

CYPRESS SEMICONDUCTOR CORPORATION

PRODUCT RELIABILITY REPORT

QUARTER 2, 1999



PERFORM PER THE REQUIREMENT OF 25-00008, RELIABILITY MONITOR PROGRAM SPECIFICATION

Ed Russell
Reliability Director

STANDARD STRESS TEST DESCRIPTIONS

<u>TEST</u>	<u>DESCRIPTION</u>
HTOL	High Temp Op Life, 150°C, Dynamic 115% Vcc Nominal
HTOL2	High Temp Op Life, 125°C, Dynamic 115% Vcc Nominal
HTSSL	High Temp Steady State Life, 150°C, Static 115% Vcc Nominal
HTSSL2	High Temp Steady State Life, 125°C, Static 115% Vcc Nominal
DRET	Data Retention Test, Data Bake 165°C, Plastic
DRET2	Data Retention Test, Data Bake 250°C, Hermetic
PCT	Pressure Cooker Test, 121°C, 100%RH, No Bias
HAST	Hi-Accel Saturation Test, 140°C, 85%RH, Static 100% Vcc Nominal
TC	Temp Cycle, 125°C to -40°C
TC2	Temp Cycle, 150°C to -65°C
HTS	High Temp Storage, 165°C, No Bias

WAFER FAB AREAS

<u>FAB #</u>	<u>LOCATION</u>
CA	San Jose, California
TX	Round Rock, Texas
MN	Bloomington, Minnesota
TW	TSMC, Taiwan

ASSEMBLY LOCATION

<u>ID</u>	<u>COMPANY/LOCATION</u>
KOREA-A	Anam-Buchon/Korea
ASAT-B	Asat/Hongkong
USA-C	Cypress/USA
PHIL-D	Dynesem/Philippines
USA-E	Cypress-Minnesota/USA
INDNS-F	Astra/Indonesia
TAIWAN-G	ASE/Taiwan
KOREA-H	Hyundai/Korea
MALAY-J	ASE/Malaysia
THLAND-K	TMS/Thailand
KOREA-L	Anam-Seoul/Korea
PHIL-M	Anam/Philippines
USA-N	Express/USA
INDNS-O	Omedata/Indonesia
USA-P	Pantronix/USA
KOREA-Q	Anam-Bupyong/Korea
PHIL-R	Cypress/Philippines
USA-S	ATM/USA
TAIWAN-T	OSE/Taiwan
MALAY-U	Unisem/Malaysia
USA-V	Aplus/USA
USA-W	Toshiba/USA
ALPHA-X	Cypress Bangkok/Thailand
ALPHA-Y	Alphatech/Thailand
THLAND-Z	Hana/Thailand

DESCRIPTION OF DATA TABLE COLUMN HEADINGS

<u>COLUMN HEADING</u>	<u>DESCRIPTION OF COLUMN CONTENTS</u>
Division	Cypress Manufacturing Division
Test	Common code for the stress performed. See table on previous page for detail.
Test Condition	Tem/humidity/bias condition for the stress. See table on previous for detail
Device ID	Cypress part number
Date Code	Week in which specific lot was marked/sealed/molded.
Lot Number	Manufacturing (assembly) lot number
Function	Generic product family at Cypress
Description	Brief description of device function
Technology	Fabrication process technology.
Process	Generic fabrication process
Pkg Material	Generic packaging material
Pkg Type	Common code for standard package configuration (PDIP=Plastic Dual-In-Line-Package).
Pkg Location	Country Location + Initial of assembly house (see table on previous page for detail).
# Pins	Pin cont of package in which device is assembled.
Duration	Data Readpoint of stress. For Temp Cycle (TC) = Cycles; all other stresses=Hours.
# Test	Quantity of devices submitted to this stress/test.
# Failed	Quantity of devices failing at this specific readpoint.
Fail Mode	Failure analysis results from this test, if any.

RELIABILITY DATA SUMMARY
(Q299)

LONG TERM FAILURE RATE SUMMARY					
PROCESS	DEVICE HOURS			FAILED	FAILURE MODE
	150C	125C	TOTAL** @ 150C		
E2PROM TOTAL	124,160	0	124,160	0	
FAMOS TOTAL	134,500	0	134,500	0	
FLASH TOTAL	0	57,500	18,745	0	
SRAM/LOGIC TOTAL	2,331,948	0	2,331,948	2	2 UNKNOWN
BICMOS TOTAL	0	0	0	0	
LFR TOTAL	2,590,608	57,500	2,609,353	2	2 UNKNOWN
EARLY FAILURE RATE SUMMARY					
PROCESS	UNITS TESTED			FAILED	FAILURE MODE
	150C	125C	TOTAL @ 150C		
E2PROM TOTAL	537	0	537	0	
FAMOS TOTAL	4,641	0	4,641	1	1 GATE OXIDE DEFECT
FLASH TOTAL	0	115	115	0	
SRAM/LOGIC TOTAL	23,757	667	24,424	1	1 UNKNOWN
BICMOS TOTAL	0	0	0	0	
EFR TOTAL	28,935	782	29,717	2	1 GATE OXIDE DEFECT/1 UNKNOWN
HTSSL FAILURE RATE SUMMARY					
PROCESS	DEVICE HOURS			FAILED	FAILURE MODE
	150C	125C	TOTAL* @ 150C		
FAMOS TOTAL	0	0	0	0	
FLASH TOTAL	0	0	0	0	
SRAM/LOGIC TOTAL	13,440	0	13,440	0	
BICMOS TOTAL	0	0	0	0	
HTSSL TOTAL	13,440	0	13,440	0	

* Equivalent Total Device Hours/Cycles. Derating factors are used for lower stress condition.

RELIABILITY DATA SUMMARY
(Q299)

TEMP CYCLE FAILURE RATE SUMMARY					
PROCESS	DEVICE CYCLE			FAILED	FAILURE MODE
	150C	125C	TOTAL ** @ 150C		
E2PROM	137,800	0	137,800	0	
FAMOS TOTAL	101,304	0	101,304	0	
FLASH TOTAL	59,100	0	59,100	0	
SRAM/LOGIC TOTAL	897,900	0	897,900	5	1 DESTROY DURING ANALYSIS/1 TOPSIDE CRACK/2 OPEN-BOND LIFT/1 PLASTIC PKG DEFECT
BICMOS TOTAL	13,500	0	13,500	0	
TC TOTAL	1,209,604	0	1,209,604	5	1 DESTROY DURING ANALYSIS/1 TOPSIDE CRACK/2 OPEN-BOND LIFT/1 PLASTIC PKG DEFECT
HAST FAILURE RATE SUMMARY					
PROCESS	DEVICE HOURS			FAILED	FAILURE MODE
	140C	130C	TOTAL * @ 140C		
E2PROM	12,544	0	12,544	0	
FAMOS TOTAL	39680	0	39680	5	1 UNKOWN/2 BROKEN LEADS/2 OPEN-BOND LIFT
FLASH TOTAL	6,272	0	6,272	0	
SRAM/LOGIC TOTAL	146,816	0	146,816	3	1 OPEN-BOND LIFT/1 TOPSIDE CRACK/1 UNKNOWN
BICMOS TOTAL	5,760	0	5,760	0	
HAST TOTAL	211,072	0	211,072	8	2 UNKOWN/2 BROKEN LEADS/3 OPEN-BOND LIFT/1 UNKNOWN
LTOL FAILURE RATE SUMMARY					
PROCESS	DEVICE HOURS			FAILED	FAILURE MODE
FAMOS TOTAL	0			0	
FLASH TOTAL	0			0	
SRAM/LOGIC TOTAL	45,000			0	
BICMOS TOTAL	0			0	
LTOL TOTAL	45,000			0	

* Equivalent Total Device Hours/Cycles. Derating factors are used for lower stress condition.

