Cypress Semiconductor
Product Qualification Report

QTP# 172504, 172206, 172207 VERSION *D
September, 2018

Microcontrollers with Flash 180nm Technology (CU80F), Cypress FAB25	
CY91F467DA/F467DB CY91F467CB,CY91F467SA CY91F465PA,CY91F467PA CY91F047PMC-GS-UJE1	FR60 32-bit Microcontroller
CY96F906HSBPMCR-GSE2 CY96F918DSBPMC-GS-UJERE2 CY96F386RSC CY96F387RSC	16-bit Proprietary Microcontroller F2MC-16FX
CY90950 Series CY90990 Series CY90F037JDSPMC-GS-UJE1 CY90F039JBSPMC-GS-UJE1 CY90F039YBSPMC-GS-UJE1	16-bit Proprietary Microcontroller F2MC-16LX

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

QTP Number	Description of Qualification Purpose	Date
172504	Qualification of 180nm Technology (CU80F) Microcontroller product family at Fab25	December, 2017
172206 173006	Qualification of Fab25 process with J-Devices Fukuoka Site	December, 2017
172207	Qualification of Fab25 process with J-Devices Usuki Site	December, 2017

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: Qualification of 180nm Technology (CU80F) Microcontroller product family at Fab25	
Marketing Part #:	CY91F467DAPFVS-GS-UJE2
Device Description:	32bit general purpose single-chip products with Flash
Cypress Division:	Microcontroller and Connectivity Division

PACKAGE	ASSEMBLY FACILITY SITE
QFP208	J-Devices Miyagi Site

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	HQB208
Package Outline, Type, or Name:	208-Quad Flat Package (QFP)
Mold Compound Name/Manufacturer:	CEL-9210HFSK / Hitachi
Mold Compound Flammability Rating:	V-0
Mold Compound Alpha Emission Rate:	Alpha1 ：8ppm, Alpha-2：35ppm
Lead Frame Material:	Cu Alloy
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Pure-Sn / 7 – 20um
Die Backside Preparation Method/Metallization:	Si Back Grind
Die Separation Method:	Dicing
Die Attach Supplier:	Hitachi
Die Attach Material:	EN4040
Bond Diagram Designation	F09-HAS-BA-S02123-MLF208QSTH1
Wire Bond Method:	Ultrasonic & Force
Wire Material/Size:	Au / 23um (0.9mil)
Thermal Resistance Theta JA □C/W:	18 degreeC/W
Package Cross Section Yes/No:	Yes
Name/Location of Assembly (prime) facility:	J-Devices Miyagi
MSL LEVEL	3
REFLOW PROFILE	245 degreeC

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	J-Devices Aizu Site

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: Qualification of Fab25 process with J-Devices Fukuoka Site	
Marketing Part #:	CY91F467DAPFVS-GS-UJE2,
Device Description:	32bit general purpose single-chip products with Flash
Cypress Division:	Microcontroller and Connectivity Division

PACKAGE	ASSEMBLY FACILITY SITE
QFP208	J-Devices Fukuoka Site

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	HQB208
Package Outline, Type, or Name:	208-Quad Flat Package (QFP)
Mold Compound Name/Manufacturer:	CEL-9210HFSK / Hitachi
Mold Compound Flammability Rating:	V-0
Mold Compound Alpha Emission Rate:	Alpha1 ：8ppm, Alpha-2 ：35ppm
Lead Frame Material:	Cu Alloy
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Pure-Sn / 7 – 20um
Die Backside Preparation Method/Metallization:	Si Back Grind
Die Separation Method:	Dicing
Die Attach Supplier:	Hitachi
Die Attach Material:	EN4040
Bond Diagram Designation	F09-HAS-BA-S02123-MLF208QSTH1
Wire Bond Method:	Ultrasonic & Force
Wire Material/Size:	Au / 23um (0.9mil)
Thermal Resistance Theta JA degreeC/W:	18 degreeC/W
Package Cross Section Yes/No:	Yes
Name/Location of Assembly (prime) facility:	J-Devices
MSL LEVEL	3
REFLOW PROFILE	245 degreeC

