

Comm/Ind Tier Qual Results

Objective: Cu wire qualification in FSL-TJN-FM on 7x7LQFP&10x10LQFP Package		Customer Name(s): "Varies"		Plan or Results: Rev 1.0 - Result
Freescale PN: Varies	Part Name: Varies	PN(s): "Varies"		Revision # & Date: See revision history
Technology: 0.25um SGF	Package: 10x10LQFP64444, 7x7LQFP32 / 8426, 82566300	Design Engr: NA		QUARTZ Tracking #: NA
Fab / Assembly / Final Test Sites: FSL-CHD-FAB / FSL-TJN-FM / Final FSL-TJN-FM	Product Engr: GAO(Global Assembly Operation) Engr: Guo Rachel-R64564	Lot: Lu Robben-B32182		(Signature/Date shown below may be electronic)
Maskset#: in report	Rev#: in report			GAO Approval (for DIMBOM results) Signature & Date: Rachel Guo Apr-30-2014
Die Size (in mm) W x L x T: W x L x T	NPI PROJ: Long Nancy - 907252			NPI PROJ Approval Signature & Date: Nancy Long Apr-29-2014
Part Operating Temp. Grade: Grade 1 -40°C to +125 °C	Trace/Date/Code: LOT A LOT B LOT C			CAB Approval Signature & Date: 14090468M Apr-30-2014
				Customer Approval Signature & Date: NA

TESTS HIGHLIGHTED IN YELLOW WILL BE PERFORMED FOR THIS STUDY

This testing is performed by Freescale Reliability Lab (TJN) unless otherwise noted in the Comments.

