

Cypress Semiconductor Product Qualification Report

**QTP # 162010 VERSION*B
March 2019**

CCG3 Device Family	
S8SPF-20/S8SPF20-NP Technology, Skywater	
CYPD3105*	3rd Generation Type-C and Power delivery microcontroller
CYPD3120*	
CYPD3121*	
CYPD3122*	
CYPD3123*	
CYPD3125*	
CYPD3126*	
CYPD3135*	

FOR ANY QUESTIONS ON THIS REPORT, PLEASE CONTACT
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PRODUCT QUALIFICATION HISTORY

QTP Number	Description of Qualification Purpose	Date
083401	Qualify SONOS S8DI-5R Technology in Skywater using PSoC 8C20066BC Krypton Device	Jan. 2009
162010	Qualify CCG3 Rev.*B /*C Silicon Mask Changes at Skywater using S8SPF-20/S8SPF20-NP Process	Dec. 2016
165005	Qualify CCG3 Rev.*D Silicon Mask Changes at Skywater using S8SPF-20/S8SPF20-NP Process	Jan. 2017

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: To qualify CCG3 Rev.*C/*D silicon mask changes at Skywater using S8SPF-20/S8SPF20-NP Process	
Marketing Part #:	CYPD3105/ CYPD3120/ CYPD3121/ CYPD3122/CYPD3123/CYPD3125/CYPD3126/ CYPD3135
Device Description:	3rd Generation Type-C and Power delivery microcontroller
Cypress Division:	Cypress Semiconductor – MCU and Connectivity Division (MCD)

TECHNOLOGY/FAB PROCESS DESCRIPTION			
Number of Metal Layers:	Proprietary	Metal Composition:	Proprietary
Passivation Type and Thickness:	Proprietary		
Generic Process Technology/Design Rule (μ -drawn):	Proprietary		
Gate Oxide Material/Thickness (MOS):	Proprietary		
Name/Location of Die Fab (prime) Facility:	Skywater		
Die Fab Line ID/Wafer Process ID:	S8SPF-20P		

PACKAGE AVAILABILITY

PACKAGE	ASSEMBLY FACILITY SITE	WIRE MATERIAL	QTP NUMBER
40-Lead QFN	CML-RA	0.8 mil CuPd	QTP# 155104
40-Lead QFN	ASE-Taiwan (G)	0.8 mil CuPd	QTP# 155106
42-Ball WLCSP	DT-Phils	-	QTP# 155107

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION

Package Designation:	LQ40A
Package Outline, Type, or Name:	Quad Flat No Lead (QFN), 6x6x0.6mm
Mold Compound Name/Manufacturer:	GE 7470LA/Nitto
Mold Compound Flammability Rating:	V-0 UL94
Oxygen Rating Index: >28%	54%
Lead Frame Designation:	Pre-plated PPF ASM+Hitachi Tape Roughened U-groove Die Paddle
Lead Frame Material:	Copper
Lead Finish, Composition / Thickness:	NiPdAu
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Saw Process
Die Attach Supplier:	Henkel
Die Attach Material:	QMI 519
Bond Diagram Designation	002-08170/002-08173
Wire Bond Method:	Thermosonic
Wire Material/Size:	0.8 mil (20um) /CuPd
Package Cross Section Yes/No:	No
Assembly Process Flow:	11-21099
Name/Location of Assembly (prime) facility:	CML-RA
MSL Level	3
Reflow Profile	260C

