444ABALE	R-CML	MR043041	CY7C1021CV33-12Z	150C -65C	300	49	0		
ZS444ABALE	R-CML	MR044021	CY7C1021CV33-15Z	150C -65C	300	44	0		
ZS444AKALN	R-CML	MR052022	CY7C1041CV33-15Z	150C -65C	300	50	0		
ZS544AALE	G-TAIWAN	MR043062	CY7C1069AV33-10Z	150C -65C	300	50	0		
ZS544AALE	G-TAIWAN	MR044031	CY7C1069AV33-12Z	150C -65C	300	50	0		
ZS544AALE	G-TAIWAN	MR052030	CY7C1069AV33-12Z	150C -65C	300	50	0		
Summary for 'Family' = TSOP II (10 detail records)						<b>486</b>	<b>0</b>		
TSOP (Pb-Free)									
ZT28R2AGN	R-CML	MR044001	CY62256LL-70ZXC	150C -65C	300	49	0		
ZT28R4AGL	R-CML	MR052011	CY7C1399B-15ZXC	150C -65C	300	50	0		
ZT32RYAGL	T-TAIWAN	MR051079	CY2308SC-1	150C -65C	300	50	0		
Summary for 'Family' = TSOP (Pb-Free) (3 detail records)						<b>149</b>	<b>0</b>		
TSOP II (Pb-Free)									
ZW444ADALL	R-CML	MR052003	CY7C1041CV33-15Z	150C -65C	300	50	0		
ZW444AFLL	R-CML	MR044004	CY62146DV30LL-70	150C -65C	300	50	0		
ZW444NAGN	R-CML	MR051047	CY62126DV30LL-55	150C -65C	300	50	0		
ZW544AALE	G-TAIWAN	042902	7C1069AC-GZWC	150C -65C	300	48	0		
ZW544AALE	G-TAIWAN	042902	7C1069AC-GZWCB	150C -65C	300	49	0		
Summary for 'Family' = TSOP II (Pb-Free) (5 detail records)						<b>247</b>	<b>0</b>		
TSSOP (Pb-Free)									
ZZ0812AGL	T-TAIWAN	MR043048	CY25104ZXC-2	150C -65C	300	50	0		
ZZ1613GAN	T-TAIWAN	MR052077	CY2309ZXI-1H	150C -65C	300	50	0		
ZZ2411AGN	T-TAIWAN	MR043020	CY7C1019CV33-12Z	150C -65C	300	50	0		
ZZ2411AGN	T-TAIWAN	MR043066	CY22313ZXC	150C -65C	300	50	0		
ZZ2411AGN	T-TAIWAN	MR051051	CY22313ZXC	150C -65C	300	48	0		
ZZ2415GAL	RA-CML	MR051028	CY22313ZXC	150C -65C	300	46	0		
ZZ2415GAL	RA-CML	MR052006	CY22313ZXC	150C -65C	300	49	0		
ZZ2813AGN	T-TAIWAN	053006	CYI5002ZXC	150C -65C	300	50	0		
ZZ2813AGN	T-TAIWAN	053006	CYI5002ZXC	150C -65C	300	49	0		
ZZ2813AGN	T-TAIWAN	053006	CYI5002ZXC	150C -65C	300	50	0		
ZZ2817AGL	RA-CML	041303	7C89000AC-RAZZC	150C -65C	300	50	0		
ZZ2817AGL	RA-CML	042701	7C89000AC-RAZZC	150C -65C	300	45	0		
ZZ2817AGL	RA-CML	042701	7C89000AC-RAZZC	150C -65C	300	45	0		
ZZ2817AGL	RA-CML	042701	7C89000AC-RAZZC	150C -65C	300	46	0		

BldKit	Loc	Eval Num	Device	Condition	Cycles	SS	Rejects	FA	Results
ZZ2817AGL	RA-CML	051903	CY221R28-ZXC	150C -65C	300	50	0		
ZZ2817AGL	RA-CML	051903	CY221R28-ZXC	150C -65C	300	50	0		
ZZ5624BG	R-CML	052802	CY28411ZXC	150C -65C	300	47	0		
ZZ5624BG	R-CML	052802	CY28411ZXC	150C -65C	300	46	0		
ZZ5624BG	R-CML	052802	CY28411ZXC	150C -65C	300	45	0		
ZZ5624BGN	R-CML	MR043046	CY28442ZXC-2	150C -65C	300	50	0		
ZZ5624BGN	R-CML	MR051026	CY28442ZXC	150C -65C	300	50	0		
ZZ5624BGN	R-CML	050504	CY28411ZXCT	150C -65C	300	50	0		
ZZ5624BGN	R-CML	050504	CY28411ZXCT	150C -65C	300	50	0		
ZZ5624BGN	R-CML	050504	CY28411ZXCT	150C -65C	300	49	0		
Summary for 'Family' = TSSOP (Pb-Free) (24 detail records)						1165	0		
<b>Grand Total</b>						<b>16302</b>	<b>0</b>		