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Product Change Notification - CYER-22RNGO053

Date: 07 Apr 2011

Product Category: Touch Sensing Technologies; 16-bit Microcontrollers and Digital Signal Controllers; Analog (Linear & Mixed Signal) AND Interface; Ana 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:
Intermediate 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 the 20 & 28L SSOP packages with SG-8300GM mold compound at MTAI assembly s

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:
20L SSOP: June 30, 2011 (Date code 1127)
28L SSOP: June 30, 2011 (Date code 1127)

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

Markings to Distinguish Revised from Unrevised Devices:
Traceability code

Revision History:
September 23, 2010: Issued the initial notification.

April 6, 2011: Issued the intermediate notification informing that the 20L SSOP qualification has com Revised the estimated first ship date from January 4, 2011 to June 30, 2011 and attached the 20L S report. Please note that the 28L SSOP package qualification will conclude at a later date triggering a notification.

Attachment(s): [CYER-22RNGO053_Affected_CPN.pdf](#)
[CYER-22RNGO053_Affected_CPN.xls](#)
[CYER-22RNGO053_Qual Plan.pdf](#)



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.

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Purpose _____ Qualification of 28L SSOP package with SG-8300GM mold compound at MTAI assembly site.

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 (I Temp)	Pre & Post Reliability Stress Test Temperature (°C) -40°C to +85°C datasheet operating range (I 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	Mil. Std. 883-2009/2010			All devices prior to submission for qualification testing	0	3	ALL	0	5	
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	+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 (l Temp)	Pre & Post Reliability Stress Test Temperature (°C) -40°C to +85°C datasheet operating range (l 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.

PCN# - CYER-22RNGO053	PCN# - CYER-22RNGO053
20L SSOP PACKAGE	28L SSOP PACKAGE
CATALOG_PART_NBR	CATALOG_PART_NBR
AR1010-I/SS	ABDBFJ16GA002-I/SSV02
AR1010T-I/SS	DSPIC33FJ12GP202-E/SS
AR1020-I/SS	DSPIC33FJ12GP202-I/SS
AR1020T-I/SS	DSPIC33FJ12GP202T-E/SS
CFPIC-I/SSC01	DSPIC33FJ12GP202T-I/SS
CFPICT-I/SSC01	DSPIC33FJ12MC202-E/SS
DSPIC33FJ12MC201-E/SS	DSPIC33FJ12MC202-I/SS
DSPIC33FJ12MC201-I/SS	DSPIC33FJ12MC202T-E/SS
DSPIC33FJ12MC201T-E/SS	DSPIC33FJ12MC202T-I/SS
DSPIC33FJ12MC201T-I/SS	ENC28J60/SS
HA0119-I/SS	ENC28J60/SSC01
HA0120T-I/SS	ENC28J60/SSC03
HA0811T-I/SS	ENC28J60-I/SS
HA1028-I/SS	ENC28J60T/SS
HA1029-I/SS	ENC28J60T/SSC03
HA1205-I/SS	ENC28J60T-I/SS
HA1205T-I/SS	ENC28J60T-I/SSV01
HA1218-I/SS	HA0923-I/SS
HA1218T-I/SS	HA0923T-I/SS
HA1560T-I/SS020	HA1500-I/SS
HA1561-I/SS	HA1500T-I/SS
HA1561T-I/SS	HA1502-I/SS
HA1577-E/SS	HA1502T-I/SS
HA1577T-E/SS	HA1592T-I/SSV10
HA2010T-I/SS	HA1930B-I/SS
HA2015-I/SS	HA1930BT-I/SS
HA2015T-I/SS	HA1930C-I/SS
HA2022-I/SS	HA1930CT-I/SS
HA2022T-I/SS	HA1930-I/SS
HA2032-I/SS	HA1930T-I/SS
HA2032T-I/SS	HA2002T-I/SS
HA2525-I/SS	HA2002T-I/SS020
HA2525T-I/SS	HA2003-I/SS
HA2580-I/SS	HA2003T-I/SS
HA2580T-I/SS	HA2003T-I/SS021
HA98K99-I/SS	HA2005-I/SS
HA98K99T-I/SS	HA2005T-I/SS
HA98K99T-I/SS020	HA2005T-I/SS020
HB12-100P0S/12PB30	HA2006T-I/SS
HC12-100PAS/12PC51	HA2006T-I/SS020
HI12-100P0S/12PI30	HA2006T-I/SS021
HI12-100PAS/12PI30	HA2030-I/SS
HI12-100PIS/12PI30	HA2030T-I/SS
HI12-100PIS/12PI30TR	HA2034-I/SS
HS12-100P0/12PS0F	HA2034T-I/SS
HS12-100P0/12PS15	HA4314-I/SS021
HS12-100P0/12PS2FTR	HA4315T-I/SS
HS12-100P0S/12PS25	HA4315T-I/SS022
HS12-100P0S/12PS25TR	HA4450-I/SS