ELECTRICAL TEST / FINISH DESCRIPTION

Test Location:	CML-RA
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RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
Acoustic Microscopy	J-STD-020 Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow)	P
Age Bond Strength	200C, 4hrs MIL-STD-883, Method 883-2011	P
Data Retention	150°C, No Bias JESD22-A117 and JESD22-A103	P
Dynamic Latch-up	125°C, 8.5V JESD78	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V/1,000V/1,250V JESD22-C101	P
Electrostatic Discharge Human Body Model (ESD-HBM)	1,100V/2,200V /3,300V JESD22, Method A114	P
Electrostatic Discharge Machine Model (ESD-MM)	200V, 220V, 275V, 330V JESD22-A115	P
Endurance Test	MIL-STD-883, Method 883-1033/ JESD22-A117	P
High Accelerated Saturation Test (HAST)	JEDEC STD 22-A110: 130°C, 85% RH, 5.25V/5.5V Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow)	P
High Temperature Operating Life Early Failure Rate	Dynamic Operating Condition, Vcc Max=2.1V/2.27V, 150°C JESD22-A-108	P
High Temperature Operating Life Early Failure Rate, Regulator On	Dynamic Operating Condition, Vcc Max=5V, 125°C/150°C JESD22-A-108	P
High Temperature Operating Life Latent Failure Rate	Dynamic Operating Condition, Vcc Max=2.1V/2.27V, 150°C JESD22-A-108	P
High Temperature Steady State life	Static Operating Condition, Vcc Max=2.1V, 150°C JESD22-A-108	P
Low Temperature Operating Life	Dynamic Operating Condition, -30°C, 2.1V JESD22-A108	P
Low Temperature Storage Life	-40°C, No Bias	P
Pre/Post LFR AC/DC Char	AC/DC Critical Parameter Char at LFR 0hr,500hrs	P
Pressure Cooker	JESD22-A102:121°C /100%RH, 15 PSIG Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow)	P
SEM Analysis	MIL-STD-883, Method 2018	P
Static Latch-up	85C/125C, +/-140mA 85C, +/- 200mA 125C,+/-100mA JESD 78	P
Temperature Cycle	MIL-STD-883, Method 1010, Condition C, -65°C to 150°C Precondition: JESD22 Moisture Sensitivity Level (192 Hrs., 30 °C, 60% RH, 260°C Reflow)	P

RELIABILITY FAILURE RATE SUMMARY

Stress/Test	Device Tested/ Device Hours	# Fails	Activation Energy	Thermal AF ³	Failure Rate
High Temperature Operating Life Early Failure Rate	3,012 Devices	0	N/A	N/A	0 PPM ⁽¹⁾
High Temperature Operating Life Long Term Failure Rate	722,900 DHRs	0	0.7	170	7 FIT ⁽²⁾

¹ Assuming an ambient temperature of 55°C and a junction temperature rise of 15°C.

² Chi-squared 60% estimations used to calculate the failure rate.

³ 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 = 8.62×10^{-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.

(1) Early Failure Rate was computed from QTP# 162010

(2) Long Term Failure Rate was computed from QTP# 083401 and QTP# 162010

Reliability Test Data
QTP #: 083401

<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>
STRESS: ACOUSTIC, MSL3							
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA COMP		15	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA COMP		15	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA COMP		15	0	
STRESS: AGE BOND STRENGTH							
CY8C20566 (8C20566AC)	4827949	610844164	CML-R COMP		3	0	
CY8C20466 (8C20466AC)	4804681	610822808	Malaysia-CA COMP		3	0	
CY8C20666 (8C20666AC)	4836589	610852813	Malaysia-CA COMP		3	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	500	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	1000	77	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	500	78	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	1000	78	0	
CY8C20566 (8C20566AC)	4836589	610851914	CML-R	500	78	0	
CY8C20566 (8C20566AC)	4836589	610851914	CML-R	1000	78	0	
STRESS: ENDURANCE							
CY8C20566 (8C20566AC)	4810486	610830786	CML-R	168	77	0	
CY8C20566 (8C20566AC)	4815537	610835437	CML-R	168	77	0	
CY8C20566 (8C20566AC)	4827949	610844164	CML-R	168	79	0	
CY8C20566 (8C20566AC)	4835945	610848270	CML-R	168	78	0	
CY8C20566 (8C20566AC)	4836589	610851914	CML-R	168	76	0	
STRESS: ESD-CHARGE DEVICE MODEL, (500V)							
CY8C20566 (8C20566AC)	4810486	610830371	CML-R	500	9	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	500	9	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	500	9	0	
STRESS: SEM CROSS SECTION							
CY8C20066 (8C20066AC)	4810486	N/A	N/A	COMP	1	0	
CY8C20666 (8C20666AC)	4837410	410.23.02	Promex	COMP	6	0	