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PCT FAILURE RATE SUMMARY					
PROCESS	DEVICE HOURS		FAILED	FAILURE MODE	
E2PROM	22,776		0		
FAMOS TOTAL	23,184		0		
FLASH TOTAL	7,560		0		
SRAM/LOGIC TOTAL	418,152		16	4 UNKNOWN/2 DELAMINATION IN TOPSIDE/1 PARTICLE DEFECT/6 OPEN-BOND LIFT/1 OPEN-HEEL/1 MIX REJ/1 ASSEMBLY DEFECT	
BICMOS TOTAL	14,952		0		
PCT TOTAL	463,848		16	4 UNKNOWN/2 DELAMINATION IN TOPSIDE/1 PARTICLE DEFECT/6 OPEN-BOND LIFT/1 OPEN-HEEL/1 MIX REJ/1 ASSEMBLY DEFECT	
DRET FAILURE RATE SUMMARY					
PROCESS	PLASTIC (165C)		HERMETIC(250C)		FAILURE MODE
	DHR	REJ	DHR	REJ	
E2PROM TOTAL	85,560	0	7,296	0	
FAMOS TOTAL	44,160	0	0	0	
FLASH TOTAL	0	0	0	0	
SRAM/LOGIC TOTAL	0	0	0	0	
BICMOS	0	0	0	0	
DRET TOTAL	129,720	0	7,296	0	

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Technology	Test	Test Condition	Division	Function	Device	Eval#	D/C	Assembly Lot No	Description	Process	Wfr Loc	Pkg type	Assy Loc	No Pin	Dura tion	Qty Test	Qty Fail	Fail Mode
BICMOS-SM1	HAST	140C/3.63V	DCD	CHNL	CY7B991-VC	MR92111	9830	219805230	PSCB	BiCMOS	TX	PLCC	ALPHA-X	32	128	45	0	
	HTS	165C/NO BIAS	DCD	CHNL	CY7B991-JC	MR91119	9907	619903134	PSCB	BiCMOS	TX	PLCC	ALPHA-X	32	336	45	0	
	PCT	121C/100%RH	DCD	CHNL	CY7B991-JC	MR92123	9903	219900322	PSCB	BiCMOS	TX	PLCC	ALPHA-X	32	168	45	0	
					CY7B991-VC	MR92109	9830	219805230	PSCB	BiCMOS	TX	PLCC	ALPHA-X	32	168	44	0	
	TC2	-65C TO 150C	DCD	CHNL	CY7B991-JC	MR92124	9903	219900322	PSCB	BiCMOS	TX	PLCC	ALPHA-X	32	300	45	0	

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CMOS-.5MU	HAST	140C/5.5V	CPD	TTECH	W42C31-03G	M99211	9913	SD10-1	CLOCK	CMOS	SS	SOIC	KOREA-A	8	128	45	0	
	TC2	-65C TO 150C	CPD	TTECH	W42C31-03G	M99213	9907	SD10-1	CLOCK	CMOS	SS	SOIC	KOREA-A	8	300	48	0	

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CMOS-.65MU	HAST	140C/3.63V	CPD	TTECH	W48C101-01H	M99229	9909	BK0482-11	CLOCK	CMOS	TW	SSOP	KOREA-A	48	128	45	0	3 EOS
	PCT	121C/100%RH	CPD	TTECH	W48C101-01H	M99228	9909	BK0482-11	CLOCK	CMOS	TW	SSOP	KOREA-A	48	168	48	0	
						M99232	9904	BK0482-11	CLOCK	CMOS	TW	SSOP	KOREA-A	48	168	48	0	
	TC2	-65C TO 150C	CPD	TTECH	W48C101-01H	M99230	9909	BK0482-11	CLOCK	CMOS	TW	SSOP	KOREA-A	48	300	48	0	
						M99234	9904	BK0482-11	CLOCK	CMOS	TW	SSOP	KOREA-A	48	300	48	0	

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E2PROM-E3	DRET	165C/NO BIAS	PLD	37K	CY37512P208-NC	98403	9903	619817611	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	168552	7676	00	
							9905	619901312	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	168552	7979	00	
	DRET2	250C/NO BIAS	PLD	37K	CY37256P208-UMB	98521	9848	619815285	256 MCEL	CMOS	TW	CQFP	USA-GA	160	96	76	0	
	HAST	140C/5.5V	PLD	37K	CY37512P208-NC	99045	9903	619817611	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	128	48	0	
					CY37512P352-BG	99043	9902	619900229	512 MCEL	CMOS	TW	BGA	TAIWAN-G	388	128	50	0	
	HTOL	150C/5.75V	PLD	37K	CY37256P208-UMB	98521	9848	619815285	256 MCEL	CMOS	TW	CQFP	USA-GA	160	80	48	0	
															184	48	0	
															500	24	0	4 ATE-Induced EOS
															500	44	0	4 ATE-Induced EOS
					CY37512P208-NC	98403	9905	619903378	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	48	275	0	
															80	273	0	
															500	83	0	
					CY37512P256-BGC	98403	9901	619817515	512 MCEL	CMOS	TW	BGA	TAIWAN-G	292	48	18	0	
															48	244	0	
															80	81	0	
															500	73	0	
	HTS	165C/NO BIAS	PLD	37K	CY37512P208-NC	99045	9903	619817611	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	336	50	0	
															1000	50	0	
					CY37512P352-BG	99043	9902	619816568	512 MCEL	CMOS	TW	BGA	TAIWAN-G	388	336	48	0	
	PCT	121C/100%RH	PLD	37K	CY37256P256-BGC	MR92197	9904	619900830	256 MCEL	CMOS	TW	BGA	TAIWAN-G	292	168	55	0	
					CY37512P208-NC	98403	9903	619817611	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	168288	4747	00	
	T/S	-55C TO 150C	PLD	37K	CY37512P208-NC	99045	9903	619817611	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	100	50	0	
															200	50	0	
			CY37512P352-BG	99043	9902	619816568	512 MCEL	CMOS	TW	BGA	TAIWAN-G	388	100	48	0			