HS12-100P0S/12PS30	HA4450T-I/SS
HS12-100P0S/12PS30TR	MCP23016-I/SS
HS12-100PAS/12PS30TR	MCP23016T-I/SS
HS12-100PIS/12PS25	MCP23017-E/SS
HS12-100PIS/12PS30	MCP23017T-E/SS
HT12-100P0S/12PT49	MCP23S17-E/SS
HT12-100P0S/12PT49TR	MCP23S17T-E/SS
HT12-100PAS/12PT49	MCP722A-I/SSV01
HT12-100PDS/12PA49	MTA11200B/SS
MCP1631-E/SS	MTR5010-I/SS
MCP1631HV-330E/SS	MTR5010T-I/SS
MCP1631HV-500E/SS	MTR7698-I/SS
MCP1631HVT-330E/SS	MTR7698T-I/SS
MCP1631HVT-500E/SS	MTR9833-I/SS
MCP1631T-E/SS	MTR9833T-I/SS
MCP1631V-E/SS	PIC16C55-10/SS
MCP1631VHV-330E/SS	PIC16C55-10I/SS
MCP1631VHV-500E/SS	PIC16C55A-04/SS
MCP1631VHVT-330E/SS	PIC16C55A-04I/SS
MCP1631VHVT-500E/SS	PIC16C55A-04I/SSVAO
MCP1631VT-E/SS	PIC16C55A-20/SS
MCP18480-I/SS	PIC16C55A-20E/SS
MCP18480T-I/SS	PIC16C55A-20I/SS
MCP2140A-I/SS	PIC16C55A-40/SS
MCP2140AT-I/SS	PIC16C55AT-04/SS
MCP2140-I/SS	PIC16C55AT-04I/SS
MCP2140-I/SSRVB	PIC16C55AT-20/SS022
MCP2140T-I/SS	PIC16C55AT-20/SS031
MCP2140T-I/SSRVB	PIC16C55AT-20/SS036
MCP2150-I/SS	PIC16C55AT-20I/SS
MCP2150-I/SSG	PIC16C55-HS/SS
MCP2150-I/SSGRVB	PIC16C55-HSI/SS
MCP2150-I/SSRVB	PIC16C55-LP/SS
MCP2150-I/SSRVC	PIC16C55-LPI/SS
MCP2150-I/SSRVCG	PIC16C55-RC/SS
MCP2150T-I/SS	PIC16C55-RCI/SS
MCP2150T-I/SSGRVB	PIC16C55-XT/SS
MCP2150T-I/SSRVB	PIC16C55-XTI/SS
MCP2150T-I/SSRVC	PIC16C57-10/SS
MCP2150T-I/SSRVCG	PIC16C57C-04/SS
MCP2155-I/SS	PIC16C57C-04I/SS
MCP2155-I/SSG	PIC16C57C-20/SS
MCP2155-I/SSRVB	PIC16C57C-20E/SS
MCP2155-I/SSRVC	PIC16C57C-20I/SS
MCP2155T-I/SS	PIC16C57C-40/SS
MCP2155T-I/SSG	PIC16C57CT-04I/SS
MCP2155T-I/SSRVB	PIC16C57CT-04I/SS042
MCP2155T-I/SSRVC	PIC16C57CT-20/SS
MCP2155T-I/SSRVCG	PIC16C57CT-20I/SS070
MCP2200-I/SS	PIC16C57CT-20I/SSG041
MCP2200-I/SSRVB	PIC16C57CT-20I/SSG049
MCP2200T-I/SS	PIC16C57-HS/SS

MCP2200T-I/SSRVB	PIC16C57-HSI/SS
MCP23008-E/SS	PIC16C57-LP/SS
MCP23008T-E/SS	PIC16C57-LPI/SS
MCP23009-E/SS	PIC16C57-RC/SS
MCP23009T-E/SS	PIC16C57-RCI/SS
MCP23S08-E/SS	PIC16C57T-HSI/SS
MCP23S08-E/SSAPL	PIC16C57T-LP/SS
MCP23S08-E/SSV02	PIC16C57-XT/SS
MCP23S08T-E/SS	PIC16C57-XTI/SS
MCP23S08T-E/SSAPL	PIC16C62A-04/SS
MCP23S08T-E/SSV01	PIC16C62A-20/SS
MCP23S08T-E/SSV02	PIC16C62A-20I/SS
MCP3901A0-E/SS	PIC16C62B-04/SS
MCP3901A0-I/SS	PIC16C62B-04I/SS
MCP3901A0T-E/SS	PIC16C62B-20/SS
MCP3901A0T-I/SS	PIC16C62B-20I/SS
MCPAS677-I/SSV07	PIC16C62BT-04I/SS
MCV20USB/SS	PIC16C62BT-20/SS
MCV20USBT/SS	PIC16C62BT-20I/SS
OAERKE690-I/SSV07	PIC16C62BT-20I/SS040
OAERKE690T-I/SSV07	PIC16C63A-04/SS
PIC16C432-E/SS	PIC16C63A-04I/SS
PIC16C432-I/SS	PIC16C63A-20/SS
PIC16C432-I/SSVAO	PIC16C63A-20E/SS
PIC16C54-10/SS	PIC16C63A-20E/SSVAO
PIC16C54-10I/SS	PIC16C63A-20I/SS
PIC16C54A-04/SS	PIC16C63AT-04I/SS045
PIC16C54A-04I/SS	PIC16C63AT-20E/SSG080
PIC16C54A-10/SS	PIC16C63AT-20I/SS
PIC16C54A-10I/SS	PIC16C72-04/SS
PIC16C54A-20/SS	PIC16C72-04I/SS
PIC16C54A-20I/SS	PIC16C72-10/SS
PIC16C54AT-04I/SS	PIC16C72-10I/SS
PIC16C54C-04/SS	PIC16C72-20/SS
PIC16C54C-04E/SS	PIC16C72A-04/SS
PIC16C54C-04I/SS	PIC16C72A-04E/SS
PIC16C54C-04I/SS102	PIC16C72A-04I/SS
PIC16C54C-04I/SS121	PIC16C72A-20/SS
PIC16C54C-20/SS	PIC16C72A-20I/SS
PIC16C54C-20E/SS	PIC16C72AT-04/SS
PIC16C54C-20I/SS	PIC16C72AT-04/SS027
PIC16C54CT-04I/SS	PIC16C72AT-20I/SS
PIC16C54CT-04I/SS077	PIC16C72T-20I/SS
PIC16C54CT-04I/SS134	PIC16C73B-04/SS
PIC16C54CT-04I/SS135	PIC16C73B-04I/SS
PIC16C54CT-20/SS	PIC16C73B-04I/SSVAO
PIC16C54-HS/SS	PIC16C73B-20/SS
PIC16C54-LP/SS	PIC16C73B-20E/SS
PIC16C54-LPI/SS	PIC16C73B-20I/SS
PIC16C54-RC/SS	PIC16C73BT-04I/SS
PIC16C54-RCI/SS	PIC16C73BT-04I/SS052
PIC16C54T-XT/SS	PIC16C73BT-04I/SSVAO

