



Product Change Notification - GBNG-08GYZA953

Date:

23 May 2018

Product Category:

Linear Regulators; Linear Comparators; Linear Op Amps; Linear Selectable Gain Amplifiers; Instrumentation Amplifier; Linear Programmable Gain Amplifiers; Battery Management and Fuel Gauges - Battery Chargers; Real-Time Clock/Calendar; Temperature Sensors; Capacitive Touch Sensors; 8-bit PIC Microcontrollers; System D/A Converters; Power MOSFET Drivers; Brushless DC Fan Controllers & Fan Fault Detectors; Memory; Charge Pump DC-to-DC Converters; Switching Regulators; Power Management - PWM Controllers; Successive Approximation Register (SAR) A/D Converters; Sigma - Delta A/D Converters; Digital Potentiometers

Affected CPNs:



Notification subject:

CCB 3181 Final Notice: Qualification of MMT as an additional assembly site for selected products available in 8L MSOP package using gold (Au) bond wire.

Notification text:

PCN Status:

Final notification.

PCN Type:

Manufacturing Change

Microchip Parts Affected:

Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

Description of Change:

Qualification of MMT as an additional assembly site for selected products available in 8L MSOP package using gold (Au) bond wire.

Pre Change:

Assembled at MTAI assembly site.

Post Change:

Assembled at MTAI or MMT assembly site.

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	Microchip Technology Thailand - HQ (MTAI)	Microchip Technology Thailand - HQ (MTAI)	Microchip Technology Thailand – Branch (MMT)
Wire material	Au	Au	Au
Die attach material	8390A	8390A	8390A
Molding compound material	G600V	G600V	G600V
Lead frame material	CDA194	CDA194	CDA194

Impacts to Data Sheet:



None

Change Impact:

None

Reason for Change:

To improve productivity by qualifying MMT as an additional assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

June 23, 2018 (date code: 1825)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Time Table Summary:

Workweek	November 2017					-->	May 2018					June 2018			
	44	45	46	47	48		18	19	20	21	22	23	24	25	26
Initial PCN Issue Date					X										
Qual Report Availability									X						
Final PCN Issue Date									X						
Estimated Implementation Date													X		

Method to Identify Change:

Traceability code

Qualification Report:

Please open the attachments included with this PCN labeled as PCN_#_Qual_Report.

Revision History:

November 28, 2017: Issued initial notification.

December 22, 2017: Re-issued initial notification to correct the Pre and Post Change summary from CuPdAu wire to Au wire.

May 23, 2018: Issued final notification. Attached the Qualification Report. Revised the affected parts list. Provided estimated first ship date on June 23, 2018.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s):

[PCN_GBNG-08GYZA953_Qual_Report.pdf](#)

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MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN#: GBNG-08GYZA953

Date
March 14, 2018

Qualification of MMT as an additional assembly site for selected products of the 200K wafer technology available in 8L MSOP package using palladium coated copper with gold flash (CuPdAu) bond wire.



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose Qualification of MMT as an additional assembly site for selected products of the 200K wafer technology available in 8L MSOP package using palladium coated copper with gold flash (CuPdAu) bond wire.

CN ES154223-23760

QUAL ID Q18015

MP CODE DFBC17A3XA00

Part No. MCP79410-I/MS

Bonding No. BDM-001551

CCB No. 3181

Package

Type 8L MSOP

Package size 3x3 mm

Die thickness 8 mils

Die size 42.10 x 65.70 mils

Lead Frame

Paddle size 82 x 94 mils

Material CDA194

Surface Ag Spot Plated

Process Stamped

Lead Lock No

Part Number 10100836

Treatment None

Material

Epoxy 8390A

Wire Au wire

Mold Compound G600V

Plating Composition Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MMT-184201195.000	TMPE218227703.300	1802UPD
MMT-184201306.000	TMPE218227703.300	1802W6A
MMT-184201307.000	TMPE218227703.300	1802W6B

Result

Pass Fail _____

8L MSOP (3x3 mm) assembled by MMT pass reliability test per QCI-39000.
This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC J-STD-020D	135	0/135	Pass	
Precondition Prior Perform Reliability Tests (At MSL Level 1)	Electrical Test :+25°C and 85°C System: NEXTEST_PT Bake 150°C, 24 hrs System: CHINEE 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 Electrical Test :+25°C and 85°C System: NEXTEST_PT	JESD22-A113	693(0)	693 693 693 0/693	 Pass	Good Devices
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Electrical Test: + 85°C System: NEXTEST_PT	JESD22-A104	 231(0)	231 0/231	 Pass	Parts had been pre-conditioned at 260°C 77 units / lot
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: NEXTEST_PT	JESD22-A118	 231(0)	231 0/231	 Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: +25°C and 85°C System: NEXTEST_PT	JESD22-A110	 231(0)	231 0/231	 Pass	Parts had been pre-conditioned at 260°C 77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB Electrical Test :+25°C and 85°C System: NEXTEST_PT	JESD22-A103	 45(0)	45 0/45	 Pass	45 units

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Solderability Temp 215°C	Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63,Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Solderability Temp 245°C	Steam Aging: Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Physical Dimensions	Physical Dimension, 10 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	M2011 JESD22-B116	30 (0) Wires 30 (0) bonds	0/30 0/30	Pass Pass	

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Affected Catalog Part Numbers(CPN)

