ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

14 Oct 2008

SUBJECT: ON Semiconductor Final Product/Process Change Notification # 16165

TITLE: Final Notification for Gold wire changing to Copper wire on SOT-23 BRT parts

PROPOSED FIRST SHIP DATE: 14 Jan 2009

AFFECTED CHANGE CATEGORY: ON Semiconductor assembly – wire bond

AFFECTED PRODUCT DIVISION: Discrete Products

FOR SAMPLES: Contact your local ON Semiconductor Sales Office

FOR ANY QUESTIONS CONCERNING RELIABILITY DATA:
Contact your local ON Semiconductor Sales Office or Laura Rivers <laura.rivers@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or Calvin Lim<calvin.lim@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 your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

This is the FPCN to IPCN 16009 available at www.onsemi.com. On Semiconductor is notifying customers of its plan to convert to Copper wire on Bias Resistor Transistor (BRT) products in the SOT-23 package.

The mold compound, die attach, and lead frame materials used in the SOT-23 package will remain the same. Two qualification vehicles, a transistor and a diode, have been selected for each of the device functions and full electrical characterization of the BRTs over temperature has be performed on each BRT vehicle to ensure device functionality and electrical specifications are met.

Devices listed in this final PCN will be converted to Copper wire starting WW0109. After January 01, 2009, customer may receive devices with either Gold or Copper as conversion is implemented in our assembly facility. Conversion of specific devices will take place at the beginning of the specified month and devices containing Copper wire can be identified by the date code (1 or greater).

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QUALIFICATION PLAN:

Reliability testing was performed on qualification vehicles chosen based on die size, voltage rating, and run rates.

RELIABILITY RESULTS:

BCX19LT1G:

MSL Preconditioning	JEDEC MSL 1 @ 260C		0/1992
HTSL	Ta = 150C, 1008 hrs		0/504
Autoclave + PC	Ta=121C, RH=100%, psig~14.7	96 hrs	0/504
Temp Cycle + PC	Ta= -65/150C 1000 cycles		0/504
H3TRB + PC	Ta= 85C, RH=85%, 80% bias	1008 hrs	0/504
IOL +PC	Ta=25C, delta Tj = 100C max		
	Ton=Toff= 2min	15000 cycles	0/504

BAS21LT1G

MSL Preconditioning	JEDEC MSL 1 @ 260C		0/960
HTRB	Ta=150C, 1008 hrs , 80% bias	1008 hrs	0/320
IOL +PC	Ta=25C, delta Tj = 100C max		
	Ton=Toff= 2min	15000 cycles	0/320
Temp Cycle + PC	Ta= -65/150C 1000 cycles		0/319
Autoclave + PC	Ta=121C, RH=100%, psig~14.7	96 hrs	0/320
H3TRB + PC	Ta= 85C, RH=85%, 80% bias	1008 hrs	0/320
HTSL	Ta = 150C, 1008 hrs		0/320

ELECTRICAL CHARACTERIZATION PLAN:

Datasheet specifications and product electrical performance will remain unchanged

Characterization of each BRT device will be performed at three temperatures on 30 units from 3 lots

ELECTRICAL CHARACTERIZATION RESULTS:

Available upon request

CHANGED PART IDENTIFICATION:

Conversion of specific devices will take place at the beginning of the specified month, January 1st, 2009, and devices containing Copper wire can be identified by the date code (1 or greater).

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AFFECTED DEVICE LIST:

MMUN2111LT1
MMUN2111LT1G
MMUN2111LT3G
MMUN2112LT1G
MMUN2113LT1G
MMUN2113LT3G
MMUN2114LT1G
MMUN2115LT1
MMUN2115LT1G
MMUN2116LT1G
MMUN2132LT1G
MMUN2133LT1G
MMUN2211LT1
MMUN2211LT1G
MMUN2211LT3G
MMUN2212LT1G
MMUN2213LT1G
MMUN2214LT1G
MMUN2215LT1G
MMUN2216LT1G
MMUN2231LT1G
MMUN2232LT1G
MMUN2233LT1G
MMUN2234LT1
MMUN2234LT1G
MMUN2238LT1G
NSVMMUN2232LT1G
SMMUN1003LT1
SMMUN1003LT1G
SMMUN1004LT1
SMMUN1004LT1G
SMMUN2111LT1
SMMUN2111LT1G
SMMUN2111LT3
SMMUN2111LT3G
SMMUN2113LT1
SMMUN2113LT1G
SMMUN2114LT1G
SMMUN2116LT1
SMMUN2116LT1G
SMMUN2211LT1
SMMUN2211LT1G
SMMUN2211LT3
SMMUN2211LT3G
SMMUN2213LT1G
SMMUN2213LT3
SMMUN2213LT3G
SMMUN2214LT1
SMMUN2214LT1G
SMMUN2216LT1
SMMUN2216LT1G