PIC16C54-XT/SS	PIC16C73BT-20/SS
PIC16C54-XTI/SS	PIC16C773/SS
PIC16C554-04/SS	PIC16C773-E/SS
PIC16C554-04I/SS	PIC16C773-I/SS
PIC16C554-20/SS	PIC16C773T/SS
PIC16C554-20I/SS	PIC16C773T-I/SS
PIC16C554T-04/SS	PIC16CR63T-04I/SS063
PIC16C558-04/SS	PIC16CR72T-04I/SS031
PIC16C558-04E/SS	PIC16CR72T-04I/SS058
PIC16C558-04I/SS	PIC16F1516-E/SS
PIC16C558-20/SS	PIC16F1516-I/SS
PIC16C558-20I/SS	PIC16F1516T-I/SS
PIC16C56-10/SS	PIC16F1518-E/SS
PIC16C56-10I/SS	PIC16F1518-I/SS
PIC16C56A-04/SS	PIC16F1518T-I/SS
PIC16C56A-04E/SS	PIC16F1933-E/SS
PIC16C56A-04I/SS	PIC16F1933-E/SSV03
PIC16C56A-20/SS	PIC16F1933-I/SS
PIC16C56A-20E/SS	PIC16F1933-I/SSC01
PIC16C56A-20I/SS	PIC16F1933-I/SSV01
PIC16C56A-40/SS	PIC16F1933T-E/SS
PIC16C56AT-04/SS	PIC16F1933T-E/SSV03
PIC16C56AT-04I/SS	PIC16F1933T-I/SS
PIC16C56AT-20/SS	PIC16F1933T-I/SSC01
PIC16C56AT-20/SS020	PIC16F1933T-I/SSV02
PIC16C56AT-20/SS021	PIC16F1936-E/SS
PIC16C56AT-20/SS023	PIC16F1936-I/SS
PIC16C56AT-20/SS033	PIC16F1936-I/SSC01
PIC16C56-HS/SS	PIC16F1936-I/SSC02
PIC16C56-HSI/SS	PIC16F1936-I/SSC03
PIC16C56-LP/SS	PIC16F1936-I/SSV01
PIC16C56-LPI/SS	PIC16F1936T-E/SS
PIC16C56-LPI/SS043	PIC16F1936T-I/SS
PIC16C56-RC/SS	PIC16F1936T-I/SSC01
PIC16C56-RCI/SS	PIC16F1936T-I/SSC02
PIC16C56-XT/SS	PIC16F1936T-I/SSC03
PIC16C56-XTI/SS	PIC16F1938-E/SS
PIC16C58B-04/SS	PIC16F1938-I/SS
PIC16C58B-04I/SS	PIC16F1938-I/SSC01
PIC16C58B-04I/SSVAO	PIC16F1938T-I/SS
PIC16C58B-20/SS	PIC16F1938T-I/SSC01
PIC16C58B-20I/SS	PIC16F57-E/SS
PIC16C58B-40/SS	PIC16F57-I/SS
PIC16C58BT-04I/SS073	PIC16F57T-E/SS
PIC16C620-04/SS	PIC16F57T-I/SS
PIC16C620-04E/SS	PIC16F57T-I/SS024
PIC16C620-04I/SS	PIC16F57T-I/SS025
PIC16C620-20/SS	PIC16F57T-I/SS027
PIC16C620-20I/SS	PIC16F57T-I/SS030
PIC16C620A-04/SS	PIC16F722A-E/SS
PIC16C620A-04E/SS	PIC16F722A-I/SS
PIC16C620A-04I/SS	PIC16F722AT-I/SS