Reliability Test Data

QTP #: 083401

<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>
STRESS: STATIC LATCH-UP (85C, 8.25V, +/-200mA)							
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA COMP		6	0	
CY8C20666 (8C20666AC)	4836589	610852813	Malaysia-CA COMP		6	0	
STRESS: ESD-HUMAN BODY CIRCUIT PER JESD22, METHOD A114, (2,200V)							
CY8C20566 (8C20566AC)	4810486	610830371	CML-R	2200	8	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	2200	8	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	2200	8	0	
STRESS: ESD-HUMAN BODY CIRCUIT PER JESD22, METHOD A114, (3,300V)							
CY8C20566 (8C20566AC)	4810486	610830371	CML-R	3300	3	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	3300	3	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	3300	3	0	
STRESS: ESD-MACHINE MODEL, (200V)							
CY8C20236A (8C202662A)	4126494	611143319	KOREA-L	200	5	0	
CY8C20236A (8C202662A)	4125077	611143627	PHIL-MB	200	5	0	
STRESS: ESD-MACHINE MODEL, (220V)							
CY8C20566 (8C20566AC)	4810486	610830371	CML-R	220	6	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	220	6	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	220	6	0	
STRESS: ESD-MACHINE MODEL, (275V)							
CY8C20566 (8C20566AC)	4810486	610830371	CML-R	275	3	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	275	3	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	275	3	0	
STRESS: ESD-MACHINE MODEL, (330V)							
CY8C20566 (8C20566AC)	4810486	610830371	CML-R	330	3	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	330	3	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	330	3	0	
STRESS: DYNAMIC LATCH-UP (125C, 8.5V)							
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA COMP		5	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA COMP		5	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA COMP		5	0	

Reliability Test Data

QTP #: 083401

<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>
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, 2.1V, Vcc Max)							
CY8C20566 (8C20566AC)	4827949	610844164	CML-R	48	1002	0	
CY8C20566 (8C20566AC)	4815537	610835437	CML-R	48	1008	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	48	1004	1	Read NV Latch (1)
CY8C20466 (8C20466AC)	4836589	610851747	Malaysia-CA	48	1004	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE REGULATOR ON (150, 5V, Vcc Max)							
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	48	45	0	
CY8C20566 (8C20566AC)	4835945	610848270	CML-R	48	45	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE REGULATOR ON (125C, 5V, Vcc Max)							
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	96	45	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.1V, Vcc Max)							
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	80	390	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	500	390	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	80	390	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	500	390	0	
CY8C20466 (8C20466AC)	4836589	610851747	Malaysia-CA	80	390	0	
CY8C20466 (8C20466AC)	4836589	610851747	Malaysia-CA	500	390	0	
STRESS: HIGH TEMP STEADY STATE LIFE TEST (150C, 2.1V)							
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	80	77	0	
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	168	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	80	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	168	77	0	
CY8C20566 (8C20566AC)	4835945	610848270	CML-R	80	77	0	
CY8C20566 (8C20566AC)	4835945	610848270	CML-R	168	77	0	
STRESS: LOW TEMPERATURE DYNAMIC OPERATING LIFE, -30C, 2.1V							
CY8C20566 (8C20566AC)	4815537	610835437	CML-R	500	77	0	
CY8C20566 (8C20566AC)	4835945	610848270	CML-R	500	77	0	

(1) Destroyed during failure analysis

Reliability Test Data

QTP #: 083401

<i>Device</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Lot</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.25V), PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	128	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	128	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	256	77	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	128	77	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	168	77	0	
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	333	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	168	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	288	77	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	168	77	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	288	77	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	500	77	0	
CY8C20466 (8C20466AC)	4810486	610828990	Malaysia-CA	1000	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	500	77	0	
CY8C20466 (8C20466AC)	4815537	610834184	Malaysia-CA	1000	77	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	500	77	0	
CY8C20466 (8C20466AC)	4835945	610847274	Malaysia-CA	1000	77	0	



Reliability Test Data

ER #: 114031

<i>Device</i>	<i>Fab Lot #</i>	<i>Assy Lot #</i>	<i>Assy Lot</i>	<i>Duration</i>	<i>Samp</i>	<i>Rej</i>	<i>Failure Mechanism</i>
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STRESS: LOW TEMPERATURE STORAGE, -40C, No Bias

CY8C20236A (8C202662A)	4137730	611155459	L-KOREA	1000	100	0	
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Reliability Test Data

