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# Cypress Semiconductor Product Qualification Plan

**QTP# 100203**

**July 2013**

<b>S8 K2 Non-Volatile SRAM Product Family</b>	
<b>CMI (Fab 4)</b>	
<b>CY14B101LA (x8) CY14B101NA (x16)</b>	<b>3V 1M Parallel Non-RTC nvSRAM Device</b>
<b>CY14B101KA (x8) CY14B101MA (x16)</b>	<b>3V 1M Parallel RTC nvSRAM Device</b>
<b>CY14E101LA (x8)</b>	<b>5V 1M Parallel Non-RTC nvSRAM Device</b>
<b>CY14V101LA (x8) CY14V101NA (x16)</b>	<b>3V Vcc with 1.8V IO 1Meg Parallel Non-RTC nvSRAM Device</b>
<b>CY14B256LA (x8) CY14B256NA (x16)</b>	<b>3V 256K Parallel Non-RTC nvSRAM Device</b>
<b>CY14B256KA (x8)</b>	<b>3V 256K Parallel RTC nvSRAM Device</b>
<b>CY14E256LA (x8)</b>	<b>5V 256K Parallel Non-RTC nvSRAM Device</b>
<b>CY14B101Q1 CY14B101Q2 CY14B101Q3</b>	<b>3V 1M Serial Non-RTC nvSRAM Device</b>
<b>CY14B101P</b>	<b>3V 1M Serial RTC nvSRAM Device</b>
<b>CY14B512Q1 CY14B512Q2 CY14B512Q3</b>	<b>3V 512K Serial Non-RTC nvSRAM Device</b>
<b>CY14B512P</b>	<b>3V 512K Serial RTC nvSRAM Device</b>
<b>CY14B256Q1 CY14B256Q2 CY14B256Q3</b>	<b>3V 256K Serial Non-RTC nvSRAM Device</b>
<b>CY14B256P</b>	<b>3V 512K Serial RTC nvSRAM Device</b>

## CYPRESS TECHNICAL CONTACT FOR QUALIFICATION DATA:

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### QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date Comp
071304	To qualify S8 SONOS technology and 4M nvSRAM devices CY14B104L / CY14B104N (7C14104AC base die) using S8TNV-5R, fabricated at Cypress Minnesota CMI (Fab4)	Nov 2008
082704	To qualify 4M nvSRAM Evans ( <i>with both RTC-Real Time Clock and bond options for Non-RTC</i> ) devices CY14B104*/CY14B102*/CY14E104* (7C14104CC base die) using S8TNV-5R, fabricated at Cypress Minnesota CMI (Fab4)	July 2009
090604	To qualify 1M nvSRAM K2 ( <i>with both RTC-Real Time Clock and bond options for Non-RTC</i> ) devices CY14B101*/CY14B512*/CY14E256* (7C14101CC base die) using S8TNV-5R, fabricated at Cypress Minnesota CMI (Fab4)	Sep 2009
092804	1 Million Endurance Qualification for 4 Meg Evans nvSRAM	Nov 2009
100203	To qualify 1M nvSRAM K2 1.8V device option CY14V101LA/CY14V101NA (7C14121CC base die) using S8TNV-5R, fabricated at Cypress Minnesota CMI (Fab4)	July 2010

PRODUCT DESCRIPTION (for qualification)	
Purpose: Qualification of S8 technology & S8TNV-5R 1M nvSRAM product at CMI (Fab 4)	
Marketing Part #:	CY14B101*/CY14B512*/CY14B256*/CY14V101*
Device Description:	3V & 5V Commercial/Industrial, available in 44-Lead TSOP II / 48-Lead SSOP / 32-Lead SOIC / 48-Lead FBGA
Cypress Division:	Cypress Semiconductor Corporation – MID

TECHNOLOGY/FAB PROCESS DESCRIPTION – S8TNV-5R			
Number of Metal Layers:	3	Metal Composition:	Metal 1: 300Å TiW / 3,200Å Al / 100Å Ti Metal 2: 300Å TiW / 3,200Å Al / 100Å Ti Metal 3: 300Å TiW / 8,000Å Al / 150Å Ti
Passivation Type:	Si <sub>2</sub> N <sub>3</sub> 7000Å & SiO <sub>2</sub> 700Å		
Generic Process Technology/Design Rule (drawn):	S8TNV-5R/0.13µm		
Gate Oxide Material/Thickness (MOS):	32Å (LV) & 110Å (HV)		
Name/Location of Die Fab (prime) Facility:	Cypress Semiconductor -- Bloomington, MN		
Die Fab Line ID/Wafer Process ID:	Fab4 / S8TNV-5R		

