



PRODUCT AND PROCESS CHANGE NOTIFICATION
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ISSUE DATE: 09-Feb-2015
NOTIFICATION: 16458
TITLE: FSL-TJN ASSY xQFP CU WIRE QUALIFICATION
EFFECTIVE DATE: 10-May-2015

DEVICE(S)

	MPN
MC11E1CPBE2	
MC56F8246MLF	
MC56F8246MLFR	
MC56F8246VLF	
MC56F8246VLFR	
MC56F8256MLF	
MC56F8256VLF	
MC68908GR16CFJE	
MC68908GR16MFJE	
MC68908GZ16CFJE	
MC68908GZ16MFJE	
MC68908GZ16VFJE	
MC68908GZ8CFAE	
MC68908GZ8CFJE	
MC68908GZ8MFAE	
MC68908GZ8VFAE	
MC68908GZ8VFJE	
MC68HC908GR4CFAE	
MC68HC908JL8CFAE	
MC68HC908JL8MFAE	
MC705C8ACFBE	
MC908GP32CFBE	
MC908GP32CFBER	
MC908GR16ACFAE	
MC908GR16AVFAE	
MC908GR16CFAE	
MC908GR16VFAE	
MC908GR32ACFAE	
MC908GR60ACFAE	
MC908GZ16CFAE	
MC908GZ16MFAE	
MC908GZ32CFAE	
MC908GZ32MFAE	
MC908GZ32VFAE	
MC908GZ60CFAE	
MC908GZ60MFAE	
MC908GZ60VFAE	
MC908JB8FBE	
MC908JL8CFAER2	
MC908LJ12CFBE	
MC9S08JM16CLC	
MC9S08JM8CLC	
MC9S08QE64CLC	
MC9S12C128CFAE	
MC9S12C128MFAE	
MC9S12C64CFAE	
MC9S12C64CFAER	
MC9S12C64MFAE	
MC9S12C64VFAE	
MC9S12C96CFAE	
MC9S12C96MFAE	
MC9S12GC64CFAE	
MC9S12GC64MFAE	
MC9S12GC96CFAE	
MC9S12GC96MFAE	
MCF51AG128CLF	

MCF52100CAE66
MCF52100CAE80
MCF52110CAE66
MCF52110CAE80
MCF5211CAE66
MCF5212CAE66
MCF5212CAE66R
MCF52210CAE80
MCF52211CAE66
MCF52211CAE80
MCF52212AE50
MCF52212CAE50
MCF52213AE50
MCF52221CAE66
MCHC908GR8ACFAE
MCHC908GR8AMFAE
MCHC908GR8CFAE
MCHC908GR8CFAER
MCHC908GR8MFAE
MCHSC705C8ACFBE
SC705C8AE0VFB

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AFFECTED CHANGE CATEGORIES

- BILL OF MATERIAL CHANGE (SAME ASSEMBLY SITE)

DESCRIPTION OF CHANGE

Copper Wire is being added as a wire bond material option for the products listed in this notification, they are currently assembled with Gold wire at Freescale TJN assembly site, Tianjin, China.

The change to Copper Wire also includes a change in wire diameter and Mold Compound as shown in below table.