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Technology	Test	Test Condition	Divi- sion	Func- tion	Device	Eval#	D/C	Assembly Lot No	Description	Pro- cess	Wfr Loc	Pkg type	Assy Loc	No Pin	Dura tion	Qty Test	Qty Fail	Fail Mode
E2PROM-E3	T/S	-55C TO 150C	PLD	37K	CY37512P352-BG	99043	9902	619816568	512 MCEL	CMOS	TW	BGA	TAIWAN-G	388	200	48	0	
	TC2	-65 TO 150C	PLD	37K	CY37256P208-UMB	98521	9848	619815285	256 MCEL	CMOS	TW	CQFP	USA-GA	160	100	46	0	
		-65C TO 150C	PLD	37K	CY37512P208-NC	98403	9903	619817519	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	300	50	0	
								619817611	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	300	48	0	
								9905 619901312	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	300	50	0	
							99045	9903 619817519	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	300	50	0	
								619817611	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	300	48	0	
								9905 619901312	512 MCEL	CMOS	TW	PQFP	TAIWAN-G	208	300	50	0	
					CY37512P352-BG	99043	9902	619816568	512 MCEL	CMOS	TW	BGA	TAIWAN-G	388	300	48	0	
								619817346	512 MCEL	CMOS	TW	BGA	TAIWAN-G	388	300	50	0	
								619817683	512 MCEL	CMOS	TW	BGA	TAIWAN-G	388	300	50	0	

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FAMOS-P26	DRET	165C/NO BIAS	CPD	USB	CY7C66013-PVC	98452	9834	519810652	FULL SP USB CMOS		TX	PDIP	CSPI-R	48	168552	8080	00											
	HAST	140C/5.5V	CPD	USB	CY7C63101A-SC	MR84016	9837	619810677	USB CMOS		TX	SOIC	CSPI-R	24	128	79	11	Unknown Cause										
						MR92070	9912	619906570	USB CMOS		TX	SOIC	CSPI-R	24	128	45	0											
						CY7C64113-PVC	99101	9907	619902497	HIGH SP USB CMOS	TX	SSOP	CSPI-R	48	128	48	0											
						CY7C65113-SC	MR92168	9916	619910306	USB HUB CMOS	TX	SOIC	ALPHA-X	28	128	45	0											
						CY7C66113-PVC	98452	9834	619809906	FULL SP USB CMOS	TX	SSOP	CSPI-R	56	128	45	42	Broken Leads/2 Open-Bond Lift (Lead Frame)										
						99022	9902	619900571	FULL SP USB CMOS	TX	SSOP	CSPI-R	56	128	48	0												
	HTOL	150C/5.5V	CPD	USB	CY7C63101A-SC	99092	9912	619907797	USB CMOS		TX	SOIC	CSPI-R	24	40	520	0											
															40	530	0											
															48	520	0											
															48	530	0											
		150C/5.75V					9842	519812947	FULL SP USB CMOS	TX	PDIP	CSPI-R	4856	500	149	149	00											
																		9853	519817122	FULL SP USB CMOS	TX	PDIP	CSPI-R	48	48	719	11	Gate oxide defect
																		9906	519902559	FULL SP USB CMOS	TX	PDIP	CSPI-R	48	4880	518	0	
																		500	120	0								
																			120	0								
150C/5.8V		9912	619906716	USB HUB CMOS	TX	SOIC	ALPHA-X	28	4548	202	298	00																
													619906719	USB HUB CMOS	TX	SOIC	ALPHA-X	28	57	295	0							
													619906875	USB HUB CMOS	TX	SOIC	ALPHA-X	28	4848	210	0							
	HTS	165C/NO BIAS	CPD	USB	CY7C63101A-OC	99101	9910	619905509	USB CMOS		TX	SSOP	CSPI-R	24	336	50	0											
					CY7C63101A-SC	MR91039	9853	619817456	USB CMOS		TX	SOIC	CSPI-R	24	3361000	45	0											

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Technology	Test	Test Condition	Divi- sion	Func- tion	Device	Eval#	Assembly D/C Lot No	Description	Pro- cess	Wfr Loc	Pkg type	Assy Loc	No Pin	Dura tion	Qty Test	Qty Fail	Fail Mode
FAMOS-P26	HTS	165C/NO BIAS	CPD	USB	CY7C64113-PVC	99101	9907 619902497	HIGH SP USB CMOS		TX	SSOP	CSPI-R	48	336	50	0	2 EOS
					CY7C66113-PVC	99022	9902 619900571	FULL SP USB CMOS		TX	SSOP	CSPI-R	56	336	50	0	
	PCT	121C/100%RH	CPD	USB	CY7C63101A-SC	MR91036	9853 619817456	USB CMOS		TX	SOIC	CSPI-R	24	168	45	0	
						MR92068	9912 619906570	USB CMOS		TX	SOIC	CSPI-R	24	168	45	0	
					CY7C66113-PVC	98452	9853 619817974	FULL SP USB CMOS		TX	SSOP	CSPI-R	56	168	48	0	
	T/S	-55C TO 150C	CPD	USB	CY7C66113-PVC	99022	9902 619900571	FULL SP USB CMOS		TX	SSOP	CSPI-R	56	100 200	50 50	0 0	
	TC2	-65C TO 150C	COD	USB	CY7C66113-PVC	99022	9902 619900605	FULL SP USB CMOS		TX	SSOP	CSPI-R	56	300	50	0	
			CPD	USB	CY7C63101A-OC	99101	9910 619905509	USB CMOS		TX	SSOP	CSPI-R	24	300	50	0	
					CY7C63101A-SC	MR91037	9853 619817456	USB CMOS		TX	SOIC	CSPI-R	24	300	45	0	
					CY7C64113-PVC	99101	9907 619902497	HIGH SP USB CMOS		TX	SSOP	CSPI-R	48	298	48	0	
					CY7C66113-PVC	98452	9829 619807023	FULL SP USB CMOS		TX	SSOP	CSPI-R	56	300	46	0	
						99022	9902 619900571	FULL SP USB CMOS		TX	SSOP	CSPI-R	56	300	50	0	
							619900663	FULL SP USB CMOS		TX	SSOP	CSPI-R	56	300	49	0	

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Technology	Test	Test Condition	Divi- sion	Func- tion	Device	Eval#	D/C	Assembly Lot No	Description	Pro- cess	Wfr Loc	Pkg type	Assy Loc	No Pin	Dura tion	Qty Test	Qty Fail	Fail Mode
FLASH-FL24D	TC2	-65C TO 150C	PLD	FLASH	CY7C371-JC	M99104	9903	219900332	32-MCEL FL	CMOS	TX	PLCC	ALPHA-X	44	300	49	0	