PACKAGE / ASSEMBLY INFORMATION	
Assembly Site:	CML-RA / AMKOR PHIL-M / ASE-G
Package:	{48-Lead SSOP/44-Lead TSOP} / {32-Lead SOIC/16-Lead SOIC} / 48-Lead FBGA
Mold Compound:	KEG600DA / G600 / KE2270
Die Attach:	Dexter QMI509 / Ablestik 8290 / Ablebond 2025D
Die Size (Mils):	165.5 x 152.7
Leadframe Design:	{C7025-HALFHARD /8 DOT SLOTTED RMP} / {Cu/RMP (Reduced Metal Pad)} / NA
Leadfinish/solder ball:	NiPdAu / Pure Sn / SAC405
Wire (Al/Au) diam:	0.8 Mil
MSL:	3
Solder Reflow Temp:	260C

**Note:** Package Qualification details upon request

## RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENT

### Qualification Summary

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate (EFR)	Dynamic Operating Condition, 150°C, 2.7V, 48 Hours JESD22-A-108-B	P
High Temperature Operating Life Latent Failure Rate (LFR)	Dynamic Operating Condition, 150°C, 2.7V, 500 Hours JESD22-A-108-B	P
Pre/Post LFR AC/DC Char	AC/DC Critical Parameter Char at LFR 0hrs, 80hrs & 500hrs	P
Endurance	1 Million Cycles @ 90C, Per datasheet	P
Data Retention	JESD22-A117150°C, 1000 Hours	P
Temperature Cycle	-65 <sup>0</sup> C to 150 <sup>0</sup> C, JESD22-A-104 500 Cycles, Require Precondition	P
High Accelerated Saturation Test (HAST)	130°C, 3.63V, 85%RH, JESD22-A-110-B 128 Hours, Require Precondition	P
Pressure Cooker	121°C/100%RH, JESD22-A102-C 168 Hours, Require Precondition	P
Precondition	JESD22 Moisture Sensitivity	P
Electrostatic Discharge Human Body Model (ESD-HBM)	2,200V, JESD22-A114E	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V, JESD22-C101C	P
Electrostatic Discharge Machine Model (ESD-MM)	200V, JESD22-A115-A	P
Latch-up Sensitivity	5.4V, ± 200mA, 125°C, EIA/JESD78	P
Age Bond Strength	Mil-Std-883, Method 2011	P
Acoustic (M3)	J-STD-020	P
Soft Error (Alpha Particle)	JESD89A	P
Soft Error (Neutron/Proton)	JESD89A	P
SEM X-Section	XY audit at center wafer and edge wafer	P
Low Temperature Operating Life Test	Dynamic Operating Condition, 2.7V, -30°C, 500 Hours	P
High Temp Steady State Life Test	Static Operating Condition, 2.7V, 150°C, 1000 Hours	P

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### RELIABILITY FAILURE RATE SUMMARY

Stress/Test	Device Tested/ Device Hours	# Fails	Activation Energy	Thermal AF <sup>4</sup>	Failure Rate
High Temperature Operating Life Early Failure Rate	2,162 Devices*	0	N/A	N/A	0 PPM
High Temperature Operating Life <sup>1,2</sup> , Long Term Failure Rate	524,500 DHRs*	0	0.7	169	10 FITs

\* EFR data is based on QTP 090604 only, LFR data is based on QTP 071304, 082704 and 090604 data

<sup>1</sup> Assuming an ambient temperature of 55°C and a junction temperature rise of 15°C.

<sup>2</sup> Chi-squared 60% estimations used to calculate the failure rate.

<sup>3</sup> Thermal Acceleration Factor is calculated from the Arrhenius equation

$$AF = \exp \left[ \frac{E_A}{k} \left[ \frac{1}{T_2} - \frac{1}{T_1} \right] \right]$$

where:

$E_A$  = The Activation Energy of the defect mechanism.

$k$  = Boltzmann's constant =  $8.62 \times 10^{-5}$  eV/Kelvin.

$T_1$  is the junction temperature of the device under stress and  $T_2$  is the junction temperature of the device at use conditions.

