

Cypress Semiconductor Product Qualification Report

QTP#160301 VERSION*B
February 2017

Generation 6 Touch Screen (TSG6_XL) Product Family	
S8SPF-10P, Fab25	
CYTT41X CYTT42X	TrueTouch® Multi-Touch All-Points Touchscreen Controller

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

QTP Number	Description of Qualification Purpose	Date
151008	Qualification of S8* Technology in Fab25 Using TSG6M Device	Dec 2015
151403	Qualification of PSoC4A Device, S8PF-10R Technology in Fab25	Dec 2015
151303	Qualification of Streetfighter Device, S8PF-10R Technology in Fab25	Dec 2015
160401	Qualification of FingerPrint1 Device, S8PFHD-10R Technology in Fab25	May 2016
160301	Qualification of TSG6_XL Device, S8SPF-10P Technology in Fab25	June 2016

PRODUCT DESCRIPTION (for qualification)

Qualification Purpose: Qualification of TSG6_XL Device, S8SPF-10P Technology in Fab25	
Marketing Part #:	CYTT41X / CYTT42X
Device Description:	5V, Industrial Programmable System on a Chip
Cypress Division:	Cypress Semiconductor Corporation – Programmable System Division (PSD)

TECHNOLOGY/FAB PROCESS DESCRIPTION

Number of Metal Layers:	5	Metal Composition:	Metal 1: 150A Ti/ 250 Ti/TiN Graded / 3200Al 0.5%Cu / 650A Ti/TiN Graded Metal 2: 150A Ti/ 250 Ti/TiN Graded / 3200Al- 0.5%Cu / 650A Ti/TiN Graded Metal 3: 150A Ti/ 250 Ti/TiN Graded / 7200Al- 0.5%Cu / 650A Ti/TiN Graded Metal 4: 150A Ti/ 250 Ti/TiN Graded / 7200Al- 0.5%Cu / 650A Ti/TiN Graded Metal 5: 150A Ti/ 250 Ti/TiN Graded / 12000Al- 0.5%Cu /650A Ti/Ti N Graded
Passivation Type and Thickness:	1K Oxide / 6K Nitride		
Generic Process Technology/Design Rule (μ -drawn):	S8SPF-10		
Gate Oxide Material/Thickness (MOS):	SiO ₂ / 32A / 120A		
Name/Location of Die Fab (prime) Facility:	Cypress, Fab 25		
Die Fab Line ID/Wafer Process ID:	Fab25 / S8PF-10		

ALTERNATIVE FAB FACILITY SITE

FAB SITE	LOCATION	QTP NUMBER
Fab 9	HHGrace1 China	152605

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	AZ100
Package Outline, Type, or Name:	TQFP 100L (14x14x1.4mm)
Mold Compound Name/Manufacturer:	KE-G6000DA / Kyocera
Mold Compound Flammability Rating:	UL-94: V-0
Mold Compound Alpha Emission Rate:	N/A (not low alpha mold compound)
Oxygen Rating Index: >28%	None
Lead Frame Designation:	RMP (slotted design)
Lead Frame Material:	Copper
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	NiPdAu
Die Backside Preparation Method/Metallization:	Backgrind
Die Separation Method:	100% Saw thru
Die Attach Supplier:	Henkel
Die Attach Material:	QMI-509
Bond Diagram Designation	001-51511
Wire Bond Method:	Thermosonic
Wire Material/Size:	Au / 0.8 mil
Thermal Resistance Theta JA °C/W:	31 C/W
Package Cross Section Yes/No:	N/A
Assembly Process Flow:	001-48855
Name/Location of Assembly (prime) facility:	CML-R
MSL LEVEL	3
REFLOW PROFILE	260C

PACKAGE AVAILABILITY

PACKAGE	WIRE MATERIAL	ASSEMBLY SITE	QTP NUMBER
111Ufbga	CuPd	ASEK-TAIWAN (G)	153204

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	ASEK-Taiwan (G)

