

23 Sep 2010

[CCB 990.03: Qualification of 20 & 28L SSOP packages with SG-8300GM mold compound at MTAI assembly site.](#)

PCN Status:

Initial notification

Microchip Part#s Affected:

See attachments of affected catalog part numbers (CPN) labeled as...

[PCN_CYER-22RNGO053_Affected_CPN.xls](#)

[PCN_CYER-22RNGO053_Affected_CPN.pdf](#)

Description of Change:

Qualification of 28L SSOP package with SG-8300GM mold compound at MTAI assembly site and the 20L SSOP package will qualify by similarity.

Pre Change:

G600V

Post Change:

SG-8300GM

Impacts to Data Sheet:

None

Reason for Change:

To improve productivity

Change Implementation Status:

In Progress

Estimated First Ship Date:

January 4, 2011 (Date code 1102)

NOTE: Please be advised that during the transition period customers may receive pre and post change parts, due to existing inventory of the pre changed parts.

Markings to Distinguish Revised from Unrevised Devices: (e.g.: Date Code, Device Marking, Ship Container Marking)

Traceability code

Attachments:

[PCN_CYER-22RNGO053_Affected_CPN.pdf](#)

[PCN_CYER-22RNGO053_Affected_CPN.xls](#)

[PCN_CYER-22RNGO053_Qual Plan.pdf](#)

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Parts Affected

AR1010
AR1020
dsPIC33FJ12GP202
dsPIC33FJ12MC201
dsPIC33FJ12MC202
ENC28J60
HB12-100P0s/12PB30
HC12-100PAs/12PC51
HI12-100POS/12PI30
HI12-100PAS/12PI30
HI12-100PIs/12PI30
HS12-100P0/12PS0F
HS12-100P0/12PS15
HS12-100P0S/12PS25
HS12-100P0S/12PS30
HS12-100PIs/12PS25
HS12-100PIs/12PS30
HT12-100P0s/12PT49
HT12-100PAs/12PT49
HT12-100PDs/12PA49
MCP1631
MCP1631HV
MCP1631V
MCP1631VHV
MCP18480
MCP2140
MCP2140A
MCP2150
MCP2155
MCP23008
MCP23009
MCP23016
MCP23017
MCP23S08
MCP23S17
MCP3901
PIC16C432
PIC16C54
PIC16C54A
PIC16C54C
PIC16C55
PIC16C554
PIC16C558

PIC16C55A
PIC16C56
PIC16C56A
PIC16C57
PIC16C57C
PIC16C58B
PIC16C620
PIC16C620A
PIC16C621
PIC16C621A
PIC16C622
PIC16C622A
PIC16C62A
PIC16C62B
PIC16C63A
PIC16C710
PIC16C711
PIC16C712
PIC16C715
PIC16C716
PIC16C717
PIC16C72
PIC16C72A
PIC16C73B
PIC16C770
PIC16C771
PIC16C773
PIC16C781
PIC16C782
PIC16CE623
PIC16CE624
PIC16CE625
PIC16CR54A
PIC16CR57C
PIC16CR58B
PIC16CR620A
PIC16CR63
PIC16CR72
PIC16F1826
PIC16F1827
PIC16F1828
PIC16F1933
PIC16F1936
PIC16F1938
PIC16F54

PIC16F57
PIC16F627
PIC16F627A
PIC16F628
PIC16F628A
PIC16F631
PIC16F639
PIC16F648A
PIC16F677
PIC16F685
PIC16F687
PIC16F689
PIC16F690
PIC16F716
PIC16F72
PIC16F722
PIC16F722A
PIC16F723
PIC16F723A
PIC16F726
PIC16F73
PIC16F737
PIC16F76
PIC16F767
PIC16F785
PIC16F818
PIC16F819
PIC16F84A
PIC16F87
PIC16F870
PIC16F872
PIC16F873A
PIC16F876A
PIC16F88
PIC16F882
PIC16F883
PIC16F886
PIC16F913
PIC16F916
PIC16HV540
PIC18F1220
PIC18F1230
PIC18F1320
PIC18F1330
PIC18F13K22