Assembly Site	Package Type	LPN	Mask Set	Current Wire (Type/Size)	New Wire (Type/Size)	Current Lead frame	New Lead frame	Current M/C	New M/C
TJN	LQFP 64 10*10*1.4P0.5	MCF521xx/MCF522xx	M44G	Au/25um	Cu/25um	X-flag flag size 7.62x7.62	Solid flag flag size 6.4x6.4	MC HITACHI 9200HF10M	CEL-9200HF10M-CW
TJN	LQFP 64 10*10*1.4P0.5	MCF521X	M30B	Au/25um	Cu/25um	X-flag flag size 7.62x7.62	Solid flag flag size 6.4x6.4	MC HITACHI 9200HF10M	CEL-9200HF10M-CW
TJN	LQFP 52 10*10*1.4P0.65	MC68HC908LJ12	M48Z	Au/25um	Cu/25um	No change	No change	MC HITACHI 9200HF10M	CEL-9200HF10M-CW
TJN	LQFP 64 10*10*1.4P0.5	MC68HC908LJ12	M48Z	Au/25um	Cu/25um	X-flag flag size 5.1x5.1	Solid flag flag size 6.4x6.4	MC HITACHI 9200HF10M	CEL-9200HF10M-CW
TJN	QFP44 10*10*2.0P0.8	MC68HC908GP32	M45Z	Au/25um	Cu/25um	No change	No change	MC HITACHI 9200HF10M	CEL-9200HF10M-CW
TJN	QFP44 10*10*2.0P0.8	MC68HC908GP32	N87E	Au/20um	Cu/25um	No change	No change	MC HITACHI 9200HF10M	CEL-9200HF10M-CW
TJN	QFP44 10*10*2.0P0.8	MC68HC908JB8	K45H	Au/25um	Cu/25um	No change	No change	MC HITACHI 9200HF10M	CEL-9200HF10M-CW
TJN	LQFP 48 7*7*1.4P0.5	MC68HC908GZ60	M29Z	Au/25um	Cu/25um	X-flag flag size 5.3x5.3	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 48 7*7*1.4P0.5	MC68HC908GZ16	M76Z	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC68HC908GZ16/8	M76Z	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC68HC908GR8	M70Z	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC68HC908JL8	M38Z	Au/25um	Cu/25um	No change	No change	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 48 7*7*1.4P0.5	MC68HC908GZ60	N55E	Au/25um	Cu/25um	X-flag flag size 5.3x5.3	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC68HC908GR8	K07X	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 48 7*7*1.4P0.5	MC68HC908GZ16	N61E	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC68HC908GZ16	N61E	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC68HC908JL8	N82E	Au/25um	Cu/25um	No change	No change	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 48 7*7*1.4P0.5	MC9S12C/MC9S12GC	M66G	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 64 10*10*1.4P0.5	MCF52223	M24E	Au/25um	Cu/25um	No change	No change	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 48 7*7*1.4P0.5	MC56F825x/4x	M53V	Au/20um	Cu/25um	X-flag flag size 5.3x5.3	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC9S08JM16	M61J	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 32 7*7*1.4P0.8	MC9S08QE128	M11J	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 48 7*7*1.4P0.5	MCF51AG128	M67X	Au/20um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL

TJN	LQFP 48 7*7*1.4P0.5	MC9S12C/MC9S12GC	L09S	Au/25um	Cu/25um	X-flag flag size 5.08x5.08	Solid flag flag size 5.334x5.334	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	LQFP 52 10*10*1.4P0.65	M68HC11E1	M28Z	Au/25um	Cu/33um	No change	No change	MC HITACHI 9200HF10M	CEL-9240HF16FL
TJN	QFP44 10*10*2.0P0.8	MC68HC705C8A	M24Z	Au/25um	Cu/33um	No change	No change	MC HITACHI 9200HF10M	CEL-9200HF10M-CW

REASON FOR CHANGE

The transfer from Gold to Copper wire is required to mitigate against raw material cost increases and to ensure supply security.

The Leadframe flag change and mold compound change enable a robust Cu wirebond process.

ANTICIPATED IMPACT OF PRODUCT CHANGE(FORM, FIT, FUNCTION, OR RELIABILITY)

The changes are summarized in above table. No Impact to form, fit or function. Reliability is equivalent or improved.

According to JEDEC Standard JESD46, lack of acknowledgement of this PCN within 30 days will be considered acceptance of change. To request further data or inquire about the notification, please enter a [Service Request](#).

For sample inquiries - please go to www.freescale.com

QUAL DATA AVAILABILITY DATE: 31-Mar-2015

QUALIFICATION STATUS: IN PROCESS

QUALIFICATION PLAN:

Will provide per request.

RELIABILITY DATA SUMMARY:

Will provide per request.

ELECTRICAL CHARACTERISTIC SUMMARY:

No change on the operating performance of the device. Electrical Distribution comparison report between Gold wire versus Copper wire will provide per request.

CHANGED PART IDENTIFICATION:

There is no change to orderable part number. The Tracecode marking on the device includes assembly site and datecode. Freescale will have traceability by assembly site.

Below Cu Sample parts are available for customer to order through the Service Request system. Other samples on PCN device list, need 4 weeks cycle time for delivery from customer ordering date.

Au Part Number	Cu Sample Part Number	Package	Fab	Assembly Site
MCF5212CAE66	PCF5212CAE66	LQFP 64 10*10*1.4P0.5	TSMCFAB3	TJNFM
MC908GZ60VFAE	PC908GZ60VFAE	LQFP 48 7*7*1.4P0.5	CHD	TJNFM
MCF51AG128CLF	PCF51AG128CLF	LQFP 48 7*7*1.4P0.5	CHD	TJNFM
MC908JL16CFJE	PC908JL16CFJE	LQFP 32 7*7*1.4P0.8	CHD	TJNFM
MC705C8ACFBE	PC705C8ACFBE	QFP44 10*10*2.0P0.8	CHD	TJNFM
MC908JB8FBE	PC908JB8FBE	QFP44 10*10*2.0P0.8	TSMCFAB3	TJNFM
MC11E1CPBE2	PC11E1CPBE2	LQFP 52 10*10*1.4P0.65	CHD	TJNFM

SAMPLE AVAILABILITY DATE: 23-Feb-2015

ATTACHMENT(S):
N/A
