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AN INFINEON TECHNOLOGIES COMPANY

Cypress Semiconductor
Product Qualification Report

QTP# 174005 VERSION *F
May 2022

PSoC 6 BLE Device Family	
CY8C62X7XX **CY8C63X6XX** **CY8C63X7XX** **CY8C62X6FDXX** **CY8C61X6FDXX** **CY8C61X7FDXX**	**Programmable System-On-Chip (PSoC®)**

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PRODUCT QUALIFICATION HISTORY

Qual Report	Description of Qualification Purpose	Date Comp
180606	Qualification of PSoC6A-BLE2 device (8CS4000A 1.8V) family using an ultra low-power 40-nm platform.	Feb 18
174005	Qualification of PSoC6A-BLE2 device (8CS4000A 3.3V) family using an ultra low-power 40-nm platform	May 18
181002	Qualification of PSoC6A-BLE2 device family using an ultra low-power 40-nm platform (8CS4000B)	Apr 18
183603	Qualification of PSoC6A-BLE2 device family using an ultra low-power 40-nm platform (8CS4000C)	Apr 19

PRODUCT DESCRIPTION	
Qualification of PSoC6A-BLE2 device family using an ultra low-power 40-nm platform	
Marketing Part #:	CY8C63XX
Device Description:	Industrial Programmable System on a Chip ultra-low-power 40-nm platform
Cypress Division:	Cypress Semiconductor Corporation – MCU and Connectivity Division (MCD)

TECHNOLOGY/FAB PROCESS DESCRIPTION			
Number of Metal Layers:	Proprietary	Metal Composition:	Proprietary
Passivation Type and Materials:			Proprietary
Generic Process Technology/Design Rule:			Proprietary
Gate Oxide Material/Thickness (MOS):			Proprietary
Name/Location of Die Fab (prime) Facility:			UMC, Taiwan SMIC, China
Die Fab Line ID/Wafer Process ID:			S40S-ULP

PACKAGE AVAILABILITY

PACKAGE	ASSEMBLY FACILITY SITE	QTP NUMBER
104-ball M-WLCSP(3.841x5.00x0.65mm)	Stats ChipPAC-Singapore (HS)	174601
116-ball BGA (6.4x5.2x0.7mm)	ASEK-Taiwan (G)	180704
80-ball WLCSP (3.676x3.19x0.467mm)	ASEK-Taiwan (AH)	181107
124-ball BGA (9x9x1.0mm)	Bangkok-Thailand (SB)	182408
124-ball BGA (9x9x1.0mm)	ASEK-Taiwan (G)	183003
116-ball BGA (6.4x5.2x0.7mm)	Bangkok-Thailand (SB)	184004
80-ball WLCSP (3.676x3.19x0.33mm)	ASEK-Taiwan (AH)	183303

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	FM104
Package Outline, Type, or Name:	104-Ball Molded Wafer Level Chip Scale Package (M-WLCSP) (3.841x5.00x0.65mm)
Die Backside Preparation Method:	Backgrind
Die Separation Method:	Laser Grooving + Wafer Saw
Solder Ball/Bump Material:	SAC-405
Bonding Method:	RDL routing
Bond Diagram Designation:	002-20113
Thermal Resistance Theta JA °C/W:	33.7 C/W
Package Cross Section Yes/No:	Yes
Assembly Process Flow:	002-22489M
Name/Location of Assembly (prime) facility:	Stats ChipPAC-Singapore (HS)
MSL Level	1
Reflow Profile	260C

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Stats ChipPAC-Singapore (HS)

Note: Please contact a Cypress Representative for other packages availability.