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	J-Devices Fukuoka Site

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: Qualification of Fab25 process with J-Devices Usuki Site	
Marketing Part #:	CY96F906HSBPMCR-GSE2, CY96F918DSBPMC-GS-UJERE2
Device Description:	16bit general purpose single-chip products with Flash
Cypress Division:	Microcontroller and Connectivity Division

PACKAGE	ASSEMBLY FACILITY SITE
LQFP100 LQFP48	J-Devices Usuki Site

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	LQI100
Package Outline, Type, or Name:	100-Low Profile Quad Flat Package (LQFP)
Mold Compound Name/Manufacturer:	CEL-9210HFSK / Hitachi
Mold Compound Flammability Rating:	V-0
Mold Compound Alpha Emission Rate:	Alpha1 ：8ppm, Alpha-2 ：35ppm
Lead Frame Material:	Cu Alloy
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Pure-Sn / 7 – 20um
Die Backside Preparation Method/Metallization:	Si Back Grind
Die Separation Method:	Dicing
Die Attach Supplier:	Hitachi
Die Attach Material:	EN4040
Bond Diagram Designation	F09-HAS-BA-S03430-MLF100LQV21-NW(CY96F906) F09-HAS-BA-S03726-MLF-100LQV21-NW (CY96F918)
Wire Bond Method:	Ultrasonic & Force
Wire Material/Size:	Au / 23um (0.9mil)
Thermal Resistance Theta JA degreeC/W:	18 degreeC/W
Package Cross Section Yes/No:	Yes
Name/Location of Assembly (prime) facility:	J-Devices
MSL LEVEL	3
REFLOW PROFILE	260 degreeC

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	J-Devices Usuki Site

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: Qualification of Fab25 process with J-Devices Usuki Site	
Marketing Part #:	CY90F037JDSPMC-GS-UJE1, CY90F039JBSPMC-GS-UJE1
Device Description:	16bit general purpose single-chip products with Flash
Cypress Division:	Microcontroller and Connectivity Division

PACKAGE	ASSEMBLY FACILITY SITE
LQFP100 LQFP48	J-Devices Usuki Site

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	LQI100, LQA048
Package Outline, Type, or Name:	48, 100-Low Profile Quad Flat Package (LQFP)
Mold Compound Name/Manufacturer:	EME-G660B / Sumitomo
Mold Compound Flammability Rating:	V-0
Mold Compound Alpha Emission Rate:	Alpha1 : 8ppm, Alpha-2 : 35ppm
Lead Frame Material:	Cu Alloy
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Sn/Bi / 5 - 20um
Die Backside Preparation Method/Metallization:	Si Back Grind
Die Separation Method:	Dicing
Die Attach Supplier:	Hitachi
Die Attach Material:	EN4040
Bond Diagram Designation	N/A
Wire Bond Method:	Ultrasonic & Force
Wire Material/Size:	Au / 23um (0.9mil)
Thermal Resistance Theta JA degreeC/W:	18 degreeC/W
Package Cross Section Yes/No:	Yes
Name/Location of Assembly (prime) facility:	J-Devices
MSL LEVEL	3
REFLOW PROFILE	260 degreeC

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	J-Devices Usuki Site

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: Qualification of Fab25 process with J-Devices Usuki Site	
Marketing Part #:	CY96F387RWCPMC-GS-UJE2
Device Description:	16bit general purpose single-chip products with Flash
Cypress Division:	Microcontroller and Connectivity Division