GROUP A - ACCELERATED ENVIRONMENTAL STRESS TESTS

Stress Test	Reference	Test Conditions	End Point Requirements	Minimum Sample Size	# of Lots	Total Units including spares	Results Lot ID: (R#J#SS) NA=Not Applicable	Comments or Generic Data
PC	JESD22-A113 J-STD-020	Preconditioning (PC) : PC required for SMDs only. MSL 3 @ 260°C, +/-0°C	TEST @ RH	77	0	0	passed	Generic data: Q202057, JM60 (CHD, M36H), 64LOFP: 0/693 Q203037, DRACO4 (CHD, L11Y), 64LOFP: 0/77 Q215084, Celis(CHD, N03F), 44LOFP: 0/77 Q197820, DRACO4 (TSMC3, N22A), 64LOFP: 0/900 Q206678, QE32(CHD, M49M), 32LOFP: 0/900 Q215700, DZ128(ATMC, M78G), 64LOFP: 0/154 Q217688, DZ128(ATMC, M78G), 64LOFP: 0/154 Q206758, DZ60(ATMC, M74K), 64LOFP: 0/231 Q206757, DZ60(ATMC, M74K), 48LOFP: 0/693 Q216028, DZ60(TSMC11, N88E), 48LOFP: 0/462 Q215741, AP64(TSMC3, M25D), 44LOFP: 0/231
HAST	JESD22-A101 A110	Highly Accelerated Stress Test (HAST) : PC before HAST (for SMDs only); Required HAST = 130°C/85%RH for 96 hrs Bias = Max Volt Timed RO of 48hrs. MAX	TEST @ RH	77	0	0	passed	Generic data: Q202057, JM60 (CHD, M36H), 64LOFP: 0/231 Q197820, DRACO4 (TSMC3, N22A), 64LOFP: 0/231 Q206678, QE32(CHD, M49M), 32LOFP: 0/231 Q20629, AC16(TSMC3, N50A), 32LOFP: 0/77 Q215700, DZ128(ATMC, M78G), 64LOFP: 0/77 Q206758, DZ60(ATMC, M74K), 64LOFP: 0/77 Q206757, DZ60(ATMC, M74K), 48LOFP: 0/231 Q216028, DZ60(TSMC11, N88E), 48LOFP: 0/231 Q215741, AP64(TSMC3, M25D), 44LOFP: 0/77
AC	JESD22-A102 A118	Autoclave (AC) : PC before AC (for SMDs only); Required AC = 121°C/100%RH/15 psig for 96 hrs Timed RO of 2-48hrs. MAX	TEST @ R	77	0	0	passed	Generic data: Q202057, JM60 (CHD, M36H), 64LOFP: 0/231 Q197820, DRACO4 (TSMC3, N22A), 64LOFP: 0/231 Q206678, QE32(CHD, M49M), 32LOFP: 0/231 Q215700, DZ128(ATMC, M78G), 64LOFP: 0/77 Q206758, DZ60(ATMC, M74K), 64LOFP: 0/77 Q206757, DZ60(ATMC, M74K), 48LOFP: 0/231 Q215741, AP64(TSMC3, M25D), 44LOFP: 0/77
TC	JESD22-A104 AEC Q100-Appendix 3	Temperature Cycle (TC) : PC before TC (for SMDs only); Required TC = -85°C to 150°C for 500 cycles. For AEC only: WBP after TC on 5 devices from 1 lot; 2 bonds per corner and one mid-bond per side on each device. Record which pins were used.	TEST @ H For AEC: WBP +/- 3 grams	77	0	0	passed	Generic data: Q202057, JM60 (CHD, M36H), 64LOFP: 0/231, WP: 0/5, min=3g Q203037, DRACO4 (CHD, L11Y), 64LOFP: 0/77, WP: 0/5, min=3g Q215084, Celis(CHD, N03F), 44LOFP: 0/77, WP: 0/5, min=3g Q206678, QE32(CHD, M49M), 32LOFP: 0/231, WP: 0/5, min=3g Q217688, DZ128(ATMC, M78G), 64LOFP: 0/154, WP: 0/5, min=3g Q206758, DZ60(ATMC, M74K), 64LOFP: 0/77, WP: 0/5, min=3g Q206757, DZ60(ATMC, M74K), 48LOFP: 0/231, WP: 0/5, min=3g Q216028, DZ60(TSMC11, N88E), 48LOFP: 0/231 Q22821, DZ128(ATMC, M78G), 64LOFP: 0/231, WP: 0/5, min=3g Q223837, DZ128(ATMC, M78G), 48LOFP: 0/231, WP: 0/5, min=3g Q223838, DZ60(ATMC, M74K), 32LOFP: 0/77 Q223839, DZ60(ATMC, M74K), 48LOFP: 0/77 Q217541, Puffer(TSMC3, L47S)64LOFP: 0/77, WP: 0/5, min=3g Q215741, AP64(TSMC3, M25D), 44LOFP: 0/77
HTSL	JESD22-A103	High Temperature Storage Life (HTSL) : 175°C for 504hrs Timed RO = 96hrs. MAX	TEST @ RH	77	0	0	passed	Generic data: Q202057, JM60 (CHD, M36H), 64LOFP: 0/231 Q203037, DRACO4 (CHD, L11Y), 64LOFP: 0/77 Q215084, Celis(CHD, N03F), 44LOFP: 0/77 Q206678, QE32(CHD, M49M), 32LOFP: 0/231 Q215700, DZ128(ATMC, M78G), 64LOFP: 0/77 Q206758, DZ60(ATMC, M74K), 64LOFP: 0/77 Q206757, DZ60(ATMC, M74K), 48LOFP: 0/77

TEST GROUP B - ACCELERATED LIFETIME SIMULATION TESTS

Stress Test	Reference	Test Conditions	End Point Requirements	Minimum Sample Size	# of Lots	Total Units including spares	Results Lot ID: (R#J#SS) NA=Not Applicable	Comments or Generic Data
HTOL	JESD22-A108	High Temperature Operating Life (HTOL) : Ta = 125°C for 1008 hrs Devices incorporating NVM shall receive 1X NVM endurance preconditioning (W/E cycling). Test R, H, C after W/E cycling. Timed RO of 96hrs. MAX	TEST @ RHC	77	0	0	Passed	Generic data for Cu wire: Q197820, DRACO4 (TSMC3, N22A), 64LOFP: 0/77 Q203037, DRACO4 (CHD, L11Y), 64LOFP: 0/77 Q215084, Celis(CHD, N03F), 44LOFP: 0/77 Q202059, LL16(CHD, M60K), 64LOFP: 0/77 Q206758, DZ60(ATMC, M74K), 64LOFP: 0/77 Q216028, DZ60(TSMC11, N88E), 48LOFP: 0/77
ELFR	AEC Q100-008	Early Life Failure Rate (ELFR) : Ta = 125°C for 48 hrs Timed RO of 48 hrs MAX	TEST @ RH	611	0	0	Passed	Generic data for Cu wire: Q197820, DRACO4 (TSMC3, N22A), 64LOFP: 0/611 Q203037, DRACO4 (CHD, L11Y), 64LOFP: 0/611 Q202062, LL16(TSMC3, N21A), 64LOFP: 0/611 Q202059, LL16(CHD, M60K), 64LOFP: 0/611 Q206758, DZ60(ATMC, M74K), 64LOFP: 0/611 Q216028, DZ60(TSMC11, N88E), 48LOFP: 0/611
EDR	AEC Q100-005	NVM Endurance, Data Retention, and Operational Life (EDR) : 150°C for 1008 hrs or 175°C for 504hrs Devices incorporating NVM shall receive 1X NVM endurance preconditioning (W/E cycling). Test R, H, C after W/E cycling. Timed RO of 96hrs. MAX	TEST @ RHC	77	0	0	Not required for Cu wire qual	