PIC18F13K50
PIC18F14K22
PIC18F14K50
PIC18F2221
PIC18F2321
PIC18F23K20
PIC18F23K22
PIC18F24J10
PIC18F24J11
PIC18F24J50
PIC18F24K20
PIC18F24K22
PIC18F25J10
PIC18F25J11
PIC18F25J50
PIC18F25K20
PIC18F25K22
PIC18F26J11
PIC18F26J13
PIC18F26J50
PIC18F26J53
PIC18F26K20
PIC18F27J13
PIC18F27J53
PIC24F04KA201
PIC24F08KA101
PIC24F08KA102
PIC24F16KA101
PIC24F16KA102
PIC24FJ16GA002
PIC24FJ32GA002
PIC24FJ48GA002
PIC24FJ64GA002
PIC24HJ12GP202
PS501
rfPIC12F675F
rfPIC12F675H
rfPIC12F675K





A Leading Provider of Microcontrollers & Analog Semiconductors

Product Change Notification - CYER-22RNGO053

Date: 23 Sep 2010

Product Category: Touch Sensing Technologies; 16-bit Microcontrollers and Digital Signal Controllers; Analog (Linear & Mixed Signal) AND Interface; Analog (Thermal, Power Management & Safety); 8-bit Microcontrollers; All 16-bit Microcontrollers; Radio Frequency Devices

Device Family:  

Notification subject: CCB 990.03: Qualification of 20 & 28L SSOP packages with SG-8300GM mold compound at MTAI assembly site.

Notification text:

PCN Status:
Initial notification

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MICROCHIP

QUALIFICATION PLAN

RELIABILITY LABORATORY

PCN#: CYER-22RNGO053

Date:
Aug 9, 2010

Qualification of 28L SSOP package with SG-8300GM mold compound at MTAI assembly site and the 20L SSOP package will qualify by similarity.

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Purpose _____ Qualification of 28L SSOP package with SG-8300GM mold compound at MTAI assembly site and the 20L SSOP package will qualify by similarity.

MP Code _____ A5AK14N2XC40

Part No. _____ PIC16F870

CCB No. _____ 990.03

Package Type _____ 28L SSOP

Die Thickness _____ 15 mils

Lead frame _____ A194

Die Size _____ 140.6 x 158.2 mils

Paddle Size _____ 153 x 200 mils

Surface _____ Ag ring plating

Process _____ Stamped

Lead Lock _____ Yes

Die Attach Epoxy _____ 8390A

Compound _____ SG-8300GM (supplier: Samsung)

Plating composition _____ Matte tin

Test Name	Conditions	Reliability Stress Read Point -40°C to +85°C datasheet operating range (Temp)	Pre & Post Reliability Stress Test Temperature (°C) -40°C to +85°C datasheet operating range (Temp)	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Duration (Days)	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011			5	0	1	5	0 fails after TC	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001			5	0	1	5	0	5	30 bonds from a min. 5 devices.
External Visual										
External Visual	Mil. Std. 883-2009/2010			All devices prior to submission for qualification testing	0	3	ALL	0	5	
HTSL (High Temp Storage Life)										
HTSL (High Temp Storage Life)	+175°C	500 hrs	+25 +85	45	5	1	50	0	10	Spares should be properly identified. Note 1 Note 2
Preconditioning - Required for surface mount devices										
Preconditioning - Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020C for package type. Perform SAM analysis using the standard sample size. MSL-1 @ 260°C		+25	231	15	3	738	0	15	Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test.
HAST	+130°C/85% RH for 96 hours. 1 lot to be hot temp testing at 85 and 125C.	96 hrs	+25 +85	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre- conditioning.

Test Name	Conditions	Reliability Stress Read Point -40°C to +85°C datasheet operating range (Temp)	Pre & Post Reliability Stress Test Temperature (°C) -40°C to +85°C datasheet operating range (Temp)	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Duration (Days)	Special Instructions
Autoclave	+121°C/15 psig for 96 hours.	96 hrs	+25	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65°C to +150°C. 3 gram force WBP on 5 devices from 1 lot, test following Temp Cycle stress. 1 lot to be hot temp testing at 85 and 125C.	500 cycles	+85	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.