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	BZ116
Package Outline, Type, or Name:	116-BGA 6.4x5.2x0.7mm
Mold Compound Name/Manufacturer:	KE-G1250LKDS / Kyocera
Mold Compound Flammability Rating:	UL04 V0
Mold Compound Alpha Emission Rate:	N/A
Oxygen Rating Index: >28%	54 (typical) / 28 (Min. value)
Lead Frame Designation:	N/A
Lead Frame Material:	N/A
Substrate Material:	BT resin
Lead Finish, Composition / Thickness:	SAC105
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	Sawing
Die Attach Supplier:	Die1: Henkel / Die2: Hitachi
Die Attach Material:	Die1: ATB-125 / Die2: FH-SC13T-HR5104
Bond Diagram Designation	002-21655
Wire Bond Method:	Ultrasonic
Wire Material/Size:	Au / 0.8mil (20um)
Package Cross Section Yes/No:	Yes
Assembly Process Flow:	49-41999
Name/Location of Assembly (prime) facility:	ASEK-Taiwan (G)
MSL LEVEL	3
REFLOW PROFILE	260C

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	Cypress Thailand Limited (SB)

Note: Please contact a Cypress Representative for other packages availability.

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENT

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate (EFR)	Dynamic Operating Condition, 150°C, Vcc max, 48 Hours JESD22-A-108-B	P
High Temperature Operating Life Early Failure Rate (EFR) - Regulator On	Dynamic Operating Condition, 150°C, Vcc max, 48 Hours JESD22-A-108-B	P
High Temperature Operating Life Latent Failure Rate (LFR)	Dynamic Operating Condition, 150°C, Vcc max, 500 Hours JESD22-A-108-B	P
Low Temperature Operating Life	-30°C, Vcc max	P
Endurance	Per datasheet(100,000 Cycling), JESD22-A117	P
Data Retention	JESD22-A117 and JESD22-A103, 150C, 1000 Hours	P
Temperature Cycle	MIL-STD-883, Method 1010, Condition B, -55°C to 125°C Precondition: JESD22 Moisture Sensitivity MSL 1 (168 Hrs.,85°C, 85%RH, 260°C Reflow)	P
High Accelerated Saturation Test (HAST)	JEDEC STD 22-A110: 130°C, 85%RH, 3.63V Precondition: JESD22 Moisture Sensitivity MSL 1 (168 Hrs.,85°C, 85%RH, 260°C Reflow)	P
High Accelerated Saturation Test (HAST) – Unbiased	JEDEC STD 22-A110: 130°C, 85%RH Precondition: JESD22 Moisture Sensitivity MSL 1 (168 Hrs.,85°C, 85%RH, 260°C Reflow)	P
Electrostatic Discharge Human Body Model (ESD-HBM)	2200V JESD22-A114E	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V (All pins except RF pin) JESD22-C101C 200V (RF pin) JESD22-C101C	P
Static Latch-up	± 140mA, 125C/85°C, JESD78	P
Neutron Emission (SER)	JESD89	P
Neutron Single Latch-up (SEL)	JESD89	P
Age Bond Strength	200C, 4hrs MIL-STD-883, Method 883-2011	P
Acoustic (M1)	J-STD-020 Precondition: JESD22 Moisture Sensitivity MSL 1 (168 Hrs.,85°C, 85%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	11,139 Devices	0	N/A	N/A	0 PPM
High Temperature Operating Life[1,2] Long Term Failure Rate	752,180 Device Hours	0	0.7	170	7 FIT

1. EFR devices number is based on QTP#180606 and QTP#174005 EFR data.
2. LFR device hours are based on QTP#180606 and QTP#174005 LFR data.

[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.

