



MICROCHIP

QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: JAON-06GIVT816

Date
November 05, 2015

**Qualification of non-conductive die attach epoxy 8900NC for
selected products available in 8L SOIC package at MMT
assembly site.**

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MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose Qualification of non-conductive die attach epoxy 8900NC for selected products available in 8L SOIC package at MMT assembly site.

CN BC151934
QUAL ID Q15148
MP CODE Y2AK1BC2XA00
Part No. TC4420EOA
Bonding No. BDM-000900 Rev. A
CCB No. 1748

Package

Type 8L SOIC
Package size 150 mils
Die thickness 15 mils
Die size 79.1 x 75.0 mils

Lead Frame

Paddle size 95 x 158 mils
Material CDA194
Surface Ag spot plated
Process Stamped
Lead Lock No
Part Number 10100807
Treatment None

Die attach material

Epoxy 8900NC
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-162400824.000	TMPE216175383.210	1537222
MMT-162401194.000	TMPE216175383.210	15375JH
MMT-162500169.000	TMPE216175383.210	153864S

Result

☒ Pass ☐ Fail ☐ _____

8L SOIC (.150") 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.

Prepared By: Thinnapol Date: November 05, 2015 (Sr. Reliability Engineer)

(Mr. Thinnapol Nakkasun)

Approved By: Som Date: November 05, 2015 (Reliability Manager)

(Mr. Somnuek Thongprasert)

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 C J-STD- 020D	135	0/135	Pass	

<u>Precondition Prior Perform Reliability Tests (At MSL Level 1)</u>	Electrical Test :+25°C,125 °C and -40 °C System: ETS88	JESD22- A113	693(0)	693		Good Devices
	Bake 150 °C, 24 hrs System: CHINEE			693		
	85 °C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C and 125°C System: ETS88			0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	Stress Condition: -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Electrical Test: + 125°C System: ETS88 Bond Strength: Wire Pull (> 3.0 grams) Bond Shear (>30.00 grams)	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: ETS88	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: 18 Volts System: HAST 6000X Electrical Test: +25°C and 125°C System: ETS88	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 125°C System: ETS88	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
Bond Strength Data Assembly	Wire Pull (> 3.0 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>30.00 grams)	JESD22- B116	30 (0) bonds	0/30	Pass	

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Affected Catalog Part Numbers (CPN)

PCN_JAON-06GIVT816
CATALOG_PART_NBR
TC1426COA
TC1426COA713
TC1427COA
TC1427COA713
TC1428COA
TC1428COA713
TC426COA
TC426COA713
TC426EOA
TC426EOA713
TC427COA
TC427COA713
TC427EOA
TC427EOA713
TC427VOA
TC427VOA713
TC428COA
TC428COA713
TC428EOA
TC428EOA713
TC428VOA
TC428VOA713
TC4426ACOA
TC4426ACOA713
TC4426AEOA
TC4426AEOA713
TC4426AVOA
TC4426AVOA713
TC4426COA
TC4426COA713
TC4426COA713CAA
TC4426EOA
TC4426EOA713
TC4426VOA
TC4426VOA713
TC4427ACOA
TC4427ACOA713
TC4427AEOA
TC4427AEOA713
TC4427AEOA713AAA
TC4427AEOAAAA
TC4427AVOA
TC4427AVOA713

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Affected Catalog Part Numbers (CPN)

PCN_JAON-06GIVT816
CATALOG_PART_NBR
TC4427COA
TC4427COA713
TC4427COA713HAZ
TC4427COA723
TC4427EOA
TC4427EOA713
TC4427VOA
TC4427VOA713
TC4428ACOA
TC4428ACOA713
TC4428ACOA713-GTD
TC4428AEOA
TC4428AEOA713
TC4428AVOA
TC4428AVOA713
TC4428COA
TC4428COA713
TC4428COA723
TC4428DCOA
TC4428EOA
TC4428EOA713
TC4428VOA
TC4428VOA713