

Product Change Notification - JAON-01HKRZ573

22 Jun 2015

Notification subject: CCB 1409.106 Final Notice: Qualification of 8060T die attach material for Supertex products in 3L SOT-23 package at NSEB assembly site.

Notification text: **PCN Status:**
Final notification

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 8060T die attach material for Supertex products in 3L SOT-23 package at NSEB assembly site.

Pre Change:

84-1LMISR4 die attach material

Post Change:

8060T die attach material

Impacts to Data Sheet:

No

Reason for Change:

To improve productivity as part of the integration of Supertex and Microchip.

Change Implementation Status:

Complete

Estimated First Ship Date:

April 11, 2015 (date code: 1515)

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

Markings to Distinguish Revised from Unrevised Devices:

Traceability code

Revision History:

June 22, 2015: Issued final notification.

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_JAON-01HKRZ573_Qual_Report.pdf](#)
[PCN_JAON-01HKRZ573_Affected_CPN.pdf](#)
[PCN_JAON-01HKRZ573_Affected_CPN.xls](#)

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PCN_JAON-01HKRZ573
CATALOG_PART_NBR
2N7002-G
DN3135K1-G
LND150K1-G
LND250K1-G
TN2106K1-G
TN2124K1-G
TN2124K1-G-D545
TN2130K1-G
TN5325K1-G
TN5335K1-G
TN5335K1-G-D589
TP0610T-G
TP2104K1-G
TP5322K1-G
TP5335K1-G
TP5335K1-G-D588
VN2110K1-G
VP2110K1-G
VP2110K1-G-D537



MICROCHIP

QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: JAON-01HKRZ573

Date
March 11, 2015

Qualification of 8060T die attach material for Supertex products in 3L SOT-23 package at NSEB assembly site.



MICROCHIP PACKAGE QUALIFICATION REPORT

Purpose Qualification of 8060T die attach material for Supertex products in 3L SOT-23 package at NSEB assembly site.

Part No. TN5325K1-G

Lot No. NSEB153600662.000

CCB No. 1409.106

Package

Type 3L SOT-23

Die thickness 8 mils

Die size 55.90 x 29.9 mils

Lead Frame

Paddle size 40 x 72 mils

Material A194

Surface Ag Plated

Process Stamped

Lead Lock No

Part Number FD0070

Treatment None

Die attach material

Epoxy (Silver paste) 8060T

Wire Au wire

Mold Compound EME-G600

Plating Composition Matte Tin

TEST 1: ASSEMBLY PROCESS CHARACTERIZATION

TEST	RESPONSIBLE	METHOD	CONDITION	ACCEPTANCE_CRITERIA	A_SS	RESULT
Die Shear	Subcon	MIL-STD-883J-M2019.9	NA	min strength & evident of adhesion conform to MILSTD-883J-M2019.9	0 / 32 units	PASS
DA Bondline Thickness	Subcon	to subcon's spec	Epoxy Cured	BLT (Dry) Control 0.6 ~ 0.9 mil	0 / 5 units	PASS
Bond Shear	Subcon	JESD22-B116A	NA	1) avg & min strength conform to JESD22-B116A; and 2) ball bond dia shall be reported	0 / 30 bonds from min 5 units	PASS
Wire Bond Pull	Subcon	MIL-STD-883J-M2011.9	Cond C or D	min strength conform to MIL-STD-883J-M2011.9	0 / 30 bonds from min 5 units	PASS
X-Ray	Subcon	X-Ray	NA	Wire and die condition to subcon spec	0 / 1 shot	PASS
Terminal Plating Thickness	Subcon	XRF or else	NA	300 - 1000 micro-inch	0 / 5 units	PASS
Terminal Plating / Solder Ball Material	Subcon	XRF, RoHS report or else	NA	Pb-free	0 / 5 units	PASS

TEST 2: FINAL TEST

TEST	RESPONSIBLE	METHOD	CONDITION	ACCEPTANCE_CRITERIA	A_SS	RESULT
Post-Assembly Final Test Yield	HKDC	per device spec	NA	per device spec	>85%	PASS

TEST 3: PACKAGE INTEGRITY AND MECHANICAL TEST

TEST	RESPONSIBLE	METHOD	CONDITION	ACCEPTANCE_CRITERIA	A_SS	RESULT
External Visual	HKDC	Supertex spec# QCGP-8001	to Supertex spec# QCGP-8001	visual defect to Supertex spec# QCGP-8001	0 / 315 units	PASS
Physical Dimension	HKDC	JESD22-B100B	post-assembly	conform to Supertex spec# DSPD-3TO236ABK1	0 / 8 units	PASS
Solderability (Tin-alloy)	HKDC	JESD22-B102E	1) Condition C (Tin-alloy): 8hrs steam age; 2) Test Method 1: Dip & Look Test; 3) Group 1: test to SnPb solder (215 +/-5 C); Group 2: test to Pb-free solder (245 +/-5 C)	min 95% coverage on critical area	0 / 8 units for Group 1; 0 / 8 units for Group 2	PASS

TEST 4: RELIABILITY AND LIFE TEST

TEST	RESPONSIBLE	METHOD	CONDITION	ACCEPTANCE_CRITERIA	A_SS	RESULT
MSL Pre-Conditioning	MTAI	JESD22-A113F	MSL 1 @ 260 +5/-0C Pb-free reflow	1) no pkg crack; and 2) electrical pass; and 3) 25 units (i.e. unit#1-25) for pre- & post-stress T- / CSAM shall be reported 4) reflow profile plot shall be reported	0 / 250 units	PASS
AutoClave	MTAI	JESD22-A102D	1) for SMD, MSL pre-conditioned prior to test 2) 121C / 100%RH / 15PSIG / 168hrs	electrical pass	0 / 45 units	PASS
Thermal Shock	MMT	MIL-STD-883J-M1011.9	1) for SMD, MSL pre-conditioned prior to test 2) Cond B: -55 to 125C / 200 cyc	electrical pass	0 / 45 units	PASS
Temperature Cycling	MTAI	MIL-STD-883J-M1010.8	1) for SMD, MSL pre-conditioned prior to test 2) Cond C: -65 to 150C / 500 cyc	electrical pass	0 / 45 units	PASS
Temperature Humidity Bias (THB)	SVDC	JESD22-A101C	1) for SMD, MSL pre-conditioned prior to test 2) biased @85C / 85%RH for 168 / 500 / 1000hrs	electrical pass	0 / 45 units	PASS