Reliability Test Data

QTP #: 180606

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ACOUSTIC, MSL1							
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	COMP	22	0	
CY8C6347FMI (8CS40002AO)	9720019	611729541	STATS-HS	COMP	22	0	
CY8C6347FMI (8CS40002AO)	9722030	611730077	STATS-HS	COMP	22	0	
STRESS: AGED BOND							
CY8C637BZI (8CPS40000AO)	9645012	611711033	BKK-SB	COMP	3	0	
CY8C637BZI (8CPS40000AO)	9645012	611714725	BKK-SB	COMP	3	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	500	80	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	1000	80	0	
CY8C6247BZI (8CPS40000AO)	9720018	611727955	BKK-SB	500	80	0	
CY8C6247BZI (8CPS40000AO)	9720018	611727955	BKK-SB	1000	80	0	
CY8C6247BZI (8CPS40000AO)	9720019	611729151	BKK-SB	500	80	0	
CY8C6247BZI (8CPS40000AO)	9720019	611729151	BKK-SB	1000	80	0	
CY8C6247BZI (8CPS40000AO)	9722030	611730528	BKK-SB	500	87	0	
CY8C6247BZI (8CPS40000AO)	9722030	611730528	BKK-SB	1000	87	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE REG ON (150, Vcc Max)							
CY8C637BZI (8CPS40000AO)	9720018	611727954	BKK-SB	48	51	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, Vcc Max)							
CY8C637BZI (8CS40004AO)	9732020	611743596	BKK-SB	48	1521	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	48	1517	0	
CY8C6347BZI (8CS40004AO)	9720018	611727954	BKK-SB	48	1052	0	
CY8C6347BZI (8CS40004AO)	9720018	611729150	BKK-SB	48	1074	0	
CY8C6347BZI (8CS40004AO)	9722030	611730529	BKK-SB	48	1081	0	

Reliability Test Data

QTP #: 180606

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ENDURANCE							
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	168	181	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	168	85	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	500	85	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	168	80	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	500	80	0	
CY8C6347BZI (8CS40004AO)	9722030	611730529	BKK-SB	168	127	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	500	9	0	
CY8C637BZI (8CS40004AO)	9732020	611743596	BKK-SB	500	9	0	
CY8C637BZI (8CS40004AO)	9732020	611743596	BKK-SB	750	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	500	9	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	750	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	1000	3	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	500	9	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	750	3	0	
STRESS: ESD-CHARGE DEVICE MODEL (RF PIN)							
CY8C6347BZI (8CS40004AO)	9742301	611744915	BKK-SB	200	50	0	
CY8C6347FMI (8CS40002AO)	9731032	611745550	STATS-HS	200	50	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	1100	3	0	
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	2200	8	0	
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	3300	3	0	
CY8C6347FMI (8CS40002AO)	9742301	611744914	STATS-HS	1100	3	0	
CY8C6347FMI (8CS40002AO)	9742301	611744914	STATS-HS	2200	8	0	
CY8C6347FMI (8CS40002AO)	9742301	611744914	STATS-HS	3300	3	0	

Reliability Test Data

QTP #: 180606

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	1100	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	2200	8	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	3300	3	0	
STRESS: UNBIASED HI-ACCEL SATURATION TEST (130C, 85%RH), PRE COND 168 HR 85C/85%RH (MSL1)							
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	96	80	0	
CY8C6347FMI (8CS40002AO)	9742301	611744914	STATS-HS	96	80	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	96	80	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	192	80	0	
CY8C6347FMI (8CS40002AO)	9722030	611730077	STATS-HS	96	80	0	
CY8C6347FMI (8CS40002AO)	9722030	611730077	STATS-HS	192	80	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 3.63V), PRE COND 168 HR 85C/85%RH (MSL1)							
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	96	30	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	192	30	0	
CY8C6347FMI (8CS40002AO)	9720019	611729541	STATS-HS	96	29	0	
CY8C6347FMI (8CS40002AO)	9720019	611729541	STATS-HS	192	28	0	
CY8C6347FMI (8CS40002AO)	9722030	611730077	STATS-HS	96	30	0	
CY8C6347FMI (8CS40002AO)	9722030	611730077	STATS-HS	192	29	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, Vcc Max)							
CY8C637BZI (8CS40004AO)	9732020	611743596	BKK-SB	80	120	0	
CY8C637BZI (8CS40004AO)	9732020	611743596	BKK-SB	500	156	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	500	147	0	
CY8C6347BZI (8CS40004AO)	9720018	611727954	BKK-SB	80	136	0	
CY8C6347BZI (8CS40004AO)	9720018	611727954	BKK-SB	500	121	0	
CY8C6347BZI (8CS40004AO)	9720018	611729150	BKK-SB	80	140	0	
CY8C6347BZI (8CS40004AO)	9720018	611729150	BKK-SB	500	115	0	
CY8C6347BZI (8CS40004AO)	9722030	611730529	BKK-SB	80	142	0	
CY8C6347BZI (8CS40004AO)	9722030	611730529	BKK-SB	500	125	0	