QTP #: 162010

<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>
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C4248LQI (8CP42488A)	4511217	611518965	CML-RA	500	80	0	
CY8C4248LQI (8CP42488A)	4511217	611518965	CML-RA	1000	80	0	
STRESS: ENDURANCE							
CY8C4248LQI (8CP42488A)	4511217	611518965	CML-RA	168	82	0	
CY8C4248LQI (8CP42488A)	4511217	611518965	CML-RA	500	82	0	
CY8C4248LQI (8CP42488A)	4518732	611528802	CML-RA	168	84	0	
CY8C4248LQI (8CP42488A)	4518732	611528802	CML-RA	500	84	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYPD3120 (7CP64300A)	4548640	611543017	CML-RA	500	9	0	
CYPD3120 (7CP64300A)	4548640	611543017	CML-RA	1000	3	0	
CYPD3120 (7CP64300A)	4548640	611543017	CML-RA	1250	3	0	
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	500	9	0	
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	1000	3	0	
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	1250	3	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	500	9	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	1000	3	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	1250	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	1100	3	0	
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	2200	8	0	
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	3300	3	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	1100	3	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	2200	8	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	3300	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, 2.27V, Vcc Max)							
CYPD3135 (7CP64301E)	4631824	611634451	CML-RA	48	1503	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	48	1509	0	

Reliability Test Data

QTP #: 162010

<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>
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.27V, Vcc Max)							
CYPD3135 (7CP64301E)	4631824	611634451	CML-RA	80	130	0	
CYPD3135 (7CP64301E)	4631824	611634451	CML-RA	500	120	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	80	120	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	500	135	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)							
CYPD3120 (7CP64300A)	4548640	611602235	CML-RA	96	24	0	
CYPD3120 (7CP64300A)	4548640	611602235	CML-RA	192	24	0	
CYPD3120 (7CP64300A)	4548640	611602237	CML-RA	96	80	0	
STRESS: LOW TEMPERATURE OPERATING LIFE, -30C							
CYPD3120 (7CP64300A)	4548640	611543017	CML-RA	500	79	0	
CYPD3120 (7CP64300A)	4548640	611543017	CML-RA	1000	78	0	
STRESS: PRE/POST LFR CRITICAL PARAMETERS							
CYPD3135 (7CP64301E)	4631824	611634451	CML-RA	0	10+2	0	
CYPD3135 (7CP64301E)	4631824	611634451	CML-RA	500	10+2	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	0	10+2	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	500	10+2	0	
STRESS: STATIC LATCH-UP (85C, 8.25/2.92/24V, +/-140mA)							
CYPD3120 (7CP64300A)	4548640	611543017	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 8.25/2.92/24V, +/-140mA)							
CYPD3120 (7CP64300A)	4548640	611543017	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (125C 8.25/2.93/24V, +/-100mA)							
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	COMP	3	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	COMP	6	0	
STRESS: STATIC LATCH-UP (125C, 9.10/3.22/24V, +/-140mA)							
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	COMP	2	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	COMP	2	0	
STRESS: STATIC LATCH-UP (85C, 9.10/3.22/24V, +/-140mA)							
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	COMP	2	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	COMP	2	0	

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Reliability Test Data

QTP #: 162010

<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>
STRESS: STATIC LATCH-UP (85C, 9.10/3.22/24V, +/-200mA)							
CYPD3120 (7CP64300B)	4611639	611612692	CML-RA	COMP	2	0	
CYPD3135 (7CP64301E)	4637598	611636462	CML-RA	COMP	2	0	

Reliability Test Data

QTP #: 165005

<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>
YIELD: SORT							
7C64300HC	4644005	N/A	N/A	COMP			EQUIVALENT
YIELD: E-TEST							
7C64300HC	4644005	N/A	N/A	COMP			EQUIVALENT
YIELD: CLASS							
7CP64301HC	4644005	611701893	CML-RA	COMP			EQUIVALENT
7CP64300HC	4644005	611701895	CML-RA	COMP			EQUIVALENT



Document History Page

Document Title: QTP# 162010: CCG3 DEVICE FAMILY, S8SPF-20/S8SPF20-NP TECHNOLOGY, FAB 4 CMI
Document Number: 002-18228

Rev.	ECN No.	Orig. of Change	Description of Change
**	5557176	JYF	Initial spec release.
*A	5614484	JYF	Added CCG3 Rev.*D silicon qualification data (QTP# 165005).
*B	6513262	HSTO	Update Cypress logo Update Contact Person for Principal Reliability Update "TECHNOLOGY/FAB PROCESS DESCRIPTION" table Update "MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION" table Replaced "Fab4/CMI" with Skywater