PACKAGE	ASSEMBLY FACILITY SITE
LQFP120	J-Devices Usuki Site

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	LQS120
Package Outline, Type, or Name:	120-Low Profile Quad Flat Package (LQFP)
Mold Compound Name/Manufacturer:	EME-G660B / Sumitomo
Mold Compound Flammability Rating:	V-0
Mold Compound Alpha Emission Rate:	Alpha1 : 8ppm, Alpha-2 : 35ppm
Lead Frame Material:	Cu Alloy
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Pure-Sn / 7 - 20um
Die Backside Preparation Method/Metallization:	Si Back Grind
Die Separation Method:	Dicing
Die Attach Supplier:	Hitachi
Die Attach Material:	EN4040
Bond Diagram Designation	N/A
Wire Bond Method:	Ultrasonic & Force
Wire Material/Size:	Au / 23um (0.9mil)
Package Cross Section Yes/No:	Yes
Name/Location of Assembly (prime) facility:	J-Devices
MSL LEVEL	3
REFLOW PROFILE	260 degreeC

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	J-Devices Usuki Site

PRODUCT DESCRIPTION (for qualification)	
Qualification Purpose: Qualification of Fab25 process with J-Devices Usuki Site	
Marketing Part #:	CY91F467CBPMC-GS-UJE2, CY91F467SAPMC-GS-UJE2, CY91F047PMC-GS-UJE1 CY91F465PAPMC-GS-UJE1, CY91F467PAPMC-GS-UJE2
Device Description:	16bit general purpose single-chip products with Flash
Cypress Division:	Microcontroller and Connectivity Division

PACKAGE	ASSEMBLY FACILITY SITE
LQFP144 (91F467CB, 91F047) LQFP176 (91F467SA, 91F465PA, 91F467PA)	J-Devices Fukuoka Site

MAJOR PACKAGE INFORMATION USED IN THIS QUALIFICATION	
Package Designation:	LQS144, LQP176
Package Outline, Type, or Name:	144, 176-Low Profile Quad Flat Package (LQFP)
Mold Compound Name/Manufacturer:	EME-G660B / Sumitomo
Mold Compound Flammability Rating:	V-0
Mold Compound Alpha Emission Rate:	Alpha1 : 8ppm, Alpha-2 : 35ppm
Lead Frame Material:	Cu Alloy
Substrate Material:	N/A
Lead Finish, Composition / Thickness:	Pure-Sn / 7 - 20um (91F467CB, 91F467SA) Sn/Bi / 5 – 20um (91F047)
Die Backside Preparation Method/Metallization:	Si Back Grind
Die Separation Method:	Dicing
Die Attach Supplier:	Hitachi
Die Attach Material:	EN4040
Bond Diagram Designation	N/A
Wire Bond Method:	Ultrasonic & Force
Wire Material/Size:	Au / 23um (0.9mil)
Package Cross Section Yes/No:	Yes
Name/Location of Assembly (prime) facility:	J-Devices
MSL LEVEL	3
REFLOW PROFILE	260 degreeC