TC1302B-GDVUATR
TC1302B-GPVUA
TC1302B-GPVUATR
TC1302B-HPVUA
TC1302B-HPVUATR
TC1302B-ICVUA
TC1302B-ICVUATR
TC1302B-IPVUA
TC1302B-IPVUATR
TC1302B-USVUA
TC1302B-USVUATR
TC1320EUA
TC1320EUATR
TC1321EUA
TC1321EUATR
TC1410EUA
TC1410EUA713
TC1410NEUA
TC1410NEUA713
TC1410NVUA
TC1410NVUA713
TC1411EUA
TC1411EUA713
TC1411NEUA
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TC1413NEUA
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TC1427CUA
TC1427CUA713
TC1428CUA

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TC1173-2.7VUATR
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TC1269-2.5VUA
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TC1269-2.7VUA
TC1269-2.7VUATR
TC1269-2.8VUA
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TC1269-3.0VUA
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TC1269-3.3VUA
TC1269-3.3VUATR
TC1269-5.0VUA
TC1269-5.0VUATR
TC1300K-2.5VUA
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TC1300R-2.5VUA
TC1300R-2.5VUATR
TC1300R-2.85VUA
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TC1300R-2.8VUA
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TC1300R-2.8VUATRAAA
TC1300R-3.0VUA
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TC1300R-3.3VUA
TC1300R-3.3VUATR
TC1300Y-2.7VUA
TC1300Y-2.7VUATR
TC1301A-AAAVUA
TC1301A-AAAVUATR
TC1301A-ADAVUA
TC1301A-ADAVUATR
TC1301A-AIAVUA
TC1301A-APAVUA
TC1301A-APAVUATR
TC1301A-DDAVUA
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24AA256T-I/MSRVE
24AA32AF-I/MS
24AA32AFT-I/MS
24AA32A-I/MS
24AA32AT-I/MS
24AA52-I/MS
24AA52T-I/MS
24AA64-E/MS
24AA64F-I/MS
24AA64FT-I/MS
24AA64-I/MS
24AA64T-E/MS
24AA64T-I/MS
24AA64T-I/MS028
24C01C-E/MS
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24C01CT-E/MS
24C01CT-I/MS
24C02C-E/MS
24C02C-I/MS
24C02CT-E/MS
24C02CT-I/MS
24FC128-I/MS
24FC128T-I/MS
24FC256-I/MS
24FC256T-I/MS
24FC64F-I/MS
24FC64FT-I/MS
24FC64-I/MS
24FC64T-I/MS
24LC014-E/MS
24LC014H-E/MS
24LC014H-I/MS
24LC014HT-E/MS
24LC014HT-I/MS
24LC014-I/MS
24LC014T-E/MS
24LC014T-I/MS
24LC01B-E/MS
24LC01BH-E/MS
24LC01BH-I/MS
24LC01BHT-E/MS

25AA010A-I/MS
25AA010AT-I/MS
25AA020A-I/MS
25AA020AT-I/MS
25AA040A-I/MS
25AA040AT-I/MS
25AA080A-I/MS
25AA080AT-I/MS
25AA080B-I/MS
25AA080BT-I/MS
25AA080C-I/MS
25AA080CT-I/MS
25AA080D-I/MS
25AA080DT-I/MS
25AA160A-I/MS
25AA160AT-I/MS
25AA160B-I/MS
25AA160BT-I/MS
25AA160C-I/MS
25AA160CT-I/MS
25AA160D-E/MS
25AA160D-I/MS
25AA160DT-E/MS
25AA160DT-I/MS
25AA320A-I/MS
25AA320AT-I/MS
25AA640A-E/MS
25AA640A-I/MS
25AA640AT-E/MS
25AA640AT-I/MS
25LC010A-E/MS
25LC010A-I/MS
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25LC010AT-I/MS
25LC020A-E/MS
25LC020A-I/MS
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25LC020AT-I/MS
25LC040A-E/MS
25LC040A-I/MS
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25LC080C-I/MS
25LC080CT-E/MS
25LC080CT-I/MS
25LC080D-E/MS
25LC080D-I/MS
25LC080DT-E/MS
25LC080DT-I/MS
25LC160A-E/MS
25LC160A-I/MS
25LC160AT-E/MS
25LC160AT-I/MS
25LC160B-E/MS
25LC160B-I/MS
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25LC160BT-I/MS
25LC160C-E/MS
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25LC160D-E/MS
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25LC160DT-I/MS
25LC320A-E/MS
25LC320A-I/MS
25LC320AT-E/MS
25LC320AT-I/MS
25LC640A-E/MS
25LC640A-I/MS
25LC640AT-E/MS
25LC640AT-I/MS
34AA02-E/MS
34AA02-I/MS
34AA02T-E/MS
34AA02T-I/MS
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34LC02T-E/MS
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34VL02/MS
34VL02T/MS
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93AA56B-I/MS
93AA56BT-I/MS
93AA56C-I/MS
93AA56CT-I/MS
93AA66A-I/MS
93AA66AT-I/MS
93AA66B-I/MS
93AA66B-I/MSL21
93AA66BT-I/MS
93AA66BT-I/MSL21
93AA66C-I/MS
93AA66CT-I/MS
93AA76A-I/MS
93AA76AT-I/MS
93AA76B-I/MS
93AA76BT-I/MS
93AA76C-I/MS
93AA76CT-I/MS
93AA86A-I/MS
93AA86AT-I/MS
93AA86B-I/MS
93AA86BT-I/MS
93AA86C-I/MS
93AA86CT-I/MS
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TC1107-2.5VUATR
TC1107-2.7VUA
TC1107-2.7VUATR
TC1107-2.8VUA
TC1107-2.8VUATR
TC1107-3.0VUA
TC1107-3.0VUATR