PIC16C620A-20/SS	PIC16F722AT-I/SS020
PIC16C620A-20E/SS	PIC16F722-E/SS
PIC16C620A-20I/SS	PIC16F722-I/SS
PIC16C620A-40/SS	PIC16F722T-E/SS
PIC16C620AT-04/SS	PIC16F722T-I/SS
PIC16C620AT-04E/SS044	PIC16F722T-I/SS021
PIC16C620AT-04I/SS	PIC16F723A-E/SS
PIC16C620AT-04I/SS032	PIC16F723A-I/SS
PIC16C620AT-04I/SS042	PIC16F723AT-E/SS
PIC16C620AT-04I/SS043	PIC16F723AT-I/SS
PIC16C620AT-04I/SS057	PIC16F723-E/SS
PIC16C620AT-04I/SS060	PIC16F723-I/SS
PIC16C620AT-04I/SS062	PIC16F723-I/SSC01
PIC16C620AT-04I/SS063	PIC16F723-I/SSC02
PIC16C620AT-04I/SS068	PIC16F723T-E/SS
PIC16C620AT-04I/SS069	PIC16F723T-I/SS
PIC16C620AT-04I/SS071	PIC16F723T-I/SSC01
PIC16C620AT-04I/SS072	PIC16F723T-I/SSC02
PIC16C620AT-04I/SS073	PIC16F726-E/SS
PIC16C620AT-04I/SS074	PIC16F726-I/SS
PIC16C621-04/SS	PIC16F726-I/SS020
PIC16C621-04I/SS	PIC16F726-I/SSC01
PIC16C621-20/SS	PIC16F726-I/SSC02
PIC16C621-20I/SS	PIC16F726-I/SSC03
PIC16C621A-04/SS	PIC16F726-I/SSC06
PIC16C621A-04E/SS	PIC16F726T-E/SS
PIC16C621A-04E/SSGVAO	PIC16F726T-I/SS
PIC16C621A-04I/SS	PIC16F726T-I/SS020
PIC16C621A-04I/SSVAO	PIC16F726T-I/SS021
PIC16C621A-20/SS	PIC16F726T-I/SS022
PIC16C621A-20E/SS	PIC16F726T-I/SS023
PIC16C621A-20I/SS	PIC16F726T-I/SS024
PIC16C621AT-04/SS	PIC16F726T-I/SS025
PIC16C621AT-04E/SSGVAO	PIC16F726T-I/SS026
PIC16C621AT-04I/SS082	PIC16F726T-I/SSC01
PIC16C621AT-04I/SS083	PIC16F726T-I/SSC02
PIC16C621AT-04I/SSVAO	PIC16F726T-I/SSC03
PIC16C621AT-20I/SS	PIC16F726T-I/SSC06
PIC16C621T-20/SS	PIC16F72-E/SS
PIC16C622-04/SS	PIC16F72-E/SSVAO
PIC16C622-04E/SS	PIC16F72-I/SS
PIC16C622-04I/SS	PIC16F72-I/SSC05
PIC16C622-20/SS	PIC16F72-I/SSG
PIC16C622-20E/SS	PIC16F72T-E/SS
PIC16C622-20I/SS	PIC16F72T-E/SS038
PIC16C622A-04/SS	PIC16F72T-E/SS050
PIC16C622A-04E/SS	PIC16F72T-E/SS051
PIC16C622A-04E/SSGVAO	PIC16F72T-E/SS052
PIC16C622A-04E/SSVAO	PIC16F72T-E/SS053
PIC16C622A-04I/SS	PIC16F72T-E/SS056
PIC16C622A-20/SS	PIC16F72T-E/SS059
PIC16C622A-20E/SS	PIC16F72T-E/SS060

PIC16C622A-20I/SS	PIC16F72T-E/SS061
PIC16C622A-20I/SSHXX	PIC16F72T-E/SS064
PIC16C622AT-04/SS	PIC16F72T-E/SSG045
PIC16C622AT-04E/SS	PIC16F72T-E/SSV01
PIC16C622AT-04E/SS042	PIC16F72T-E/SSVAO
PIC16C622AT-04E/SS079	PIC16F72T-I/SS
PIC16C622AT-04E/SS082	PIC16F72T-I/SS027
PIC16C622AT-04E/SS086	PIC16F72T-I/SS072
PIC16C622AT-04E/SSGVAO	PIC16F72T-I/SSC12
PIC16C622AT-04I/SS	PIC16F737-I/SS
PIC16C622AT-04I/SS032	PIC16F737T-I/SS
PIC16C622AT-04I/SS065	PIC16F73-E/SS
PIC16C622AT-04I/SS068	PIC16F73-E/SSVAO
PIC16C622AT-04I/SS069	PIC16F73-I/SS
PIC16C622AT-04I/SS080	PIC16F73-I/SSG
PIC16C622AT-04I/SS081	PIC16F73-I/SSVAO
PIC16C622AT-04I/SS088	PIC16F73T-E/SS
PIC16C622AT-04I/SS089	PIC16F73T-E/SS075
PIC16C622AT-04I/SS090	PIC16F73T-E/SS121
PIC16C622AT-20/SS066	PIC16F73T-E/SS140
PIC16C622AT-20E/SS027	PIC16F73T-E/SS151
PIC16C622AT-20E/SS031	PIC16F73T-E/SS158
PIC16C622AT-20E/SS046	PIC16F73T-E/SSVAO
PIC16C622AT-20E/SS087	PIC16F73T-I/SS
PIC16C622AT-20I/SS	PIC16F73T-I/SS092
PIC16C622T-20I/SS	PIC16F73T-I/SS134
PIC16C710-04/SS	PIC16F73T-I/SS135
PIC16C710-04I/SS	PIC16F73T-I/SS155
PIC16C710-20/SS	PIC16F73T-I/SSC05
PIC16C710-20I/SS	PIC16F73T-I/SSC10
PIC16C710T-04/SS	PIC16F73T-I/SSC15
PIC16C711-04/SS	PIC16F73T-I/SSVAO
PIC16C711-04E/SS	PIC16F767-E/SS
PIC16C711-04I/SS	PIC16F767-I/SS
PIC16C711-04I/SSVAO	PIC16F767T-E/SS
PIC16C711-20/SS	PIC16F767T-I/SS
PIC16C711-20E/SS	PIC16F76-E/SS
PIC16C711-20I/SS	PIC16F76-E/SSG067
PIC16C711T-04/SS	PIC16F76-E/SSG068
PIC16C711T-04I/SS	PIC16F76-E/SSVAO
PIC16C711T-04I/SSVAO	PIC16F76-I/SS
PIC16C711T-20I/SS	PIC16F76-I/SS081
PIC16C712-04/SS	PIC16F76T-E/SS
PIC16C712-04/SS051	PIC16F76T-E/SS084
PIC16C712-04E/SS	PIC16F76T-E/SSG067
PIC16C712-04I/SS	PIC16F76T-E/SSG068
PIC16C712-20/SS	PIC16F76T-E/SSGC15
PIC16C712-20E/SS	PIC16F76T-E/SSVAO
PIC16C712-20I/SS	PIC16F76T-I/SS
PIC16C712T-04/SS	PIC16F76T-I/SS032
PIC16C712T-20I/SS	PIC16F76T-I/SS079
PIC16C715-04/SS	PIC16F76T-I/SS080