## Reliability Test Data

QTP #: 071304

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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**STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE, 150C, 2.7V, Vcc Max**

CY14B104L (7C14104AC)	4811240	610819876	CML-RA	48	1222	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	48	1316	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	48	932	0	
CY14B104L (7C14104AC)	4819437	610842294	CML-RA	48	813	0	

**STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, 150C, 2.7V, Vcc Max**

CY14B104L (7C14104AC)	4811240	610819876	CML-RA	500	120	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	500	120	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	500	119	0	
CY14B104L (7C14104AC)	4819437	610842294	CML-RA	500	119	0	

**STRESS: Pre-/ Post HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE CHAR**

CY14B104L (7C14104AC)	4811240	610819876	CML-RA	80/500	10	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	80/500	10	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	80/500	10	0	
CY14B104L (7C14104AC)	4819437	610842294	CML-RA	80/500	10	0	

**STRESS: ENDURANCE, 200K CYCLES, 90C**

CY14B104L (7C14104AC)	4811240	610819876	CML-RA	COMP	80	0	
CY14B104L (7C14104AC)	4817305	610841260	CML-RA	COMP	77	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	COMP	160	0	
CY14B104L (7C14104AC)	4819437	610842294	CML-RA	COMP	80	0	
CY14B104L (7C14104AC)	4817306/4818074		CML-RA	COMP	3307	0	

**STRESS: DATA RETENTION, 150C**

CY14B104L (7C14104AC)	4817306	610830615	CML-RA	1000	77	0	
CY14B104L (WAFER)	4817306	610830615	CML-RA	1008	228	0	
CY14B104L (7C14104AC)	4817305	610841260	CML-RA	1000	80	0	
CY14B104L (WAFER)	4817305	610841260	CML-RA	1008	216	0	
CY14B104L (7C14104AC)	4818074	N/A	CML-RA	1000	80	0	
CY14B104L (WAFER)	4818074	N/A	CML-RA	1008	402	0	

## Reliability Test Data

QTP #: 071304

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
<b>STRESS: ESD-HUMAN BODY CIRCUIT PER JEDEC EIA/JESD22-A114-B, 2,200V</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	COMP	8	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	COMP	8	0	
CY14B104L (7C14104AC)	4811240	610819876	CML-RA	COMP	8	0	
<b>STRESS: ESD-CHARGE DEVICE MODEL, 500V</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	COMP	9	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	COMP	9	0	
CY14B104L (7C14104AC)	4811240	610819876	CML-RA	COMP	9	0	
<b>STRESS: ESD-MACHINE MODEL, 200V</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	COMP	5	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	COMP	5	0	
CY14B104L (7C14104AC)	4811240	610819876	CML-RA	COMP	5	0	
<b>STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 1.98V, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY14B104L (7C14104AC)	4811240	610819876	CML-RA	128	77	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	128	80	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	128	77	0	
<b>STRESS: PRESSURE COOKER TEST, 121C, 100%RH, 15 Psig, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	168	77	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	168	80	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	168	77	0	
<b>STRESS: Temperature Cycle COND. C, -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	1000	77	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	1000	80	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	500	80	0	
<b>STRESS: STATIC LATCH-UP TESTING, 125C, 5.4V, ±200mA</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	COMP	6	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	COMP	6	0	
CY14B104L (7C14104AC)	4819437	610842294	CML-RA	COMP	6	0	



## Reliability Test Data

QTP #: 071304

<i>Device</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Loc</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
<b>STRESS: AGE BOND</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	COMP	10	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	COMP	10	0	
CY14B104L (WAFER)	4818074	N/A	CML-RA	COMP	10	0	
<b>STRESS: ACOUSTIC-MSL3</b>							
CY14B104L (7C14104AC)	4807004	610812949	CML-RA	COMP	15	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	COMP	15	0	
CY14B104L (7C14104AC)	4814841	610832326	CML-RA	COMP	15	0	
<b>STRESS: SER – ALPHA PARTICLE, 3-TEPM, 3-VOLTAGE, FIT=550 FIT/Mbit @ 85C, Vcc Nom</b>							
CY14B104L (7C14104AC)	4811240	610819876	CML-RA	COMP	3	0	
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	COMP	3	0	
CY14B104L (7C14104AC)	4819437	610842294	CML-RA	COMP	3	0	
<b>STRESS: SER – NEUTRON/PROTON</b>							
CY14B104L (7C14104AC)	4808220	N/A	CML-RA	COMP	3	0	
<b>STRESS: LOW TEMPERATURE OPERATING LIFE TEST, -30C, 2.7V, Vcc Max</b>							
CY14B104L (7C14104AC)	4817306	610830615	CML-RA	500	77	0	
<b>STRESS: HIGH TEMP STEADY STATE LIFE TEST, 150C, 2.7V, Vcc Max</b>							
CY14B104L (7C14104AC)	4811240	610819876	CML-RA	1000	76	0	