Reliability Test Data

QTP #: 180606

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: LOW TEMPERATURE OPERATING LIFE, -30C, Vcc Max							
CY8C6347BZI (8CS40004AO)	9720018	611727954	BKK-SB	500	38	0	
CY8C6347BZI (8CS40004AO)	9720018	611727954	BKK-SB	1000	38	0	
STRESS: SOFT ERROR TEST-NEUTRON/PROTON/SEL							
CY8C68237	N/A	N/A	N/A	COMP	3	0	
STRESS: SOFT ERROR TEST-ALPHA-PATICLE/SEL							
CY8C68237	N/A	N/A	N/A	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	3	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	COMP	2	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	2	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C68237FM (8CS40002AO)	9732020	611743592	STATS-HS	COMP	2	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	2	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C6347FMI (8CS40002AO)	9732020	611743592	STATS-HS	COMP	2	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	2	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	COMP	3	0	

Reliability Test Data

QTP #: 180606

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: TC COND. B -55C TO 125C, PRE COND 168 HRS 85C/85%RH, MSL1							
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	500	80	0	
CY8C6347FMI (8CS40002AO)	9720018	611726415	STATS-HS	1000	80	0	
CY8C6347FMI (8CS40002AO)	9720019	611729541	STATS-HS	500	80	0	
CY8C6347FMI (8CS40002AO)	9720019	611729541	STATS-HS	1000	80	0	
CY8C6347FMI (8CS40002AO)	9722030	611730077	STATS-HS	500	78	0	
CY8C6347FMI (8CS40002AO)	9722030	611730077	STATS-HS	1000	78	0	

Reliability Test Data

QTP #: 174005

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	500	80	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	1000	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	148	80	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	279	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, Vcc Max)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	48	234	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	48	349	0	
CY8C6247BZI (8CPS40000AO)	9735025	611748458	BKK-SB	48	548	0	
CY8C6247BZI (8CPS40000AO)	9731032	611747826	BKK-SB	48	725	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	48	1521	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	48	1517	0	
STRESS: ENDURANCE (100k)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	CYCLING	85	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	168	85	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	500	85	0	
CY8C6247BZI (8CPS40000AO)	9732020	N/A	BKK-SB	CYCLING	181	0	
CY8C6247BZI (8CPS40000AO)	9732020	N/A	BKK-SB	168	181	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	CYCLING	80	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	168	80	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	500	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	500	9	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	750	3	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	1000	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	500	9	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	750	3	0	

Reliability Test Data

QTP #: 174005

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	500	9	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	750	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	1000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	1100	3	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	2200	8	0	
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	3300	3	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	1100	3	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	2200	8	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	3300	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	1100	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	2200	8	0	
CY8C6347BZI (8CS40004AO)	9742301	611744915	BKK-SB	1100	3	0	
CY8C6347BZI (8CS40004AO)	9742301	611744915	BKK-SB	2200	8	0	
CY8C6347BZI (8CS40004AO)	9742301	611744915	BKK-SB	3300	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	1100	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	2200	8	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	3300	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, Vcc Max)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	500	7	0	
CY8C6247BZI (8CPS40000AO)	9742301	611744913	BKK-SB	500	29	0	
CY8C6247BZI (8CPS40000AO)	9735025	611748458	BKK-SB	500	249	0	
CY8C6247BZI (8CPS40000AO)	9731032	611747826	BKK-SB	500	249	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	500	156	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	500	147	0	