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate (EFR)	Dynamic Operating Condition, 150°C, 2.07V, 48 Hours JESD22-A-108-B	P
High Temperature Operating Life Latent Failure Rate (LFR)	Dynamic Operating Condition, 150°C, 2.07V, 500 Hours JESD22-A-108-B	P
Low Temperature Operating Life	-40°C	P
Endurance	Per datasheet, JESD22-A117	P
Data Retention	JESD22-A117 and JESD22-A103, 150C, 1000 Hours	P
Temperature Cycle	-65°C to 150°C, JESD22-A-104, 500 Cycles / 1000Cycles Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
High Accelerated Saturation Test (HAST)	130C, 5.5V, 85%RH, JESD22-A-110-B, 96 Hours Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Pressure Cooker	121C/100%RH, JESD22-A102-C, 168 Hours Precondition: JESD22 Moisture Sensitivity Level 3 192 Hrs, 30C/60%RH+3IR-Reflow, 260°C+0, -5°C	P
Electrostatic Discharge Human Body Model (ESD-HBM)	2200V, 3300V, JESD22-A114E	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	500V,750V, 1000V JESD22-C101C	P
Static Latch-up	± 140Ma, 125C/85°C, JESD78	P
Acoustic (M3)	J-STD-020	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	3,622 Devices	1	N/A	N/A	237 PPM 1
High Temperature Operating Life Long Term Failure Rate	287,500	0	0.7	170	19 FIT 2

1. EFR devices number is based on QTP#160301 EFR data.

2. LFR device hours are based on QTP#151008, QTP#151403, QTP#151303 and QTP#160301 LFR data.

3 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 #: 151008

<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							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	15	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	15	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	80	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1000	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1000	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	76	80	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	152	79	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	76	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	152	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	76	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150, 2.07V, Vcc Max)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	48	1490	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	48	1510	0	
CYTT214032 (8CP206101)	4545249	611537364	CML-RA	48	1547	0	
STRESS: ENDURANCE							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	168	78	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	78	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	168	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	168	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	9	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	750	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1000	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1250	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1500	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1750	3	0	



Reliability Test Data

QTP #: 151008

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS: ESD-CHARGE DEVICE MODEL							
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	9	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	750	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1000	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1250	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1500	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1750	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	9	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	750	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1000	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1250	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1500	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1750	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1100	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	2200	8	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	3300	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	4000	3	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	5000	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	1100	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	2200	8	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	3300	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	4000	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1100	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	2200	8	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	3300	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	4000	3	0	
STRESS: HI-ACCEL SATURATION TEST (130C, 85%RH, 5.5V), PRE COND 192 HR 30C/60%RH (MSL3)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	96	30	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	96	30	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	80	116	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	116	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	80	120	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	120	0	

Reliability Test Data

QTP #: 151008

<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: LOW TEMPERATURE OPERATING LIFE, -40C							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	160	40	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	380	40	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	168	75	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	168	78	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	168	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	288	80	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	10+2	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	10+2	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	10+2	0	
STRESS: STATIC LATCH-UP (85C, 140Ma)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	6	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	6	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	6	0	
STRESS: STATIC LATCH-UP (85C, 200Ma)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300Ma)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	3	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	COMP	3	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	COMP	3	0	
STRESS: SEM CROSS SECTION							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	1	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	500	80	0	
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	1000	80	0	
CYTT214032 (8CP206101)	4540145	611534709	CML-RA	500	80	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	500	79	0	
CY8C42452 (8CP44200)	4537464	611531543	CML-RA	1000	79	0	
STRESS: THERMAL JUNCTION MEASUREMENT							
CYTT214032 (8CP206101)	4539372	611534008	CML-RA	COMP	1	0	

Reliability Test Data

QTP #: 151403

<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							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	76	80	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	48	1510	0	
STRESS: ENDURANCE							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	168	80	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	9	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	750	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1000	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1250	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1500	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1750	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	2000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1100	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	2200	8	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	3300	3	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	4000	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	80	120	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	120	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	168	80	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	288	80	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	10+2	0	
STRESS: STATIC LATCH-UP (85C, 140Ma)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	6	0	
STRESS: STATIC LATCH-UP (85C, 200Ma)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140Ma)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	3	0	

Reliability Test Data

QTP #: 151403

<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, 300Ma)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	500	79	0	
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	1000	79	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8C42452A(8CP44200DB)	4537464	611531543	CML-R	48	1469	0	