TEST GROUP C - PACKAGE ASSEMBLY INTEGRITY TESTS

Stress Test	Reference	Test Conditions	End Point Requirements	Minimum Sample Size	# of Lots	Total Units including spares	Results Lot ID: (R#J#SS) NA=Not Applicable	Comments or Generic Data
WBS	AEC Q100-001	Wire Bond shear (WBS)	Cpk = or > 1.67	30 bonds from minimum 5 units	0	0	passed	Generic data: Q203037, DRACO4 (CHD, L11Y), 64LOFP: 0/5, Cpk=1.67 Q202057, JM60 (CHD, M36H), 64LOFP: 0/5, Cpk=1.67 Q215084, Celis(CHD, N03F), 44LOFP: 0/5, Cpk=1.67 AW60(CHD, M75B) 44LOFP Cu wire qual assembly CZ: 0/5, Cpk=1.67 AC16(CHD) 32LOFP Cu wire qual assembly CZ: 0/5, Cpk=1.67
WBP	MIS1883-2011	Wire Bond Pull (WBP) : Concl. C or D	Cpk = or > 1.67	30 bonds from minimum 5 units	0	0	passed	Generic data: Q203037, DRACO4 (CHD, L11Y), 64LOFP: 0/5, Cpk=1.67 Q202057, JM60 (CHD, M36H), 64LOFP: 0/5, Cpk=1.67 Q215084, Celis(CHD, N03F), 44LOFP: 0/5, Cpk=1.67 AW60(CHD, M75B) 44LOFP Cu wire qual assembly CZ: 0/5, Cpk=1.67 AC16(CHD) 32LOFP Cu wire qual assembly CZ: 0/5, Cpk=1.67
SD	JESD22-B102	Solderability (SD) : 8hr. (1 hr. for Au-plated leads) Steam age prior to test. If production burn-in is done, samples must also undergo burn-in prior to SD.	>95% lead coverage of critical areas	15	0	0	passed	Generic data: Q223837, DZ128(ATMC, M78G), 48LOFP(solid flag): 0/15
PD	JESD22-B100	Physical Dimensions(PD) : PD per FSL 98A drawing	Cpk = or > 1.67	10	0	0	passed	Generic data: Q223837, DZ128(ATMC, M78G), 48LOFP(solid flag): 0/30, Cpk=1.67
DIM & BOM		Dimensional (DIM) : GAO to verify PD results against valid 98A drawing BOM Verification (BOM) : GAO to verify qual lot ERF BOM is accurate.					DIM: not required BOM: passed	
SBS	AEC Q100-010	Solder Ball Shear (SBS) : Performed on all solder ball mounted packages e.g. PBGA, Chip Scale, Micro Lead Frame (but NOT Flip Chip). Two reflow cycles at MSL reflow temperature before shear.	Cpk = or > 1.67	10 (5 balls from a min. of 10 devices)	0	0		For solder ball mounted packages only; NOT for Flip Chips.
LI	JESD22-B105	Lead Integrity (LI) : Not required for surface mount devices; Only required for through-hole devices.	No lead breakage or cracks	5 (10 leads from each of 5 parts)	0	0		