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FLASH-FL28D	HAST	140C/5.5V	PLD	FLASH	CY7C374I-AC	99052	9909	619902518	128 MCEL FL CMOS		TX	TQFP	TAIWAN-T	100	128	49	0	
	HTOL2	125C/5.75V	PLD	FLASH	CY7C374I-JC	M84028	9838	619811084	128 MCEL FL CMOS		TX	PLCC	ALPHA-X	84	96 500	115 115	0 0	
	HTS	165C/NO BIAS	PLD	FLASH	CY7C374I-AC	99052	9909	619902518	128 MCEL FL CMOS		TX	TQFP	TAIWAN-T	100	336	50	0	
	PCT	121C/100%RH	PLD	FLASH	CY7C371-JC	MR92184	9916	619910273	32-MCEL FL CMOS		TX	PLCC	ALPHA-X	44	168	45	0	
	T/S	-55C TO 150C	PLD	FLASH	CY7C374I-AC	99052	9909	619902518	128 MCEL FL CMOS		TX	TQFP	TAIWAN-T	100	100 200	50 50	0 0	
	TC2	-65C TO 150C	PLD	FLASH	CY7C374I-AC	99052	9909	619902517	128 MCEL FL CMOS		TX	TQFP	TAIWAN-T	100	300	49	0	
								619902518	128 MCEL FL CMOS		TX	TQFP	TAIWAN-T	100	300	50	0	
								619902519	128 MCEL FL CMOS		TX	TQFP	TAIWAN-T	100	300	49	0	

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MTI-STD	TC	-40C TO 100C	MPD	MTI	CYM1836V33DPZ		9921	349900181	128K x 32	SMT	CA	ZIP	SJ	64	500	16	0	
					CYM1841APR		9916	349900117	256K x 32	SMT	TH	ZIP	SJ	64	500	16	0	

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SRAM/LOGIC-L20	HTS	165C/NO BIAS	DCD	VME	CY7C611A-NC	98422	9844	619813226	RISC CONTRL	CMOS	TX	PQFP	HK-B	160	336	48	0	
															1000	48	0	

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Technology	Test	Test Condition	Divi- sion	Func- tion	Device	Eval#	D/C	Assembly Lot No	Description	Pro- cess	Wfr Loc	Pkg type	Assy Loc	No Pin	Dura tion	Qty Test	Qty Fail	Fail Mode
SRAM/LOGIC-L27	HAST	140C/5.5V	CPD	FCT	CY74FCT162827TP	MR91044	9852	619817458	10 BIT REG.	CMOS	MN	SSOP	CSPI-R	56	128	45	0	
	HTS	165C/NO BIAS	CPD	FCT	CY74FCT162827TP	MR91045	9852	619817458	10 BIT REG.	CMOS	MN	SSOP	CSPI-R	56	1000	45	0	
	PCT	121C/100%RH	CPD	FCT	CY74FCT162827TP	MR92050	9915	619908472	10 BIT REG.	CMOS	MN	SSOP	CSPI-R	56	168	45	0	
	TC2	-65C TO 150C	CPD	FCT	CY74FCT162827TP	MR91043	9852	619817458	10 BIT REG.	CMOS	MN	SSOP	CSPI-R	56	300	45	0	
					CY74FCT2646ATQC	99101	9906	619901183	8 BIT TRANS	CMOS	MN	SSOP	CSPI-R	24	300	50	0	
						MR92139	9917	619910754	8 BIT TRANS	CMOS	MN	SSOP	CSPI-R	24	300	45	0	

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SRAM/LOGIC-L28	HTOL	150C/5.75V	CPD	FCT	CY74FCT2245ATDM	99174	NA	619904050	8 BIT TRAN.	CMOS	TX	CERD	ALPHA-X	20	184	50	0	
SRAM/LOGIC-L28	PCT	121C/100%RH	CPD	FCT	CY74FCT2827ATQC	MR92130	9916	619909475	10 BIT BUF.	CMOS	TX	SSOP	CSPI-R	24	168	44	0	
					CY74FCT257ATQC	MR91147	9904	619901722	MULTIPLEXER	CMOS	TX	SSOP	MALAY-U	16	168	42	0	
	TC2	-65 TO 150C	CPD	FCT	CY74FCT2245ATDM	99174	9908	619904050	8 BIT TRAN.	CMOS	TX	CERD	ALPHA-X	20	100	50	0	
															100	50	0	
															1000	50	0	
	TC2	-65 TO 150C	CPD	FCT	CY74FCT2245ATQC	99101	9907	619903565M	8 BIT TRANS	CMOS	TX	SSOP	CSPI-R	20	300	50	0	
					CY74FCT2827ATQC	MR92131	9916	619909475	10 BIT BUF.	CMOS	TX	SSOP	CSPI-R	24	300	44	0	

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SRAM/LOGIC-L31	HTS	165C/NO BIAS	CPD	FCT	CY74FCT162827TP	MR91045	9852	619817458	10 BIT REG.	CMOS	MN	SSOP	CSPI-R	56	336	45	0	
	TC2	-65C TO 150C	CPD	FCT	CY74FCT16244ATP	99101A	9911	619904891	16 BIT BUFF	CMOS	MN	SSOP	CSPI-R	48	300	50	0	

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SRAM/LOGIC-R21	PCT	121C/100%RH	MPD	COMDTY	CY7C185-VC	MR91195	9825	619806933	SML/64K	CMOS	TX	SOJ	CSPI-R	28	168	46	1 1	Unknown Cause
						MR91210	9836	619810465	SML/64K	CMOS	TX	SOJ	CSPI-R	28	168	45	2 2	Delamination in Topside
	TC2	-65C TO 150C	MPD	COMDTY	CY7C185-VC	MR91196	9825	619806933	SML/64K	CMOS	TX	SOJ	CSPI-R	28	300	36	0	
						MR91211	9836	619810465	SML/64K	CMOS	TX	SOJ	CSPI-R	28	300	45	0	