PIC16C715-04E/SS	PIC16F76T-I/SS081
PIC16C715-04I/SS	PIC16F76T-I/SS095
PIC16C715-20/SS	PIC16F76T-I/SSG076
PIC16C715-20I/SS	PIC16F76T-I/SSVAO
PIC16C715T-04/SS	PIC16F870-E/SS
PIC16C715T-04E/SS	PIC16F870-I/SS
PIC16C715T-04I/SS	PIC16F870T-E/SS
PIC16C715T-20/SS	PIC16F870T-I/SS
PIC16C715T-20I/SS	PIC16F872-E/SS
PIC16C716-04/SS	PIC16F872-E/SSG
PIC16C716-04E/SS	PIC16F872-I/SS
PIC16C716-04E/SSGVAO	PIC16F872-I/SSG
PIC16C716-04I/SS	PIC16F872-I/SSVAO
PIC16C716-20/SS	PIC16F872T-I/SS
PIC16C716-20E/SS	PIC16F872T-I/SSG
PIC16C716-20E/SSGVAO	PIC16F872T-I/SSVAO
PIC16C716-20E/SSVAO	PIC16F873A-E/SS
PIC16C716-20I/SS	PIC16F873A-I/SS
PIC16C716T-04E/SS	PIC16F873A-I/SSVAO
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PIC16C716T-04E/SSVAO	PIC16F876A-E/SS
PIC16C716T-20E/SS040	PIC16F876A-E/SSV01
PIC16C716T-20E/SS041	PIC16F876A-E/SSVAO
PIC16C716T-20E/SSVAO	PIC16F876A-H/SSVAO
PIC16C716T-20I/SS	PIC16F876A-I/SS
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PIC16C717T-I/SS	PIC16F876A-I/SSVAO
PIC16C717T-I/SS030	PIC16F876AT-E/SS
PIC16C770/SS	PIC16F876AT-E/SS029
PIC16C770-E/SS	PIC16F876AT-E/SSV01
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PIC16C770T/SS	PIC16F876AT-I/SS
PIC16C770T-I/SS	PIC16F876AT-I/SSC25
PIC16C771/SS	PIC16F876AT-I/SSC36
PIC16C771-E/SS	PIC16F876AT-I/SSG
PIC16C771-E/SSGVAO	PIC16F876AT-I/SSGVAO
PIC16C771-I/SS	PIC16F876AT-I/SSVAO
PIC16C771T/SS	PIC16F882-E/SS
PIC16C771T-E/SSD41	PIC16F882-E/SSVAO
PIC16C771T-E/SSGVAO	PIC16F882-I/SS
PIC16C771T-I/SS	PIC16F882-I/SSV02
PIC16C781-I/SS	PIC16F882T-E/SS
PIC16C781T-I/SS	PIC16F882T-E/SSVAO
PIC16C782-I/SS	PIC16F882T-I/SS
PIC16C782T-I/SS	PIC16F882T-I/SS026
PIC16CE623-04/SS	PIC16F882T-I/SS029
PIC16CE623-04E/SS	PIC16F882T-I/SSV02
PIC16CE623-04I/SS	PIC16F883-E/SS
PIC16CE623-20/SS	PIC16F883-E/SSVAO
PIC16CE623-20I/SS	PIC16F883-I/SS

PIC16CE624-04/SS	PIC16F883-I/SS020
PIC16CE624-04E/SS	PIC16F883-I/SS021
PIC16CE624-04I/SS	PIC16F883-I/SS023
PIC16CE624-20/SS	PIC16F883-I/SS026
PIC16CE624-20I/SS	PIC16F883-I/SS027
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PIC16CE625-04/SS	PIC16F883-I/SS037
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PIC16CE625-04I/SS	PIC16F883-I/SS045
PIC16CE625-20/SS	PIC16F883-I/SS046
PIC16CE625-20E/SS	PIC16F883-I/SSC02
PIC16CE625-20E/SSVAO	PIC16F883-I/SSV01
PIC16CE625-20I/SS	PIC16F883-I/SSV04
PIC16CE625T-04/SS	PIC16F883-I/SSVAO
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PIC16CE625T-20E/SS032	PIC16F883T-I/SS022
PIC16CE625T-20E/SSVAO	PIC16F883T-I/SS032
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PIC16CR620AT-04I/SS026	PIC16F883T-I/SS043
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PIC16F1828T-I/SS	PIC16F886T-E/SS034
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PIC16F1828T-I/SSV01	PIC16F886T-E/SSV08
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PIC16F1829-I/SS	PIC16F886T-E/SSVAO
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PIC16F54-I/SS032	PIC16F886T-I/SSV13
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PIC16F54T-I/SS	PIC16F913-I/SS