Reliability Test Data

QTP #: 174005

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	3	0	
CY8C68237FM (8CS40002AO)	9742301	611744914	STATS-HS	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	2	0	
CY8C68237FM (8CS40002AO)	9742301	611744914	STATS-HS	COMP	2	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	2	0	
CY8C68237FM (8CS40002AO)	9742301	611744914	STATS-HS	COMP	2	0	
STRESS: STATIC LATCH-UP (85C, 200mA)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9735025	611748457	BKK-SB	COMP	2	0	
STRESS: STATIC LATCH-UP (85C, 300mA)							
CY8C6247BZI (8CPS40000AO)	9732020	611743595	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004AO)	9732020	611743596	BKK-SB	COMP	3	0	
CY8C68237FM (8CS40002AO)	9742301	611744914	STATS-HS	COMP	2	0	

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Reliability Test Data

QTP #: 181002

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
YIELD: E-TEST							
CY8C6247	9803008	N/A	N/A	COMP	EQUIVALENT		
YIELD: SORT							
CY8C6247	9803008	N/A	N/A	COMP	EQUIVALENT		
YIELD: CLASS							
CY8C6347BZI (8CS40004BO)	9803008	611810226	BKK-SB	COMP	EQUIVALENT		
CY8C6247BZI (8CPS40000BO)	9803008	611810206	BKK-SB	COMP	EQUIVALENT		

Reliability Test Data

QTP #: 183603

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
YIELD: E-TEST							
CY8C6247	9844020	N/A	N/A	COMP	EQUIVALENT		
YIELD: SORT							
CY8C6247	9844020	N/A	N/A	COMP	EQUIVALENT		
YIELD: CLASS							
CY8C6347BZI (8CPS40000CO)	9844020	611904779	BKK-SB	COMP	EQUIVALENT		
CY8C6247BZI (8CS40004CO)	9844020	611904778	BKK-SB	COMP	EQUIVALENT		
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	500	9	0	
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	500	9	0	
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	750	3	0	
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	750	3	0	
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	1000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	1100	9	0	
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	1100	9	0	
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	2200	3	0	
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	2200	3	0	
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	3300	3	0	
STRESS: STATIC LATCH-UP (125C, 100mA)							
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	COMP	3	0	
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140mA)							
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	COMP	2	0	
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	COMP	2	0	
STRESS: STATIC LATCH-UP (85C, 140mA)							
CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	COMP	2	0	
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	COMP	2	0	

Reliability Test Data

QTP #: 183603

STRESS: STATIC LATCH-UP (85C, 200Ma)

CY8C6247BZI (8CPS40000CO)	9844020	611904779	BKK-SB	COMP	2	0
CY8C6347BZI (8CS40004CO)	9844020	611904778	BKK-SB	COMP	2	0

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Document History Page

Document Title: QTP#174005: PSoC 6 BLE Device Family
Document Number: 002-23996

Rev.	ECN No.	Orig. of Change	Description of Change
**	6179071	HSTO	Initial spec release
*A	6199842	HSTO	Update MPN list in front page and stress data Added “80-ball WLCSP” package option in the package availability table Standardize naming for the assy location
*B	6298063	HSTO	Added “124-ball BGA” package option in the package availability table
*C	6375462	HSTO	Added “116-ball / 124-ball BGA” package option in the package availability table
*D	6395791	HSTO	Added Thin “80-ball WLCSP” package option in the package availability table
*E	6545417	HSTO	Added Reliability test result of QTP#183603
*F	7759661	HSTO	Added notes on CY logo Updated contact person Updated Marketing Part Number in cover page to include CY8C62X7XX