Stress Test	Reference	Test Conditions	End Point Requirements	Minimum Sample Size	# of Lots	Total Units including spares	Results Lot ID (#Rej/SS) NA=Not Applicable	Comments or Generic Data
TEST	Freescale 48A	Pre- and Post Functional / Parametrics (TEST): For AEC, test software shall meet requirements of AEC-Q100-007. Testing performed to the limits of device specification in temperature and limit value.	0 Fails	All	All	All	See Results Summary	This action refers to Final Testing of all qualification units.
CCU	Freescale 12MYS-62419B	Control/Correlation Units (CCU): CCU required Units shall be marked to distinguish them from the qual units and must be marked in such a way as to retain marking over the test temperature.	NA	60 30 units as primary units, 30 units as back-up units	0	0		not required
HBM	AEC-Q100-002 / JESD22-A114E Jun 2007	ElectroStatic Discharge/ Human Body Model Classification (HBM): Test @ 500/1000/1500/2000/2500 Volts For AEC, see AEC-Q100-002 for classification levels.	TEST @ RH 2KV min.	3 units per Voltage level	0	0		not required
MM	AEC-Q100-003 or JESD22	ElectroStatic Discharge/ Machine Model Classification m(MM): Test @ 200 Volts For AEC, see AEC-Q100-003 for classification levels.	TEST @ RH 200V only	3 units per Voltage level	0	0		not required
CDM	AEC-Q100-011	ElectroStatic Discharge/ Charged Device Model Classification (CDM): Test @ 250/500/750/1000 Volts For AEC, see AEC-Q100-011 for classification levels. Timed RO of 96hrs MAX.	TEST @ RH All pins +/- 500V For AEC, Corner pins +/- 750V;	3 units per Voltage level	0	0		not required
LU	JESD78 plus AEC-Q100-004 for AEC	Latch-up (LU): Test per JEDEC JESD78 with the AEC-Q100-004 requirements for AEC. T+ Maximum operating temperature Vsupply = Maximum operation voltage	TEST @ RH	6	0	0		not required
ED	AEC-Q100-009, Freescale 48A spec	Electrical Distribution (ED)	TEST @ RHC	5	0	0		ED comparison Cu vs Au: refer to ED report
FG	For AEC, AEC-Q100-007	Fault Grading (FG)	FG shall be = or > 90% for qual units				FG% = no change	
CHAR	For AEC, AEC-Q003	Characterization (CHAR): Dry performed on new technologies and part families per AEC Q003.						
GL (for information only)	For AEC, AEC-Q100-006	Electro-Thermally Induced Gate Leakage (GL): 155°C, 2.0 min, +400/-400 V Per AEC Q100 Rev G, this test is performed for information only. Timed RO of 96 hrs MAX. For all failures, perform unbiased bake (hrs/125°C, or 2hrs/150°C) and retest; rework/replace area if failures.	TEST @ R	6	0	0		
EMC	IEC 61967-2 - Radiated Emission Measurement (TEM Cell)	Electromagnetic Compatibility (EMC) Test per IEC 61967-2. T+ Room Temp Vsupply = Typical operating voltage						