## Reliability Test Data

QTP #: 082704

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
<b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE, 150C, 2.7V, Vcc Max</b>							
CY14B104 (7C14104B)	4847698	610905735	CML-RA	48	1787	0	
CY14B104 (7C14104B)	4850719	610910241	CML-RA	48	1774	0	
CY14B104 (7C14104B)	4850719	610914474	CML-RA	48	1555	1	1-unfilled via, FA#082704-3CE1 CAR#200930051
CY14B104 (7C14104B)	4906080	610918905	CML-RA	48	1136	0	
<b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, 150C, 2.7V, Vcc Max</b>							
CY14B104 (7C14104B)	4847698	610905735	CML-RA	500	118	0	
CY14B104 (7C14104B)	4850719	610910241	CML-RA	500	147	0	
CY14B104 (7C14104B)	4850719	610914474	CML-RA	500	186	0	
<b>STRESS: Pre-/ Post HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE CHAR</b>							
CY14B104 (7C14104B)	4847698	610905735	CML-RA	80/500	10	0	
CY14B104 (7C14104B)	4850719	610910241	CML-RA	80/500	10	0	
<b>STRESS: ENDURANCE (90C), 200K CYCLES+168 HOURS DATA RETENSION</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	COMP	80	0	
CY14B104 (7C14104B)	4850719	610910241	CML-RA	COMP	89	0	
<b>STRESS: DATA RETENTION (150C) + 200K ENDURANCE</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	1000	80	0	
CY14B104 (7C14104B)	4850719	610910241	CML-RA	1000	80	0	
<b>STRESS: ESD-HUMAN BODY CIRCUIT PER JEDEC EIA/JESD22-A114-B, 2,200V</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	COMP	8	0	
CY14B104 (7C14104B)	4850719	610910241	CML-RA	COMP	8	0	
CY14B104 (7C14104B)	4850719	610910242	CML-RA	COMP	8	0	
CY14B104 (7C14104B)	4906080	610918905	CML-RA	COMP	8	0	
<b>STRESS: ESD-CHARGE DEVICE MODEL, 500V</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	COMP	9	0	
CY14B104 (7C14104B)	4847698	610914510	CML-RA	COMP	9	0	
CY14B104 (7C14104B)	4847698	610918518	CML-RA	COMP	9	0	

## Reliability Test Data

QTP #: 082704

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
<b>STRESS: ESD-MACHINE MODEL, 200V</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	COMP	5	0	
<b>STRESS: HI-ACCEL SATURATION TEST, 130C, 85%RH, 1.98V, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	128	80	0	
<b>STRESS: PRESSURE COOKER TEST, 121C, 100%RH, 15 Psig, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	168	77	0	
<b>STRESS: Temperature Cycle COND. C, -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	1000	75	0	
CY14B104 (7C14104B)	4841954	610855137	CML-RA	1000	77	0	
<b>STRESS: STATIC LATCH-UP TESTING, 125C, 5.4V, ±200mA</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	COMP	9	0	
CY14B104 (7C14104B)	4850719	610910241	CML-RA	COMP	9	0	
CY14B104 (7C14104B)	4850719	610910242	CML-RA	COMP	9	0	
CY14B104 (7C14104B)	4906080	610918905	CML-RA	COMP	9	0	
<b>STRESS: ACOUSTIC-MSL3</b>							
CY14B104 (7C14104B)	4847698	610904566	CML-RA	COMP	15	0	
CY14B104 (7C14104B)	4841954	610855137	CML-RA	COMP	15	0	
<b>STRESS: SER – ALPHA PARTICLE, 3-TEPM, 3-VOLTAGE, @ 85C, Vcc Nom</b>							
CY14B104 (7C14104B)	4850719	610910241	CML-RA	COMP	3	0	