ELECTRICAL TEST / FINISH DESCRIPTION	
Test Location:	J-Devices Fukuoka Site

RELIABILITY TESTS PERFORMED PER SPECIFICATION REQUIREMENTS

Stress/Test	Test Condition (Temp/Bias)	Result P/F
High Temperature Operating Life Early Failure Rate	Dynamic Operating Condition, Max. rating Voltage, 125 degreeC, JESD22-A108, AEC-Q100 Test Temperature : Room and Hot	P
High Temperature Operating Life Latent Failure Rate	Dynamic Operating Condition, Max. rating Voltage, 125 degreeC, JESD22-A108, AEC-Q100 Test Temperature : Room, Cold, and Hot (in that order)	P
High Accelerated Saturation Test (HAST)	JEDEC STD 22-A110, 130 degreeC, 85%RH, Max. Rating Voltage, Precondition: JESD22-A113 Moisture Sensitivity Level3 Test Temperature : Room and Hot	P
Unbiased High Accelerated Saturation Test (UHST)	JEDEC STD 22-A118, 130 degreeC, 85%RH, Precondition: JESD22-A113 Moisture Sensitivity Level3 Test Temperature : Room	P
Temperature Cycle	JESD22-A104, Condition C, -65 to 150 degreeC Precondition: JESD22-A113 Moisture Sensitivity Level3 Test Temperature : Room and Hot	P
High Temperature Storage	JESD22-A103: 150 degreeC, Test Temperature : Room and Hot	P
Electrostatic Discharge Human Body Model (ESD-HBM)	AEC-Q100-002 +/- 2000V Test Temperature : Room and Hot	P
Electrostatic Discharge Charge Device Model (ESD-CDM)	AEC-Q100-011 +/- 500V (+/-750V Corner pin) Test Temperature : Room and Hot	P
Static Latch up	AEC-Q100-004 +/- 100mA, 8.25V (125℃) Test Temperature : Room and Hot	P
Endurance + Data Retention	AEC-Q100-005 Endurance (10Kcycling) at 125 degreeC with Retention at 150 degreeC / Operation Life at 125 degreeC, Endurance (10Kcycling) at 25 degreeC with Retention at 55 degreeC,	P
Electrical Distribution	AEC-Q100-009, AEC-Q003 / Cpk > 1.67 Test temperature : Room, Hot, and Cold.	P
Wire Bond Shear (Before stress)	MIL-STD883, Cpk>1.67	P
Wire Bond Pull (Before stress)	MIL-STD883, Cpk>1.67	P
Wire Bond Pull Post Temperature Cycle	MIL-STD883	P
Acoustic Microscopy	JEDEC J-STD-020, Precondition: JESD22-A113 Moisture Sensitivity Level3	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	3,798 Devices	0	N/A	N/A	0 PPM
High Temperature Operating Life[1,2] Long Term Failure Rate	1,192,000 Device Hours	0	0.7	78	9.8 FIT

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 #: 172504, 172206, 172207

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism

STRESS : High Temperature Operation Life (Early Failure Rate)

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
CY91F467DA	J4326LP	1541Z01	Miyagi	96	381	0	
CY91F467DA	J4326LP	1541Z02	Miyagi	96	245	0	
CY91F467DA	J4326LP	1541Z03	Miyagi	96	376	0	
CY91F467DA	J4326LP	1541Z04	Miyagi	96	242	0	
CY91F467DA	J4326LP	1541Z05	Miyagi	96	393	0	
CY91F467DA	J4326M8	1541Z06	Miyagi	96	247	0	
CY91F467DA	J4326M8	1541Z07	Miyagi	96	246	0	
CY91F467DA	J4326M8	1541Z08	Miyagi	96	392	0	
CY91F467DA	J4298H9	1541Z09	Miyagi	96	246	0	
CY91F467DA	J4298H9	1541Z10	Miyagi	96	394	0	
CY91F467DA	J4298H9	1541Z11	Miyagi	96	390	0	
CY91F467DA	J4298H9	1541Z12	Miyagi	96	246	0	

STRESS : High Temperature Operation Life (Latent Failure Rate)

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
CY91F467DA	J4326LP	1541Z04	Miyagi	2000	80	0	
CY91F467DA	J4326M8	1541Z07	Miyagi	2000	80	0	
CY91F467DA	J4298H9	1541Z12	Miyagi	2000	80	0	
CY91F467DA	J6261JP	1723822	Fukuoka	1000	77	0	
CY91F467DA	J6132VX	1723826	Fukuoka	1000	77	0	
CY91F467DA	J6132XX	1723829	Fukuoka	1000	77	0	

STRESS : High Accelerated Saturation Test

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
CY91F467DA	J4326LP	1541Z02	Miyagi	96	80	0	
CY91F467DA	J4326M8	1541Z06	Miyagi	96	80	0	
CY91F467DA	J4298H9	1541Z12	Miyagi	96	80	0	
CY91F467DA	J6261JP	1723822	Fukuoka	96	77	0	
CY91F467DA	J6132VX	1723826	Fukuoka	96	77	0	
CY91F467DA	J6132XX	1723829	Fukuoka	96	77	0	
CY90F906	J6305N0	1723N00	Usuki	96	80	0	
CY90F906	J6305NU	1723N04	Usuki	96	77	0	
CY90F906	J6995NY	1723N08	Usuki	96	77	0	

