



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16423

Generic Copy

Issue Date: 03-Mar-2010

TITLE: Solder Die Attach replacing Epoxy Die Attach for SOT223 Package

PROPOSED FIRST SHIP DATE: 3-June-2010

AFFECTED CHANGE CATEGORY(S): Die Attach Assembly

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Masitah Aznam
<masitah.aznam@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office or Masitah Aznam
<masitah.aznam@onsemi.com>

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Laura Rivers <laura.rivers@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

This is an addendum to FPCN16346 where ON Semiconductor is notifying customers of its plan to replace Epoxy Die Attach to Solder Die Attach for Bipolar Transistor used in SOT223-Epoxy package.

Product change to Solder Die Attach material in the SOT223 package can be rated as MSL-1 which dry packing is no longer required instead of the current MSL-3 rating with the epoxy. Additionally, Power Devices built with solder will have improved electrical and thermal conductivity over devices built with epoxy.

All Qualification and Reliability testing have been completed, and have passed all established criteria. Electrical characterization over temperature has been performed showing similar results between product built with soft solder and epoxy.



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RELIABILITY DATA SUMMARY:

Package: SOT223
Qual Vehicles:

BCP68T1G

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/240
Autoclave	Ta=121C RH=100% ~15 psig	96 hrs	0/240
HAST	Ta=131C RH=85% bias=80% rated V	96 hrs	0/240
IOL	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/240
TC	Ta= -65 C to 150 C	1000 cyc	0/240
RSH	Ta=260C, 10 sec dwell		0/90
SAT	MSL1		0/30
DPA	post HAST		0/6
DPA	post TC		0/6

NSS60600MZ4T1G

Test:	Conditions:	Interval:	Results
HTRB	TA=150C,80% Rated Voltage	1008 hrs	0/240
Autoclave	Ta=121C, RH=100% ~15 psig	96 hrs	0/240
HAST	Ta=131C, RH=85% bias=80% rated V	96 hrs	0/240
SAT	MSL1		0/30
DPA	post HAST		0/6

ELECTRICAL CHARACTERISTIC SUMMARY:

There is no change in electrical parametric performance. Characterization data is available upon request

CHANGED PART IDENTIFICATION:

The SOT223 Products assembled with the 'Solder Die Attach' from ON Semiconductor will have a Finish Good Date Code of 1022 or 'L' representing Work Week 22, 2010 and newer.



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List of affected General Parts:

PART

BCP68T1
BCP68T1G
BSP52T1
BSP52T1G
BSP52T3G
MMJT350T1G
NJT4030PT1G
NJT4030PT3G
NJT4031NT1G
NJT4031NT3G
NSB9435T1
NSB9435T1G
NSS1C200MZ4T1G
NSS1C200MZ4T3G
NSS1C201MZ4T1G
NSS1C201MZ4T3G
NSS40300MZ4T1G
NSS40300MZ4T3G
NSS40301MZ4T1G
NSS40301MZ4T3G
NSS60600MZ4T1G
NSS60600MZ4T3G
NSS60601MZ4T1G
NSS60601MZ4T3G
PZT651T1
PZT651T1G
PZT751T1
PZT751T1G