QUALIFICATION PLAN

PCN #: IIRA-19HYJU812

Date:
Dec 18, 2013

Qualification of selected products available in the 28L SPDIP package with palladium coated copper (PdCu) bond wire at MMT (ALPH) assembly site.

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Purpose:________________Qualification of selected products available in the 28L SPDIP package with palladium coated copper (PdCu) bond wire at MMT (ALPH) assembly site.

MP code:________________ A5AF14M3XE04

Part No.: ________________ PIC16F876-04E/SP

BD No:__________________ BDM-000418 rev.A

CCB No: ________________ 1361.01

Package:

Type ___________________ 28L SPDIP

Width or Size ___________ 300 mils

Die thickness: __________ 15 mils

Die size: _______________ 179.20 x 199.60 mils

Lead frame:

Paddle size: ____________ 196 x 300 mils (Samsung–Korea)

Material________________ C194

Surface ________________ Ring Ag on Paddle

Process________________ Stamped

Lead Lock______________ No

Part Number____________ TBD

Treatment ______________ None

Wire:

Material________________ PdCu (Nippon-Japan)

Die Attach Epoxy:

Part Number____________ CRM-1064L (Sumitomo-Singapore)

Conductive_____________ Yes

Mold Compound: _________ GE800 (Hitachi-Malaysia)

Reliability Test plan: ______ See attached, STD Package Reliability Test plan on each package.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	30 bonds from a minimum of 5 devices.
Wire Sweep		5	1	3	15			Required for any reduction in wire bond thickness.
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 for 504 hours or 150℃ for 1008 hrs. Electrical test pre and post stress at +25C and hot temp.	45	5	1	50	0	10	Must be in progress at time of package release to production, but completion is not required for release to production. For hot temp testing, pre/post test 1 lot at 85℃ and 125℃ (if applicable).
HAST	+130℃/85% RH for 96 hours. Electrical test pre and post stress at +25℃ and hot temp.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. For hot temp testing, pre/post test 1 lot at 85℃ and 125℃ (if applicable).
Unbiased HAST	+130℃/85% RH for 96 hrs. Electrical test pre and post stress at +25℃.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	-65℃ to +150℃ for 500 cycles. Electrical test pre and post stress at hot temp; 3 gram force WBP, on 5 devices from 1 lot, Test by following readpoint TC50,TC250 and TC 500.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. For hot temp testing, pre/post test 1 lot at 85℃ and 125℃ (if applicable).