Reliability Test Data

QTP #: 172504, 172206, 172207

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS : Unbiased High Accelerated Saturation Test							
CY91F467DA	J4326LP	1541Z02	Miyagi	96	80	0	
CY91F467DA	J4326M8	1541Z06	Miyagi	96	80	0	
CY91F467DA	J4298H9	1541Z09	Miyagi	96	80	0	
CY91F467DA	J6261JP	1723822	Fukuoka	96	77	0	
CY91F467DA	J6132VX	1723826	Fukuoka	96	77	0	
CY91F467DA	J6132XX	1723829	Fukuoka	96	77	0	
CY90F906	J6305N0	1723N01	Usuki	96	77	0	
CY90F906	J6305NU	1723N03	Usuki	96	77	0	
CY90F906	J6995NY	1723N06	Usuki	96	77	0	
STRESS ; Temperature Cycle							
CY91F467DA	J4326LP	1541Z02	Miyagi	500	80	0	
CY91F467DA	J4326M8	1541Z06	Miyagi	500	80	0	
CY91F467DA	J4298H9	1541Z09	Miyagi	500	80	0	
CY91F467DA	J6261JP	1723822	Fukuoka	500	77	0	
CY91F467DA	J6132VX	1723826	Fukuoka	500	77	0	
CY91F467DA	J6132XX	1723829	Fukuoka	500	77	0	
CY90F906	J6305N0	1723N02	Usuki	500	77	0	
CY90F906	J6305NU	1723N05	Usuki	500	77	0	
CY90F906	J6995NY	1723N06	Usuki	500	77	0	
STRESS ; High Temperature Storage							
CY91F467DA	J4326LP	1541Z04	Miyagi	1000	26	0	
CY91F467DA	J4326M8	1541Z07	Miyagi	1000	26	0	
CY91F467DA	J4298H9	1541Z12	Miyagi	1000	26	0	
CY91F467DA	J6261JP	1723822	Fukuoka	1000	45	0	
CY90F906	J6995NY	1723N08	Usuki	1000	45	0	
STRESS ; ESD-HBM							
CY91F467DA	J4326LP	1541Z04	Miyagi	COMP	3	0	
CY96F918	J6134J0	1726N00	Usuki	COMP	3	0	
CY90F037	J7262J0	1749N14	Usuki	COMP	3	0	
CY90F039	J731530	1805N00	Usuki	COMP	3	0	
CY96F387	J7397J0	1821N00	Usuki	COMP	3	0	
CY91F467CB	J715680	1810G00	Fukuoka	COMP	3	0	
CY91F467SA	J7353P0	1810G00	Fukuoka	COMP	3	0	
CY91F047	J7324W0	1809G00	Fukuoka	COMP	3	0	
CY91F467PA	J7481A0	1831F01	Fukuoka	COMP	3	0	
CY91F465PA	J746660	1822G00	Fukuoka	COMP	3	0	

Reliability Test Data

QTP #: 172504, 172206, 172207

STRESS ; ESD-CDM

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
CY91F467DA	J4326LP	1541Z04	Miyagi	COMP	3	0	
CY96F918	J6134J0	1726N00	Usuki	COMP	3	0	
CY90F037	J7262J0	1749N14	Usuki	COMP	3	0	
CY90F039	J731530	1805N00	Usuki	COMP	3	0	
CY96F387	J7397J0	1821N00	Usuki	COMP	3	0	
CY91F467CB	J715680	1810G00	Fukuoka	COMP	3	0	
CY91F467SA	J7353P0	1810G00	Fukuoka	COMP	3	0	
CY91F047	J7324W0	1809G00	Fukuoka	COMP	3	0	
CY91F467PA	J7481A0	1831F01	Fukuoka	COMP	3	0	
CY91F465PA	J746660	1822G00	Fukuoka	COMP	3	0	