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SRAM/LOGIC-R28	HAST	140C/5.5V	DCD	DPORT	CY7C136-JC	MR92202	9912	519903133	2K x 8 DP	CMOS	MN	PLCC	INDNS-O	52	128	45	0									
				MPD	COMDTY	CY6264-SNC	99151	9915	619907866	32K x 8	CMOS	TX	NSOI	CSPI-R	28	128	50	0								
						CY7C185-VI	MR92064	9909	619903571	SML/64K	CMOS	TX	SOJ	CSPI-R	28	128	45	0								
	HTOL	150C/3.8V	DCD	FIFO	CY7C4245V-ASC	99085	9908	619903784	4Kx18 FIFO	CMOS	MN	TQFP	KOREA-Q	64	48	333	0									
								619903786	4Kx18 FIFO	CMOS	MN	TQFP	KOREA-Q	64	48	333	0									
								619903788	4Kx18 FIFO	CMOS	MN	TQFP	KOREA-Q	64	48	336	0									
		150C/5.75V	MPD	COMDTY	CY7C185-PC	MR91033	9852	519816332	SML/64K	CMOS	TX	PDIP	INDNS-O	28	48	150	0									
															96	150	0									
															500	150	0									
					CY7C188-VC	MR84067	9836	619810239	32K x 9	CMOS	MN	SOJ	CSPI-R	32	48	150	0									
															96	150	0									
															500	150	0									
	CY7C199-VC	MR91015	9847	619813801	32K x 8	CMOS	TX	SOJ	CSPI-R	28	48	115	0													
											96	115	0													
											500	115	1 1 Unknown Cause													
	150C/5.75V	MPD	COMDTY	CY7C185-PC	MR91033	9852	519816332	SML/64K	CMOS	TX	PDIP	INDNS-O	28	48	150	0										
														96	150	0										
														500	150	0										
CY7C188-VC				MR84067	9836	619810239	32K x 9	CMOS	MN	SOJ	CSPI-R	32	48	150	0											
													96	150	0											
													500	150	0											
CY7C199-VC	MR91015	9847	619813801	32K x 8	CMOS	TX	SOJ	CSPI-R	28	48	115	0														
										96	115	0														
										500	115	1 1 Unknown Cause														
	HTS	165C/NO BIAS	MPD	COMDTY	CY6264-SNC	99151	9915	619907866	32K x 8	CMOS	TX	NSOI	CSPI-R	28	336	50	0									
																1000	50	0								
					CY7C185-PC	MR91032	9852	519816332	SML/64K	CMOS	TX	PDIP	INDNS-O	28	336	45	0									
		165C/NO BIAS	MPD	COMDTY	CY7C185-PC	MR91032	9852	519816332	SML/64K	CMOS	TX	PDIP	INDNS-O	28	336	45	0									
																							1000	45	0	
															CY7C188-VC	MR91010	9852	619813043	32K x 9	CMOS	TX	SOJ	CSPI-R	32	336	44
					CY7C197-VC	MR91025	9849	519815657	256K x 1	CMOS	TX	SOJ	CSPI-R	24	336	45	0									
																							1000	45	0	

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SRAM/LOGIC-R28	PCT	121C/100%RH	DCD	DPORT	CY7C136-JC	MR92200	9912	519903133	2K x 8 DP	CMOS	MN	PLCC	INDNS-O	52	168	45	0	
				FIFO	CY7C4221V-AC	MR92153	9805	619800934	1Kx9 FIFO	CMOS	MN	TQFP	KOREA-A	32	168	45	0	
			MPD	COMDTY	CY7C185-VC	MR91198	9901	619817996	SML/64K	CMOS	TX	SOJ	CSPI-R	28	168	45	0	
					CY7C185-VI	MR91222	9912	619904918	SML/64K	CMOS	TX	SOJ	CSPI-R	28	168	45	0	
						MR91225	9908	619902201	SML/64K	CMOS	TX	SOJ	CSPI-R	28	168	45	0	
						MR92062	9909	619903571	SML/64K	CMOS	TX	SOJ	CSPI-R	28	168	45	0	
					CY7C188-VC	MR92036	9914	619907801	32K x 9	CMOS	TX	SOJ	CSPI-R	32	168	40	0	
					CY7C195-VC	MR92191	9827	519807582	64K x 4	CMOS	MN	SOJ	INDNS-O	28	168	45	0	
					CY7C197-VC	MR91022	9849	519815657	256K x 1	CMOS	TX	SOJ	CSPI-R	24	168	45	1 1	Particle Defect
					CY7C199-12VC	MR91204	9850	219808699	32K x 8	CMOS	MN	SOJ	ALPHA-X	28	168	45	1 1	Unknown Cause
						MR91213	9851	619815914	32K x 8	CMOS	MN	SOJ	PHIL-M	28	168	45	0	
					CY7C199-VC	MR91144	9805	619800916	32K x 8	CMOS	TX	SOJ	PHIL-GW	28	168	43	0	
						MR91234	9804	619800829	32K x 8	CMOS	TX	SOJ	PHIL-GW	28	168	44	0 1	EOS
						MR91240	9906	619901833	32K x 8	CMOS	MN	SOJ	ALPHA-X	28	168	45	0	
	T/S	-55C TO 150C	MPD	COMDTY	CY6264-SNC	99151	9915	619907866	32K x 8	CMOS	TX	NSOI	CSPI-R	28	100 200	60 60	0 0	
	TC2	-65C TO 150C	MPD	COMDTY	CY6264-SNC	99151	9915	619907866	32K x 8	CMOS	TX	NSOI	CSPI-R	28	300	50	0	
								619907866M	32K x 8	CMOS	TX	NSOI	CSPI-R	28	300 300	50 50	0 0	
					CY7C185-VC	MR91199	9901	619817996	SML/64K	CMOS	TX	SOJ	CSPI-R	28	300	45	0	
						MR91238	9850	219808808	SML/64K	CMOS	TX	SOJ	ALPHA-X	28	300	35	0	
					CY7C185-VI	MR91223	9912	619904918	SML/64K	CMOS	TX	SOJ	CSPI-R	28	300	45	0	
						MR91226	9908	619902201	SML/64K	CMOS	TX	SOJ	CSPI-R	28	300	43	0	

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SRAM/LOGIC-R28	TC2	-65C TO 150C	MPD	COMDTY	CY7C188-VC	MR92037	9914	619907801	32K x 9	CMOS	TX	SOJ	CSPI-R	32	300	45	1	1 Topside Crack - Buss
					CY7C199-VC	99101	9908	619904034M	32K x 8	CMOS	MN	SOJ	PHIL-M	28	300	50	0	
						MR91145	9805	619800916	32K x 8	CMOS	TX	SOJ	PHIL-GW	28	300	45	1	1 Destroyed During Analysis
						MR91205	9850	219808699	32K x 8	CMOS	MN	SOJ	ALPHA-X	28	300	45	2	2 Open- Bond Lift (Lead Frame)
						MR91214	9851	619815914	32K x 8	CMOS	MN	SOJ	PHIL-M	28	300	41	0	
						MR91235	9804	619800829	32K x 8	CMOS	TX	SOJ	PHIL-GW	28	300	45	0	
						MR91241	9906	619901833	32K x 8	CMOS	MN	SOJ	ALPHA-X	28	300	46	0	

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SRAM/LOGIC-R3	HAST	140C/5.5V	MPD	COMDTY	CY7C1021-VC	MR91091	9901	619815906	64K x16	CMOS	MN	SOJ	CSPI-R	44	128	45	0	
	HTOL	150C/5.75V	MPD	COMDTY	CY7C1021-VC	MR91094	9901	619815906	64K x16	CMOS	MN	SOJ	CSPI-R	44	48 96 500 1000	150 150 150 150	0 0 0 0	
	HTS	165C/NO BIAS	MPD	COMDTY	CY7C1021-VC	MR91093	9901	619815906	64K x16	CMOS	MN	SOJ	CSPI-R	44	336 1000	45 44	0 0	
	PCT	121C/100%RH	MPD	COMDTY	CY7C199-VC	MR91165	9904	619814223	256K	CMOS	MN	SOJ	CSPI-R	28	168	50	0	
	TC2	-65C TO 150C	MPD	COMDTY	CY7C1021-VC	MR91092	9901	619815906	64K x16	CMOS	MN	SOJ	CSPI-R	44	300	45	0	
					CY7C199-VC	MR91166	9904	619814223	256K	CMOS	MN	SOJ	CSPI-R	28	300	50	0	