Quantity	Logic Part	Part/Max sat/Water Test CD	Assembly Site	PACK DESCRIPTION	Die Size(mm/mm)	MOLD COMPOUND	EPOXY DESCRIPTION	Wire Description	QML
203037	MC9S08G60A(DRACO4)	PSL-CHD-FAB/L11/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.080X3.150	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10453590M
202057	MC9S08M60	PSL-CHD-FAB/M60/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.474X3.084	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
202059	MC9S08L16	PSL-CHD-FAB/M60/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	2.472X2.672	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
215084	MC9S08L16	PSL-CHD-FAB/M60/025FXKQ	PSL-TIN-FM	LQFP 44 10*10*1.4P0.8/8256	5.077 X 4.472	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	11171393M
202078	MC9S08R32	PSL-CHD-FAB/M60/025FXKQ	PSL-TIN-FM	LQFP 32 7*7*1.4P0.8/8300	2.784X2.453	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
203037	MC9S08G60A(DRACO4)	PSL-CHD-FAB/L11/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.080X3.150	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10453590M
202059	MC9S08L16	PSL-CHD-FAB/M60/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	2.472X2.672	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
NA	MC9S08A0W	PSL-CHD-FAB/M75/025FXKQ	PSL-TIN-FM	LQFP 44 10*10*1.4P0.8/8256	2.850X2.820	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10453590M
NA	MC9S08A16	PSL-CHD-FAB/M60/025FXKQ	PSL-TIN-FM	LQFP 32 7*7*1.4P0.8/8300	2.624X2.624	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
202062	MC9S08L16	TSMC1/N21A/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	2.472X2.672	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
197820	MC9S08G60A(DRACO4)	TSMC1/N21A/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.080X3.150	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10403228M
209130	MC9S08A50	TSMC1/N21A/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	2.840X3.810	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
197820	MC9S08G60A(DRACO4)	TSMC1/N22A/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.080X3.150	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10403228M
202062	MC9S08L16	TSMC1/N21A/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	2.472X2.672	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10443516M
216026	MC9S08D350	TSMC1/N88L/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.385X3.334	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10453593M
216028	MC9S08D350	TSMC1/N88L/025FXKQ	PSL-TIN-FM	LQFP 48 7*7*1.4P0.5/8089	3.385X3.334	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	11413095M
206758	SS9802Z60	PSL-ATMC-FAB/M74K/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.390X3.366	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10453593M
090757	SS9802Z60	PSL-ATMC-FAB/M74K/025FXKQ	PSL-TIN-FM	LQFP 48 7*7*1.4P0.5/8089	3.390X3.366	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	10453593M
211700	SS9802Z18	PSL-ATMC-FAB/M76G/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.922X3.982	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	11433253M
217688	SS9802Z18	PSL-ATMC-FAB/M76G/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.922X3.982	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	11433253M
222821	SS9802Z18	PSL-ATMC-FAB/M76G/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	3.922X3.982	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	13191207M
223837	SS9802Z18	PSL-ATMC-FAB/M76G/025FXKQ	PSL-TIN-FM	LQFP 48 7*7*1.4P0.5/8089	3.922X3.982	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	13191207M
223839	SS9802Z60	PSL-ATMC-FAB/M74K/025FXKQ	PSL-TIN-FM	LQFP 48 7*7*1.4P0.5/8089	3.390X3.366	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	13191207M
223838	SS9802Z60	PSL-ATMC-FAB/M74K/025FXKQ	PSL-TIN-FM	LQFP 32 7*7*1.4P0.8/6300	3.390X3.366	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	13191207M
217541	MC9S12UF12(Puffer)	TSMC1/N27S/025FXKQ	PSL-TIN-FM	LQFP 64 10*10*1.4P0.5/8426	4.780X4.884	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	11433253M
215741	MC9S08A0A	TSMC1/N25U/025FXKQ	PSL-TIN-FM	DFP44 10*10*2.0P0.8/6116	2.523X3.176	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um	11433253M

Covered device list & BOM

Logic Part	Package Description/Code	Mask set	FAB	Water Tech	Die Size	MOLD COMPOUND	Epoxy	Wire Description
GOLDFISH(MC9S12C12)	LQFP 48 7*7*1.4P0.5/8089	M34C	PSL-ATMC-FAB	025AFKQ	3.906X3.189	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
GOLDFISH(MC9S12C32)	LQFP 52 10*10*1.4P0.65/8260	M34C	PSL-ATMC-FAB	025AFKQ	3.906X3.189	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
KOUMC9S12C128MFA4	LQFP 52 10*10*1.4P0.65/8260	M66G	PSL-ATMC-FAB	025AFKQ	4.230X4.230	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
KOUMC9S12C128MFA4	LQFP 52 10*10*1.4P0.65/8260	U95	TSMCFAB3	025AFKQ	4.234X4.234	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
KINGJUS(MC9S08R16)	LQFP 44 10*10*1.4P0.8/8256	M21A	PSL-CHD-FAB	025FXKQ	2.433X2.433	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
ANGULLA_WHITE(MC9S08R06)	LQFP 32 7*7*1.4P0.8/8300	M63M	PSL-CHD-FAB	025FXKQ	3.260X3.162	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
ANGULLA_WHITE(MC9S08R06)	LQFP 48 7*7*1.4P0.5/8089	M63M	PSL-CHD-FAB	025FXKQ	3.260X3.162	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
LASKOMC9S12C128	LQFP 64 10*10*1.4P0.5/8426	M72P	PSL-CHD-FAB	025FXKQ	4.382X4.382	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
CYGNUS(MC9S08R16)	LQFP 32 7*7*1.4P0.8/8300	T6P	TSMCFAB3	025FXKQ	2.433X2.433	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um
MC9S08W32	LQFP 48 7*7*1.4P0.5/8089	K14Y	TSMCFAB3	025FXKQ	3.637X2.311	CEL-9200HF10M CU WIRE	SUMITOMO CRM-1064MBLL	Cu 25um

Revision	Date	Comments	Author
Rev. 1.0	Apr 29 2014	Update Qual report	Nancy Long