STRESS ; Static Latch-up

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
CY91F467DA	J4326LP	1541Z04	Miyagi	COMP	6	0	
CY96F918	J6134J0	1726N00	Usuki	COMP	6	0	
CY90F037	J7262J0	1749N14	Usuki	COMP	6	0	
CY90F039	J731530	1805N00	Usuki	COMP	6	0	
CY96F387	J7397J0	1821N00	Usuki	COMP	6	0	
CY91F467CB	J715680	1810G00	Fukuoka	COMP	6	0	
CY91F467SA	J7353P0	1810G00	Fukuoka	COMP	6	0	
CY91F047	J7324W0	1809G00	Fukuoka	COMP	6	0	
CY91F467PA	J4781A0	1831F01	Fukuoka	COMP	6	0	
CY91F465PA	J746660	1822G00	Fukuoka	COMP	6	0	

STRESS ; Endurance + Data Retention (HT)

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
CY91F467DA	J6132X0	1641Z04	Miyagi	732	40	0	
CY91F467DA	J6132V0	1641Z12	Miyagi	732	40	0	
CY91F467DA	J6261H0	1714Z02	Miyagi	732	40	0	
CY91F467DA	J4326LP	1541Z02	Miyagi	732	40	0	
CY91F467DA	J4326M8	1541Z07	Miyagi	732	40	0	
CY91F467DA	J 4 298H9	1541Z11	Miyagi	732	40	0	
CY91F467DA	J6132W0	1631Z05	Miyagi	732	80	0	
CY91F467DA	J6132V0	1641Z14	Miyagi	732	80	0	
CY91F467DA	J6261J7	1701Z04	Miyagi	732	80	0	

STRESS ; Endurance + Data Retention (Operation Life)

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
CY91F467DA	J4326LP	1541Z04	Miyagi	1000	40	0	
CY91F467DA	J4326M8	1541Z07	Miyagi	1000	40	0	
CY91F467DA	J4298H9	1541Z09	Miyagi	1000	40	0	
CY91F467DA	J4326LP	1541Z03	Miyagi	1000	40	0	
CY91F467DA	J4326M8	1541Z08	Miyagi	1000	40	0	
CY91F467DA	J4298H9	1541Z11	Miyagi	1000	40	0	
CY91F467DA	J6132W0	1631Z05	Miyagi	1000	80	0	
CY91F467DA	J6132V0	1641Z14	Miyagi	1000	80	0	
CY91F467DA	J6261J7	1701Z04	Miyagi	1000	80	0	