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SRAM/LOGIC-R31	HAST	140C/3.3V	MPD	SYNC	CY7C1399-VC	99101	9908	619903699	32K x 8	CMOS	MN	SOJ	CSPI-R	28	128	47	1 1	Open- Bond Lift/1 EOS
	HTOL	150C/3.45V	MPD	SYNC	CY7C1399-VC	99101	9908	619903699	32K x 8	CMOS	MN	SOJ	CSPI-R	28	48	120	0	
	HTS	165C/NO BIAS	MPD	SYNC	CY7C1399-VC	99101	9908	619903699	32K x 8	CMOS	MN	SOJ	CSPI-R	28	336 1000	50 50	0 0	
						MR84102	9848	619812723	32K x 8	CMOS	MN	TSOP	CSPI-R	28	336 1000	45 43	0 0	2 Thermal EOS
	PCT	121C/100%RH	MPD	SYNC	CY7C1399-VC	MR91201	9845	219807600	32K x 8	CMOS	MN	SOJ	ALPHA-X	28	168	44	0	
						MR91207	9850	619812005	32K x 8	CMOS	MN	SOJ	CSPI-R	28	168	45	4 2	unknown, 1 open bond lift, 1 mix
						MR91231	9833	619809217	32K x 8	CMOS	MN	SOJ	CSPI-R	28	168	45	0	
					CY7C1399-VI	MR91216	9910	619904878	32K x 8	CMOS	MN	SOJ	CSPI-R	28	168	45	0	
	TC2	-65C TO 150C	MPD	SYNC	CY7C1399-VC	99101	9908	619903699	32K x 8	CMOS	MN	SOJ	CSPI-R	28	300	50	0	
						MR91202	9845	219807600	32K x 8	CMOS	MN	SOJ	ALPHA-X	28	300	45	0	
						MR91232	9833	619809217	32K x 8	CMOS	MN	SOJ	CSPI-R	28	300	44	0	
					CY7C1399-VI	MR91220	9909	619904880	32K x 8	CMOS	MN	SOJ	CSPI-R	28	300	45	0	

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SRAM/LOGIC-R32	HAST	140C/5.5V	MPD	COMDTY	CY62256-SNC	MR84058	9837	519811387	32K x 8	CMOS	CA	NSOI	INDNS-O	28	128	44	0	
	HTS	165C/NO BIAS	MPD	COMDTY	CY62256-SNC	MR84059	9837	519811387	32K x 8	CMOS	CA	NSOI	INDNS-O	28	336	45	0	
						MR91100	9853	519900063	32K x 8	CMOS	CA	NSOI	INDNS-O	28	336 1000	46 46	0 0	
	TC2	-65C TO 150C	MPD	COMDTY	CY62256-SNC	MR91099	9853	519900063	32K x 8	CMOS	CA	NSOI	INDNS-O	28	300	45	0	
						MR92103	9915	519906723	32K x 8	CMOS	CA	NSOI	INDNS-O	28	300	45	0	

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SRAM/LOGIC-R32D	HAST	140C/5.5V	DCD	FIFO	CY7C4285-JC	99053	9905	619902522	64Kx18 FIFO	CMOS	MN	PLCC	PHIL-GW	64	128	48	0	
			MPD	COMDTY	CY7C199-VC	MR91077	9903	619900012	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	128	44	0	
	HTS	165C/NO BIAS	DCD	FIFO	CY7C4285-JC	99053	9905	619902522	64Kx18 FIFO	CMOS	MN	PLCC	PHIL-GW	68	336 1000	48 48	0 0	
			MPD	COMDTY	CY7C199-VC	MR91079	9903	619900012	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	336 1000	35 35	0 0	
	PCT	121C/100%RH	MPD	COMDTY	CY7C199-VC	MR91183	9911	619904105	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	40	5	3 EOS/4 Open- Bond Lift/1 Open- Heel
						MR91186	9908	619904258	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	49	0	
				SYNC	CY7C1399-VC	MR91192	9911	619905946	32K x 8	CMOS	MN	SOJ	CSPI-R	28	168	45	0	
	T/S	-55C TO 150C	DCD	FIFO	CY7C4285-JC	99053	9905	619902522	64Kx18 FIFO	CMOS	MN	PLCC	PHIL-GW	68	100 200	48 48	0 0	
	TC2	-65C TO 150C	DCD	FIFO	CY7C4285-JC	99053	9905	619902521	64Kx18 FIFO	CMOS	MN	PLCC	PHIL-GW	68	300	48	0	
								619902521-	64Kx18 FIFO	CMOS	MN	PLCC	PHIL-GW	68	300	48	0	
								619902522	64Kx18 FIFO	CMOS	MN	PLCC	PHIL-GW	68	300	48	0	
			MPD	COMDTY	CY7C199-VC	MR91078	9903	619900012	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	45	1	1 Plastic Package Defect
						MR91184	9911	619904105	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	44	0	
						MR91187	9908	619904258	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	48	0	
					CY7C199-VI	MR91157	9909	619900813	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	46	0	

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SRAM/LOGIC-R42	HAST	140C/3.63V	MPD	COMDTY	CY62256V-ZC	MR91125	9911	619816728	32K x 8	CMOS	MN	TSOP	CSPI-R	28	128	43	0	
	HTS	165C/NO BIAS	MPD	COMDTY	CY62256V-ZC	MR91126	9911	619816728	32K x 8	CMOS	MN	TSOP	CSPI-R	28	336 1000	45 45	0 0	
	PCT	121C/100%RH	MPD	COMDTY	CY62256V-ZC	MR91123	9911	619816728	32K x 8	CMOS	MN	TSOP	CSPI-R	28	168	39	0	
	TC2	-65C TO 150C	MPD	COMDTY	CY62256V-VC	99101	9910	619903700	32K x 8	CMOS	MN	SOJ	CSPI-R	28	300	50	0	
					CY62256V-ZC	MR91124	9911	619816728	32K x 8	CMOS	MN	TSOP	CSPI-R	28	300	45	0	