## Reliability Test Data

QTP #: 090604

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
<b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE, 150C, 2.7V, Vcc Max</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	48	1153	0	
CY14101B8CC (7C14101CC)	4910444	610922709	CML-RA	48	688	0	
<b>STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE, 150C, 2.7V, Vcc Max</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	500	118	0	
<b>STRESS: Pre-/ Post HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE CHAR</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	80/500	10	0	
<b>STRESS: ENDURANCE (90C), 200K CYCLES+168 HOURS DATA RETENSION</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	COMP	80	0	
<b>STRESS: DATA RETENTION (150C) + 200K ENDURANCE</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	1000	80	0	
<b>STRESS: ESD-HUMAN BODY CIRCUIT PER JEDEC EIA/JESD22-A114-B, 2,200V</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	COMP	8	0	
<b>STRESS: ESD-CHARGE DEVICE MODEL, 500V</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	COMP	9	0	
<b>STRESS: PRESSURE COOKER TEST, 121C, 100%RH, 15 Psig, PRE COND 192 HR 30C/60%RH, MSL3</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	288	77	0	
<b>STRESS: Temperature Cycle COND. C, -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	1000	77	0	
<b>STRESS: STATIC LATCH-UP TESTING, 125C, 5.4V, ±200mA</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	COMP	9	0	
<b>STRESS: ACOUSTIC-MSL3</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	COMP	15	0	
<b>STRESS: SER – ALPHA PARTICLE, 3-TEPM, 3-VOLTAGE, @ 85C, Vcc Nom</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	COMP	3	0	
<b>STRESS: AGE BOND</b>							
CY14101B8C (7C14101CC)	4908403	610918063	CML-RA	COMP	3	0	

## Reliability Test Data

QTP #: 092804

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
<b>STRESS: ENDURANCE (90C) 1 MILLION CYCLES+168 HOURS DATA RETENTION</b>							
CY14B104NA (7C1404B6C)	4850719	610910241	CML-R	COMP	80	0	
CY14B104LA (7C1404B8C)	4919815	610923434	CML-R	COMP	80	0	
<b>STRESS: ENDURANCE (24C) 1 MILLION CYCLES+168 HOURS DATA RETENTION</b>							
CY14B104K (7C1404B1C)	4847698	610905735	CML-R	COMP	79	0	

## Reliability Test Data

QTP #: 100203

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
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**STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE, 150C, 2.7V, Vcc Max**

CY14V101LA (7C14121CC)	4944705	611017304	ASE-G	48	2162	0	
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**STRESS: ESD-HUMAN BODY CIRCUIT PER JEDEC EIA/JESD22-A114-B, 2,200V**

CY14V101LA (7C14121CC)	4944705	HA1011002	ASE-G	COMP	8	0	
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**STRESS: ESD-CHARGE DEVICE MODEL, 500V**

CY14V101LA (7C14121CC)	4944705	HA1011002	ASE-G	COMP	9	0	
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**STRESS: ESD-MACHINE MODEL, 200V**

CY14V101LA (7C14121CC)	4944705	HA1011002	ASE-G	COMP	5	0	
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**STRESS: Temperature Cycle COND. C, -65C TO 150C, PRE COND 192 HRS 30C/60%RH, MSL3**

CY14V101LA (7C14121CC)	4944705	HA1011002	ASE-G	500	80	0	
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**STRESS: STATIC LATCH-UP TESTING, 125C, 5.4V, ±180mA**

CY14V101LA (7C14121CC)	4944705	HA1011002	ASE-G	COMP	9	0	
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**STRESS: ACOUSTIC-MSL3**

CY14V101LA (7C14121CC)	4944705	HA1011002	ASE-G	COMP	15	0	
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## Document History Page

Document Title: 100203: S8 K2 NON-VOLATILE SRAM PRODUCT FAMILY, CMI (FAB 4)  
Document Number: 001-62930

Rev.	ECN No.	Orig. of Change	Description of Change
**	2975233	HGA	Initial spec release
*A	4073208	HSTO	Sunset Review Remove version 1.0 in the QTP# in title page. Remove the reference Cypress specs (25-00060, 25-00020, 01-00081, 25-00104, 001-47027 & 001-45212) on the reliability test conditions and replace with the industry standards.

Distribution: WEB

Posting: None