Reliability Test Data

QTP #: 172504, 172206, 172207

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS ; Endurance + Data Retention (LT)							
CY91F467DA	J4326LP	1541Z04	Miyagi	1000	26	0	
CY91F467DA	J4326M8	1541Z07	Miyagi	1000	26	0	
CY91F467DA	J4298H9	1541Z09	Miyagi	1000	26	0	
CY91F467DA	J4326LP	1541Z03	Miyagi	1000	26	0	
CY91F467DA	J4326M8	1541Z08	Miyagi	1000	26	0	
CY91F467DA	J4298H9	1541Z11	Miyagi	1000	26	0	
CY91F467DA	J6132W0	1631Z05	Miyagi	1000	26	0	
CY91F467DA	J6132V0	1641Z14	Miyagi	1000	26	0	
CY91F467DA	J6261J7	1701Z04	Miyagi	1000	26	0	
STRESS ; Electrical Distributions							
CY91F467DA	J6261JP	1723822	Fukuoka	COMP	30	0	
CY91F467DA	J6132VX	1723824	Fukuoka	COMP	30	0	
CY91F467DA	J6132XX	1723829	Fukuoka	COMP	30	0	
CY96F918	J6134J0	1723N02	Usuki	COMP	30	0	
CY90F037	J7262J0	1749N14	Usuki	COMP	30	0	
CY96F387	J7397J0	1821N00	Usuki	COMP	30	0	
CY91F467CB	J715680	1810G00	Fukuoka	COMP	30	0	
CY91F467SA	J7353P0	1810G00	Fukuoka	COMP	30	0	
CY91F047	J7324W0	1809G00	Fukuoka	COMP	30	0	
CY91F467PA	J7481A0	1831F01	Fukuoka	COMP	30	0	
CY91F465PA	J746660	1822G00	Fukuoka	COMP	30	0	
STRESS ; Wire Bond Pull (Before Stress)							
CY91F467DA	J6261JP	1723822	Fukuoka	COMP	30	0	
CY91F467DA	J6132VX	1723824	Fukuoka	COMP	30	0	
CY91F467DA	J6132XX	1723829	Fukuoka	COMP	30	0	
CY90F906	J6305N0	1723N02	Usuki	COMP	30	0	
CY90F906	J6305NU	1723N04	Usuki	COMP	30	0	
CY90F906	J6995NY	1723N06	Usuki	COMP	30	0	
STRESS ; Wire Bond Shear (Before Stress)							
CY91F467DA	J6261JP	1723822	Fukuoka	COMP	30	0	
CY91F467DA	J6132VX	1723824	Fukuoka	COMP	30	0	
CY91F467DA	J6132XX	1723829	Fukuoka	COMP	30	0	
CY90F906	J6305N0	1723N02	Usuki	COMP	30	0	
CY90F906	J6305NU	1723N04	Usuki	COMP	30	0	
CY90F906	J6995NY	1723N06	Usuki	COMP	30	0	

Reliability Test Data

QTP #: 172504, 172206, 172207

Device	Fab Lot #	Assy Lot #	Assy Loc	Duration	Samp	Rej	Failure Mechanism
STRESS ; Wire Bond Pull Post Temperature Cycle							
CY91F467DA	J6261JP	1723822	Fukuoka	COMP	30	0	
CY91F467DA	J6132VX	1723824	Fukuoka	COMP	30	0	
CY91F467DA	J6132XX	1723829	Fukuoka	COMP	30	0	
CY90F906	J6305N0	1723N02	Usuki	COMP	30	0	
CY90F906	J6305NU	1723N04	Usuki	COMP	30	0	
CY90F906	J6995NY	1723N06	Usuki	COMP	30	0	
STRESS ; Acoustic Microscopy							
CY91F467DA	J6261JP	1723822	Fukuoka	COMP	22	0	
CY91F467DA	J6132VX	1723826	Fukuoka	COMP	22	0	
CY91F467DA	J6132XX	1723829	Fukuoka	COMP	22	0	
CY90F906	J6305N0	1723N00	Usuki	COMP	22	0	
CY90F906	J6305NU	1723N04	Usuki	COMP	22	0	
CY90F906	J6995NY	1723N08	Usuki	COMP	22	0	

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Document History Page

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Document Number: 002-22508

Rev.	ECN No.	Orig. of Change	Description of Change
**	6000639	KUMI	Initial release.
*A	6035471	KUMI	Corrected typo. (ASSECLY TO ASSEMBLY)
*B	6137007	KUMI	Add additional qualified product data (CY90F037JDSPMC-GS-UJE1, CY90F039JBSPMC-GS-UJE1), Added wire diameter by ‘mil’
*C	6221719	KUMI	Add test temperature, Electrical Distributions, Endurance test result, CY91F467DAPFVS-GS-UJE2 changed to CY91F467DA Added CY91F467CB, CY91F467SA, CY91F047, CY96F386RSC, CY96F387RSC qual result Document title change
*D	6316333	KUMI	Add CY91F465PA, CY91F467PA qualification result.