Reliability Test Data

QTP #: 151303

<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							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	500	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	76	80	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8CMBR31552 (8CP44303CB)	4542914	611534693	ASE-G	48	1469	0	
STRESS: ENDURANCE							
CY8CMBR31552 (8CP44303CB)	4542914	611534693	ASE-G	168	80	0	
CY8CMBR31552 (8CP44303CB)	4542914	611534693	ASE-G	500	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	500	9	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	750	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1250	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1500	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1750	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1100	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	2200	8	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	3300	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	4000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	5000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	6000	3	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	7000	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CY8CMBR31552(8CP44303CB)	4542914	611534693	ASE-G	80	120	0	
CY8CMBR31552(8CP44303CB)	4542914	611534693	ASE-G	500	120	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 P_{sig}, PRE COND 192 HR 30C/60%RH (MSL3)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	168	80	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	288	79	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CY8CMBR31552(8CP44303CB)	4542914	611534693	ASE-G	COMP	10+2	0	

Reliability Test Data

QTP #: 151303

<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, 140Ma)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	6	0	
STRESS: STATIC LATCH-UP (85C, 200Ma)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140Ma)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300Ma)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	500	80	0	
CY8CMBR3106S2(8CP44304)	4542914	611534639	CML-RA	1000	80	0	

Reliability Test Data

QTP #: 160401

<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							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	15	0	
STRESS: DATA RETENTION, PLASTIC, 150C							
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	500	80	0	
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	1000	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	48	1550	0	
STRESS: ENDURANCE							
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	168	80	0	
CY8C42452(8CP44200DB)	4537464	611531543	CML-RA	1000	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	500	9	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	750	3	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	1000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	1100	3	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	2200	3	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	3300	3	0	
STRESS: PRESSURE COOKER TEST (121C, 100%RH), 15 Psig, PRE COND 192 HR 30C/60%RH (MSL3)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	168	80	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	168	76	0	
STRESS: STATIC LATCH-UP (125C, 100Ma)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (125C, 140Ma)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200Ma)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300Ma)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	500	78	0	
CYFPA1 (8CP2F1001BB)	3609025	611610290	CML-R	1000	76	0	

Reliability Test Data

QTP #: 160301

<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							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	500	80	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	1000	80	0	
STRESS: DATA RETENTION, PLASTIC, 175C							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	76	80	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	152	80	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-EARLY FAILURE RATE (150C, 2.07V, Vcc Max)							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	48	2609	1	No Visual Defect found
CYTT417012 (8C206802BB)	3617006	611617664	CML-R	48	1013	0	
STRESS: ENDURANCE							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	500	80	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	1000	80	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	500	9	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	750	3	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	1000	3	0	
STRESS: ESD-CHARGE DEVICE MODEL							
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	500	9	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1000	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1250	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1500	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	1750	3	0	
CYTT417012 (8CP206801BB)	3613017	611614958	CML-R	2000	3	0	
STRESS: ESD-HUMAN BODY MODEL PER JESD22, METHOD A114							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	1100	3	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	2200	8	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	3300	3	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	4000	3	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	5000	3	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	6000	3	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	7000	3	0	
STRESS: HIGH TEMP DYNAMIC OPERATING LIFE-LATENT FAILURE RATE (150C, 2.07V, Vcc Max)							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	500	99	0	
STRESS: PRE/POST LFR PARAMETER ASSESSMENT							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	COMP	10	0	
STRESS: STATIC LATCH-UP (125C, 140Ma)							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	

Reliability Test Data

QTP #: 160301

<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, 140Ma)							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 200Ma)							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	
STRESS: STATIC LATCH-UP (85C, 300Ma)							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	COMP	3	0	
STRESS: TC COND. C -65C TO 150C, PRE COND 192 HRS 30C/60%RH (MSL3)							
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	500	80	0	
CYTT417012 (8C206802BB)	3613017	611611087	CML-R	1000	80	0	

Document History Page

Document Title: QTP#160301: Generation 6 Touch Screen (TSG6_XL) Product Family S8SPF-10P, Fab25
 Document Number: 002-14184

Rev.	ECN No.	Orig. of Change	Description of Change
**	5330485	HSTO	Initial Spec Release
*A	5362953	HSTO	Update MPN list -Remove MPN CYATI8X and replace it with CYTT41X -Use CYTT417012 part number for QTP#160301 Reliability Test data
*B	5626739	HSTO	Update contact person for Reliability Manager and Reliability Director. Updated Alternate Fab Site table