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SRAM/LOGIC-R42D	HAST	140C/3.63V	MPD	COMDTY	CY7C1021V33-ZSI	MR91106	9842	619811676	64K x16	CMOS	MN	TSOP	KOREA-H	44	128	45	0																						
						MR92018	9909	619904569	64K x16	CMOS	MN	TSOP	CSOU-R	44	128	45	0																						
	HTOL	150C/3.8V	DCD	DPORT	CY7C028V-AC	98516	9908	619904225	64K x 16 DP	CMOS	MN	TQFP	TAIWAN-G	100		48	240	0																					
																48	345	0																					
																48	420	0																					
																80	396	0																					
																500	120	0																					
					CY7C038V-AC	98516	9907	619903202	64K x 18 DP	CMOS	MN	TQFP	TAIWAN-G	100		48	505	0																					
																80	120	0																					
																500	120	0																					
					MPD	COMDTY	CY7C1019V33-VC	99097	9822	519806013D	128K x 8	CMOS	MN	SOJ	INDNS-O	32	48	1449	0																				
																		9831	519809136	128K x 8	CMOS	MN	SOJ	INDNS-O	32	48	1217	0											
																		519809139D	128K x 8	CMOS	MN	SOJ	INDNS-O	32	48	1580	0												
		150C/4.3V			MPD	COMDTY	CY7C1021V33-VC	99258	9921	619911346	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	1364	0																				
																		9922	619911273N	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	901	0											
																		619911274N	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	815	0												
																		9923	619911346N	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	1182	0											
																		SYNCHR	CY7C1350-AC	99181	9917	619904889	128K x 36	CMOS	MN	TQFP	CSPI-R	100	48	1364	0								
																														619905086	128K x 36	CMOS	MN	TQFP	CSPI-R	100	48	1079	0
																														619905086L	128K x 36	CMOS	MN	TQFP	CSPI-R	100	48	328	0
																			HTS	165C/NO BIAS	MPD	COMDTY	CY7C1021V33-VC	MR84081	9845	619811706	64K x16	CMOS	MN	SOJ	CSPI-R	44	336	45	0				
		1000			45	0																																	
					CY7C1021V33-ZSC	MR84045	9839	619810959	64K x16	CMOS	MN	TSOP	KOREA-H	44	336	45	0																						
	PCT	121C/100%RH	MPD	COMDTY	CY7C1021V33-ZSI	MR91104	9842	619811676	64K x16	CMOS	MN	TSOP	KOREA-H	44	168	45	0																						
						MR92016	9909	619904569	64K x16	CMOS	MN	TSOP	CSOU-R	44	168	45	0																						

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SRAM/LOGIC-R42D	PCT	121C/100%RH	MPD	SYNC	CY7C1334-AC	M99223	9901	619817737	64K x 32	CMOS	MN	TQFP	CSPI-R	100	168	46	0	
						M99224	9911	619901398	64K x 32	CMOS	MN	TQFP	CSPI-R	100	168	46	0	
	TC2	-65C TO 150C	MPD	SYNC	CY7C1334-AC	M99218	9901	619817737	64K x 32	CMOS	MN	TQFP	CSPI-R	100	50 100	46 46	0 0	
						M99219	9911	619901398	64K x 32	CMOS	MN	TQFP	CSPI-R	100	50 300	46 46	0 0	

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SRAM/LOGIC-R42H	HTS	165C/NO BIAS	MPD	COMDTY	CY62128-ZAC	MR91133	9829	619807930	128K x 8	CMOS	MN	STSO	CSPI-R	32	336 1000	45 43	0 0	
	PCT	121C/100%RH	MPD	COMDTY	CY62128-ZAC	MR91130	9829	619807930	128K x 8	CMOS	MN	STSO	CSPI-R	32	168	44	0	
	TC2	-65C TO 150C	MPD	COMDTY	CY62128-ZAC	MR91131	9829	619807930	128K x 8	CMOS	MN	STSO	CSPI-R	32	300	44	0	

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SRAM/LOGIC-R42HD	HAST	140C/5.5V	MPD	COMDTY	CY7C1021-VC	MR84087	9851	619811004	64K x16	CMOS	MN	SOJ	CSPI-R	44	128	44	0 1	EOS		
						MR92045	9911	619816998	64K x16	CMOS	MN	SOJ	CSPI-R	44	128	45	0			
							CY7C1049-VCB	MR91064	9901	619815482	512K x 8	CMOS	MN	SOJ	CSPI-R	36	128	44	0	
							CY7C109-VC	MR91070	9904	519901259	128K x 8(5)	CMOS	MN	SOJ	INDNS-O	32	128	45	0	
								MR92118	9912	519905501	128K x 8(5)	CMOS	MN	SOJ	INDNS-O	32	128	45	0	
	HTOL	125C/6.5V	MPD	COMDTY	CY7C1021-VC	99257	9918	619910995N	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	951	0			
								9920	619910952N	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	948	0		
								9922	619911631	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	965	0		
		150C/3.8V	DCD	DPORT	CY7C026V-AC	99122	9915	619908661	16K x 16 DP	CMOS	MN	TQFP	TAIWAN-G	100	48	119	0			
																48	417	0		
																48	468	0		
		150C/5.75V	DCD	FIFO	CY7C4265-AC	99152	9914	619908289	16KX18 FIFO	CMOS	MN	TQFP	KOREA-Q	64	48	360	0			
								9915	619909123	16KX18 FIFO	CMOS	MN	TQFP	KOREA-Q	64	48	360	0		
								9917	619910128	16KX18 FIFO	CMOS	MN	TQFP	KOREA-Q	64	48	360	0		
			MPD	COMDTY	CY7C1021-VC	MR84089	9851	619811004	64K x16	CMOS	MN	SOJ	CSPI-R	44	48	149	0 1	EOS		
																96	149	0		
																500	149	0		
					CY7C1049-VCB	MR91066	9901	619815482	512K x 8	CMOS	MN	SOJ	CSPI-R	36	48	150	0			
																168	150	0		
																500	149	0		
															1000	149	0			
	HTS	165C/NO BIAS	MPD	COMDTY	CY7C1021-VC	MR84088	9851	619811004	64K x16	CMOS	MN	SOJ	CSPI-R	44	336	45	0			
						MR91051	9851	619815548	64K x16	CMOS	MN	SOJ	CSPI-R	44	336	45	0			
						CY7C1041-ZSC	MR92026	9914	619908567	256K x 16	CMOS	MN	TSOP	CSPI-R	44	336	45	0		
														1000	45	0				
							CY7C1049-VCB	MR91065	9901	619815482	512K x 8	CMOS	MN	SOJ	CSPI-R	36	336	45	0	