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PIC16F54T-I/SS032	PIC16F913-I/SSVAO
PIC16F54T-I/SSC02	PIC16F913T-E/SS
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PIC16F687-I/SSVAO	PIC16LF876A-I/SS
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PIC16F687T-I/SS035	PIC18F2321-E/SS
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PIC16F689T-I/SS032	PIC18F23K20-I/SS
PIC16F689T-I/SS034	PIC18F23K20T-I/SS
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PIC16F689T-I/SS045	PIC18F23K22-I/SS
PIC16F689T-I/SSV03	PIC18F23K22T-I/SS
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PIC16F690-E/SSVAO	PIC18F24J11T-I/SS
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PIC16F690-I/SSC05	PIC18F24K20-I/SS021
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PIC16F690-I/SSC09	PIC18F24K20-I/SSC03
PIC16F690-I/SSVAO	PIC18F24K20-I/SSLPR
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PIC16F690T-I/SS033	PIC18F24K22T-I/SS
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PIC16F690T-I/SSVAO	PIC18F25K20-E/SSC04
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PIC16F716-E/SSGVAO	PIC18F25K20-E/SSVAO
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PIC16F716T-E/SS	PIC18F25K20-I/SSC06
PIC16F716T-E/SS051	PIC18F25K20-I/SSC09
PIC16F716T-E/SS052	PIC18F25K20-I/SSLPR
PIC16F716T-E/SS053	PIC18F25K20-I/SSVAO
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PIC16F716T-E/SSGVAO	PIC18F25K20T-E/SS023
PIC16F716T-E/SSVAO	PIC18F25K20T-E/SS025
PIC16F716T-I/SS	PIC18F25K20T-E/SSC04
PIC16F716T-I/SS040	PIC18F25K20T-E/SSV01
PIC16F716T-I/SS041	PIC18F25K20T-E/SSVAO
PIC16F716T-I/SS045	PIC18F25K20T-I/SS
PIC16F716T-I/SS058	PIC18F25K20T-I/SSC01
PIC16F716T-I/SSV02	PIC18F25K20T-I/SSC06
PIC16F716T-I/SSVAO	PIC18F25K20T-I/SSC09
PIC16F720-E/SS	PIC18F25K20T-I/SSLPR
PIC16F720-I/SS	PIC18F25K20T-I/SSVAO
PIC16F720T-I/SS	PIC18F25K22-E/SS
PIC16F721-E/SS	PIC18F25K22-E/SSVAO
PIC16F721-I/SS	PIC18F25K22-I/SS
PIC16F721T-I/SS	PIC18F25K22T-E/SS
PIC16F785-E/SS	PIC18F25K22T-E/SSVAO
PIC16F785-E/SSVAO	PIC18F25K22T-I/SS
PIC16F785-I/SS	PIC18F25K80-E/SS
PIC16F785T-E/SS	PIC18F25K80-I/SS
PIC16F785T-E/SS026	PIC18F25K80T-E/SS

PIC16F785T-E/SS027	PIC18F25K80T-I/SS
PIC16F785T-E/SS030	PIC18F26J11-I/SS
PIC16F785T-E/SS031	PIC18F26J11T-I/SS
PIC16F785T-E/SS033	PIC18F26J13-I/SS
PIC16F785T-E/SS038	PIC18F26J13T-I/SS
PIC16F785T-E/SSV01	PIC18F26J50-I/SS
PIC16F785T-E/SSV02	PIC18F26J50-I/SS020
PIC16F785T-E/SSVAO	PIC18F26J50T-I/SS
PIC16F785T-I/SS	PIC18F26J50T-I/SS020
PIC16F785T-I/SS020	PIC18F26J50T-I/SS021
PIC16F818-E/SS	PIC18F26J53-I/SS
PIC16F818-E/SSC30	PIC18F26J53T-I/SS
PIC16F818-E/SSVAO	PIC18F26K20-E/SS
PIC16F818-I/SS	PIC18F26K20-I/SS
PIC16F818-I/SSTSL	PIC18F26K20-I/SSLPR
PIC16F818T-E/SS	PIC18F26K20T-E/SS
PIC16F818T-I/SS	PIC18F26K20T-I/SS
PIC16F818T-I/SSTSL	PIC18F26K20T-I/SSLPR
PIC16F819-E/SS	PIC18F26K22-E/SS
PIC16F819-E/SSGV01	PIC18F26K22-I/SS
PIC16F819-E/SSGVAO	PIC18F26K22-I/SSVAO
PIC16F819-E/SSVAO	PIC18F26K22T-I/SS
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PIC16F819-I/SSC09	PIC18F26K80-I/SS
PIC16F819-I/SSC26	PIC18F26K80T-E/SS
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PIC16F819T-E/SSC19	PIC18F27J53-I/SS
PIC16F819T-E/SSGV01	PIC18F27J53T-I/SS
PIC16F819T-E/SSGVAO	PIC18LF2221-I/SS
PIC16F819T-E/SSV02	PIC18LF2221T-I/SS
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PIC16F819T-I/SSTSL	PIC18LF2321T-I/SS
PIC16F819T-I/SSV02	PIC18LF23K22-E/SS
PIC16F819T-I/SSVAO	PIC18LF23K22-I/SS
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PIC16F84A-20/SS	PIC18LF24J10T-I/SS
PIC16F84A-20I/SS	PIC18LF24J11-I/SS
PIC16F84AT-20/SS	PIC18LF24J11T-I/SS
PIC16F87-E/SS	PIC18LF24J50-I/SS
PIC16F87-I/SS	PIC18LF24J50T-I/SS
PIC16F87T-I/SS	PIC18LF24K22-E/SS
PIC16F88-E/SS	PIC18LF24K22-I/SS
PIC16F88-E/SSC19	PIC18LF24K22T-I/SS
PIC16F88-E/SSVAO	PIC18LF25J10-I/SS
PIC16F88-I/SS	PIC18LF25J10T-I/SSC01
PIC16F88-I/SSVAO	PIC18LF25J11-I/SS
PIC16F88T-E/SSVAO	PIC18LF25J11T-I/SS
PIC16F88T-I/SS	PIC18LF25J50-I/SS

PIC16F88T-I/SSG	PIC18LF25J50T-I/SS
PIC16F88T-I/SSVAO	PIC18LF25K22-E/SS
PIC16HV540-04/SS	PIC18LF25K22-I/SS
PIC16HV540-04I/SS	PIC18LF25K22T-I/SS
PIC16HV540-20/SS	PIC18LF25K80-I/SS
PIC16HV540-20I/SS	PIC18LF25K80T-I/SS
PIC16HV785-E/SS	PIC18LF26J11-I/SS
PIC16HV785-I/SS	PIC18LF26J11T-I/SS
PIC16HV785T-E/SS	PIC18LF26J13-I/SS
PIC16HV785T-I/SS	PIC18LF26J13T-I/SS
PIC16LC54A-04/SS	PIC18LF26J50-I/SS
PIC16LC54A-04I/SS	PIC18LF26J50T-I/SS
PIC16LC54AT-04/SS	PIC18LF26J53-I/SS
PIC16LC54AT-04I/SS	PIC18LF26J53T-I/SS
PIC16LC54AT-04I/SS027	PIC18LF26K22-E/SS
PIC16LC54C-04/SS	PIC18LF26K22-I/SS
PIC16LC54C-04I/SS	PIC18LF26K22T-I/SS
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PIC16LC554-04I/SS	PIC18LF26K80T-I/SS
PIC16LC554T-04/SS	PIC18LF27J13-I/SS
PIC16LC554T-04I/SS	PIC18LF27J13T-I/SS
PIC16LC554T-04I/SS018	PIC18LF27J53-I/SS
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PIC16LC58B-04/SS	PIC24F16KA302T-I/SS
PIC16LC58B-04I/SS	PIC24F32KA302-I/SS
PIC16LC58BT-04/SS074	PIC24F32KA302T-I/SS
PIC16LC58BT-04I/SSC03	PIC24FJ16GA002-E/SS
PIC16LC620-04/SS	PIC24FJ16GA002-E/SS020
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PIC16LC620A-04/SS	PIC24FJ16GA002-E/SSVAO
PIC16LC620A-04/SS049	PIC24FJ16GA002-I/SS
PIC16LC620A-04E/SS	PIC24FJ16GA002-I/SS020
PIC16LC620A-04I/SS	PIC24FJ16GA002T-E/SS
PIC16LC620A-04I/SS070	PIC24FJ16GA002T-E/SSC02
PIC16LC620AT-04/SS	PIC24FJ16GA002T-E/SSVAO
PIC16LC620AT-04I/SS	PIC24FJ16GA002T-I/SS
PIC16LC621-04/SS	PIC24FJ16GA002T-I/SSC03
PIC16LC621-04I/SS	PIC24FJ16GA002T-I/SSC07
PIC16LC621A-04/SS	PIC24FJ16GA002T-I/SSC08
PIC16LC621A-04E/SS	PIC24FJ32GA002-E/SS
PIC16LC621A-04I/SS	PIC24FJ32GA002-I/SS
PIC16LC621AT-04/SS	PIC24FJ32GA002-I/SSC07
PIC16LC622-04/SS	PIC24FJ32GA002-I/SSC10
PIC16LC622-04I/SS	PIC24FJ32GA002T-I/SS
PIC16LC622A-04/SS	PIC24FJ32GA002T-I/SSC10

PIC16LC622A-04E/SS	PIC24FJ48GA002-E/SS
PIC16LC622A-04I/SS	PIC24FJ48GA002-I/SS
PIC16LC622AT-04/SS	PIC24FJ48GA002-I/SSC04
PIC16LC622AT-04I/SS	PIC24FJ48GA002T-I/SS
PIC16LC622T-04/SS	PIC24FJ64GA002-E/SS
PIC16LC710-04/SS	PIC24FJ64GA002-I/SS
PIC16LC710-04I/SS	PIC24FJ64GA002-I/SSB5
PIC16LC711-04/SS	PIC24FJ64GA002-I/SSVAO
PIC16LC711-04E/SS	PIC24FJ64GA002T-E/SSB5
PIC16LC711-04I/SS	PIC24FJ64GA002T-E/SSC12
PIC16LC711T-04/SS	PIC24FJ64GA002T-I/SS
PIC16LC711T-04I/SS	PIC24FJ64GA002T-I/SSVAO
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PIC16LC712T-04/SS	PIC24FV32KA302-I/SS
PIC16LC712T-04I/SS039	PIC24FV32KA302T-I/SS
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PIC16LC715-04I/SS	PIC24HJ12GP202-I/SS
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PIC16LC715T-04I/SS	PIC24HJ12GP202T-I/SS
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PIC16LC770-I/SS	
PIC16LC770-I/SSHLF	
PIC16LC770T-E/SS	
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PIC16LC781T-I/SS	
PIC16LC782-I/SS	
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PIC16LCE623T-04I/SS	
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PIC16LF88T-I/SS045	
PIC16LF88T-I/SSV03	
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PIC16LV54AT-02I/SS	
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PIC18F1220-I/SS	
PIC18F1220-I/SSVAO	
PIC18F1220T-E/SSVAO	
PIC18F1220T-I/SS	
PIC18F1220T-I/SSV01	
PIC18F1220T-I/SSVAO	
PIC18F1230-E/SS	