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SRAM/LOGIC-R42HD	HTS	165C/NO BIAS	MPD	COMDTY	CY7C1049-VCB	MR91065	9901	619815482	512K x 8	CMOS	MN	SOJ	CSPI-R	36	1000	45	0	
						MR92077	9914	619905722	512K x 8	CMOS	MN	SOJ	CSPI-R	36	336 1000	45 45	0 0	
					CY7C109-VC	MR91072	9904	519901259	128K x 8(5)	CMOS	MN	SOJ	INDNS-O	32	336 1000	50 50	0 0	
					CY7C109-ZC	MR92013	9908	619903670	128K x 8(5)	CMOS	MN	TSOP	PHIL-GW	32	336 1000	45 45	0 0	
				SYNC	CY7C1011-ZC	MR91086	9903	619815422	128K x 16	CMOS	MN	TSOP	CSPI-R	44	336	45	0	
	PCT	121C/100%RH	MPD	COMDTY	CY7C1021-VC	MR92043	9911	619816998	64K x16	CMOS	MN	SOJ	CSPI-R	44	168	45	0	
					CY7C1041-ZSC	MR92023	9914	619908567	256K x 16	CMOS	MN	TSOP	CSPI-R	44	168	45	0	
					CY7C1049-VCB	MR91062	9901	619815482	512K x 8	CMOS	MN	SOJ	CSPI-R	36	168	45	1	1 Assembly Defect
						MR92074	9914	619905722	512K x 8	CMOS	MN	SOJ	CSPI-R	36	168	45	0	
					CY7C109-VC	MR91069	9904	519901259	128K x 8(5)	CMOS	MN	SOJ	INDNS-O	32	168	48	0	
						MR92116	9912	519905501	128K x 8(5)	CMOS	MN	SOJ	INDNS-O	32	168	45	0	
					CY7C109-ZC	MR92010	9908	619903670	128K x 8(5)	CMOS	MN	TSOP	PHIL-GW	32	168	45	0	
					CY7C199-VC	MR91153	9909	619901743	32K x 8(5V)	CMOS	MN	SOJ	ALPHA-X	28	168	45	0	
						MR91162	9913	619907915	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	39	0	
						MR91168	9905	619900850	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	44	0	
						MR91171	9906	619901240	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	50	0	
						MR91177	9907	619901334	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	49	0	
						MR91180	9912	619907459	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	50	1	1 Open- Bond Lift
						MR91189	9913	619907977	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	168	43	0	
		MR91243	9908	619901753	32K x 8(5V)	CMOS	MN	SOJ	ALPHA-X	28	168	44	0					
	TC2	-65C TO 150C	MPD	COMDTY	CY7C1021-VC	MR84086	9851	619811004	64K x16	CMOS	MN	SOJ	CSPI-R	44	300	45	0	

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SRAM/LOGIC-R42HD	TC2	-65C TO 150C	MPD	COMDTY	CY7C1041-ZSC	MR92024	9914	619908567	256K x 16	CMOS	MN	TSOP	CSPI-R	44	300	45	0	
					CY7C1049-VCB	MR91063	9901	619815482	512K x 8	CMOS	MN	SOJ	CSPI-R	36	300	45	0	
						MR92075	9914	619905722	512K x 8	CMOS	MN	SOJ	CSPI-R	36	300	45	0	
					CY7C199-VC	MR91154	9909	619901743	32K x 8(5V)	CMOS	MN	SOJ	ALPHA-X	28	300	45	0	
						MR91160	9914	619908641	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	44	0	
						MR91163	9913	619907915	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	51	0	
						MR91169	9905	619900850	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	45	0	
						MR91172	9906	619901240	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	48	0	
						MR91175	9906	619901277	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	43	0	
						MR91178	9907	619901334	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	45	0	
						MR91181	9912	619907459	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	48	0	
						MR91190	9913	619907977	32K x 8(5V)	CMOS	MN	SOJ	CSPI-R	28	300	48	0	

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SRAM/LOGIC-R42LD	HTOL	150C/3.8V	CPD	TTECH	CY2211SC	98377	9923	619915605	CLOCK GEN.	CMOS	MN	SOIC	CSPI-R	24	48	210	0	
														28	48	300	0	
					CY2211ZC	99141	9919	619912991/	CLOCK GEN.	CMOS	MN	TSOP	PHIL-M	16	48	100	0	
															48	300	0	
															48	300	0	
															48	300	0	
	HTOL2	125C/3.8V	CPD	TTECH	CY2211SC	98377	9915	619909813/	CLOCK GEN.	CMOS	MN	SOIC	CSPI-R	24	48	117	0	
															48	250	0	
															48	300	0	
															48	300	0	
	PCT	121C/100%RH	CPD	TTECH	CY2211SC	98377	9915	619909813/	CLOCK GEN.	CMOS	MN	SOIC	CSPI-R	24	168	48	0	
					CY2211ZC	99141	9919	619912994	CLOCK GEN.	CMOS	MN	TSOP	PHIL-M	16	168	50	0	
	TC2	-65C TO 150C	CPD	TTECH	CY2211SC	98377	9915	619909813/	CLOCK GEN.	CMOS	MN	SOIC	CSPI-R	24	300	48	0	
					CY2211ZC	99141	9919	619912994	CLOCK GEN.	CMOS	MN	TSOP	PHIL-M		300	50	0	

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SRAM/LOGIC-R52H	HTS	165C/NO BIAS	MPD	COMDTY	CY62128V-ZIB	MR92033	9849	619815623	128K x 8	CMOS	MN	TSOP	KOREA-GQ	32	336 1000	45 45	0 0	
	PCT	121C/100%RH	MPD	COMDTY	CY62128V-ZIB	MR92030	9849	619815623	128K x 8	CMOS	MN	TSOP	KOREA-GQ	32	168	45	0	
	TC2	-65C TO 150C	MPD	COMDTY	CY62128V-ZIB	MR92031	9849	619815623	128K x 8	CMOS	MN	TSOP	KOREA-GQ	32	300	45	0	

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SRAM/LOGIC-R52LD	HAST	140/3.63V	MPD	COMDTY	CY62137VL-ZSIB	99075	9914	619907944	128K x 16	CMOS	MN	TSOP	CSPI-R	44	128	48	0	
		140c/3.63V	MPD	COMDTY	CY62137VL-ZSIB	99075	9910	619905577	128K x 16	CMOS	MN	TSOP	CSPI-R	44	128 256	48 48	0 0	
		140C/3.63V	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	128 256	48 48	0 2	1 Topside Crack/1 Unknown
	HTOL	150C/3.8V	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	48	1505	0	
															80	405	0	
							9910	619905577	128K x 16	CMOS	MN	TSOP	CSPI-R	44	48	1504	1	1 Unknown Cause
															80	396	0	
		150C/5.75V	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	1000	403	0	1 EOS
															2000	403	0	
	HTS	165C/NO BIAS	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	336	47	0	
															1000	47	0	
							9910	619905577	128K x 16	CMOS	MN	TSOP	CSPI-R	44	336	48	0	
															1000	48	0	
	HTSSL	150C/3.63V	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	80	9	0	
															80	71	0	
															168	80	0	
	LTOL	-30C/3.8V	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	500	45	0	
															1000	45	0	
	PCT	121C/100%RH	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	168	48	0	
															168	48	0	
	TC2	-65C TO 150C	MPD	COMDTY	CY62137VL-ZSIB	99075	9907	619903364	128K x 16	CMOS	MN	TSOP	CSPI-R	44	300	48	0	

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SRAM/LOGIC-R52LD	TC2	-65C TO 150C	MPD	COMDTY	CY62137VL-ZSIB	99075	9910	619905577	128K x 16	CMOS	MN	TSOP	CSPI-R	44	300	48	0	