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PIC18F14K50T-I/SS024	
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PIC18LF14K22T/SS	
PIC18LF14K22T-I/SS	
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PIC18LF14K50-I/SSC03	
PIC18LF14K50T-I/SS	
PIC18LF14K50T-I/SSC03	
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PIC24F08KA101-I/SS	
PIC24F08KA101T-I/SS	
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PIC24F16KA101-I/SS	
PIC24F16KA101T-I/SS	
PIC24F16KA301-I/SS	
PIC24F16KA301T-I/SS	
PIC24F32KA301-I/SS	
PIC24F32KA301T-I/SS	
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PIC24FV16KA301T-I/SS	
PIC24FV32KA301-I/SS	
PIC24FV32KA301T-I/SS	
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RFPIC12F675FT-I/SS	
RFPIC12F675FT-I/SS020	
RFPIC12F675FT-I/SS025	
RFPIC12F675FT-I/SS026	
RFPIC12F675H-I/SS	
RFPIC12F675HT-I/SS	
RFPIC12F675K-I/SS	
RFPIC12F675K-I/SS021	
RFPIC12F675K-I/SS022	
RFPIC12F675K-I/SS023	
RFPIC12F675K-I/SS024	
RFPIC12F675KT-I/SS	



MICROCHIP

**QUALIFICATION REPORT
RELIABILITY LABORATORY**

PCN: CYER-22RNGO053

Date

February 03, 2011

**Qualification of the 20L SSOP package with SG-8300GM mold compound at
MTAI assembly site.**

Distribution

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MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose	Qualification of the 20L SSOP package with SG-8300GM mold compound at MTAI assembly site.
CN	BC103138
QUAL ID	Q10136
MP CODE	A5AB77G3XAL4
Part No.	PIC16LF627-04I/SS
Bonding No.	A-028481 Rev. F
CCB No.	990.03
<u>Package</u>	
Type	20L SSOP
Package size	209 mils
Die thickness	15 mils
Die size	134.70 x 176.30 mils
<u>Lead Frame</u>	
Paddle size	154 x 200 mils
Material	CDA194
Surface	Ag Spot
Process	stamped
Part Number	10102006
<u>Die attach material</u>	
Epoxy	8390A
Wire	Au wire
Mold Compound	SG-8300GM
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Trace Code
MTA1113603828	TMPE211176418.C00	10494CP
MTA1113604002	TMPE211176418.C00	10495HQ
MTA1113604003	TMPE211176418.C00	10495HR

Result

Pass Fail _____

20L SSOP assembled by MTAI 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-020C standard.

Prepared By: _____) Date: February 03, 2011 (Reliability Engineer)

(Mr.Udom Suksansakul)

Approved By: _____) Date: February 03, 2011 (Reliability Manager)

(Mr.Surasit Phurikhup)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
<u>MSL</u>								
MSL Level 1/260°C	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 260°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020C)	S12/14/16 (PDC)	135	12/21/10	01/04/11	0/135	Pass	
<u>Precondition</u>								
Electrical Test	Electrical Test :+25°C and 85°C System: J750 (Test 1 lot 125°C on MTAI113603828.000)	S12/14/16 (PDC)	693(0)	12/17/10	12/21/10	693		Good Devices
Bake	Bake 150°C, 24 hrs System: CHINEE	PI-92014B		12/27/10	12/28/10	693		
Moisture Soak	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH	PI-91173B		12/28/10	01/04/11	693		
Convection-Reflow	3x Convection-Reflow 260°C max System: Vitronics Soltec MR1243	PI-91160B		01/04/11	01/04/11	693		
Electrical Test	Electrical Test :+25°C and 85°C System: J750 (Test 1 lot 125°C on MTAI113603828.000)	S12/14/16 (PDC)		01/04/11	01/07/11	0/693	Pass	

PACKAGE QUALIFICATION REPORT

Qual Report : Q10136

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification	PI-91020B		01/07/11	01/19/11	231		Parts had been pre-conditioned at 260°C
		QCI-33003	30(0)	01/19/11	01/19/11	0/30		
	Electrical Test: + 85°C System: J750 (Test 1 lot 125°C on MTA113603828.000)	S12/14/16 (PDC)	231(0)	01/19/11	01/25/11	0/231	Pass	77 units / lot
UNBIASED-HAST	Bond Strength: Bond Shear (15.60 grams) Wire Pull (> 3 grams)	QCI-91022	15 (0) 15 (0)	01/25/11 01/25/11	01/25/11 01/25/11	0/15 0/15	Pass Pass	
	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	PI-91261B		01/07/11	01/12/11	231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: J750	S12/14/16 (PDC)	231(0)	01/12/11	01/14/11	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X	PI-92010B		01/07/11	01/12/11	231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C and 85°C System: J750 (Test 1 lot 125°C on MTA113603828.000)	S12/14/16 (PDC)	231(0)	01/12/11	01/14/11	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: CHINEE	PI-92014B S12/14/16		12/21/10	01/13/11	45		45 units
	Electrical Test: +25°C and 85°C System: J750	(PDC)	45(0)	01/13/11	01/14/11	0/45	Pass	
Bond Strength Data Assembly	Bond Shear (15.60 grams)	QCI-91022	30 (0) bonds	-	-	0/30	Pass	
	Wire Pull (> 3 grams)		30 (0) wires	-	-	0/30	Pass	

[CYER-22RNGO053_Qual_Report_20L_SSOP.pdf](#)

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