



FINAL PRODUCT/PROCESS CHANGE NOTIFICATIONGeneric Copy

16 Oct 2007**SUBJECT: ON Semiconductor Final Product/Process Change Notification # 16049****TITLE: Final Notification for Gold wire changing to Copper wire on SOT-23 commodity parts****PROPOSED FIRST SHIP DATE: 16 Jan 2008****AFFECTED CHANGE CATEGORY: ON Semiconductor assembly – wire bond****AFFECTED PRODUCT DIVISION: Discrete Products****FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**Contact your local ON Semiconductor Sales Office or Terry Galloway <terry.galloway@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:

On Semiconductor is notifying customers of its plan to convert to Copper wire on commodity products of Small Signal PNP transistors, Small Signal NPN Transistors, and switching diodes 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 over temperature has been performed on each qualification vehicle to ensure device functionality and electrical specifications are met.

Devices listed in this final PCN will be converted to Copper wire starting January 01, 2008. After January 01, 2008, 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.


Final Product/Process Change Notification # 16049

Manufacturing Part Number	May have Copper wire after this date	May be Copper wire with this date code or later
MMBT2907ALT1	1/1/08	E
MMBT2907ALT1G	1/1/08	E
MMBT2907ALT3	1/1/08	E
MMBT2907ALT3G	1/1/08	E
BAS16LT1	3/1/08	H
BAS16LT1G	3/1/08	H
BAS16LT3	3/1/08	H
BAS16LT3G	3/1/08	H
BAS19LT1	3/1/08	H
BAS19LT1G	3/1/08	H
BAS19LT3	3/1/08	H
BAS19LT3G	3/1/08	H
BAS20LT1	3/1/08	H
BAS20LT1G	3/1/08	H
BAS21LT1	3/1/08	H
BAS21LT1G	3/1/08	H
BAS21LT3	3/1/08	H
BAS21LT3G	3/1/08	H
BAS21SLT1G	3/1/08	H
BAV70LT1	3/1/08	H
BAV70LT1G	3/1/08	H
BAV70LT3	3/1/08	H
BAV70LT3G	3/1/08	H
BAV74LT1	3/1/08	H
BAV74LT1G	3/1/08	H
BAV74LT3	3/1/08	H
BAV74LT3G	3/1/08	H
BAV99LT1	3/1/08	H
BAV99LT1G	3/1/08	H
BAV99LT3	3/1/08	H
BAV99LT3G	3/1/08	H
BAW56LT1	3/1/08	H
BAW56LT1G	3/1/08	H
BAW56LT3	3/1/08	H
BAW56LT3G	3/1/08	H
BCW30LT1	5/1/08	K
BCW30LT1G	5/1/08	K
BCW32LT1	5/1/08	K
BCW32LT1G	5/1/08	K
BCW33LT1	5/1/08	K
BCW33LT1G	5/1/08	K
BCW33LT3	5/1/08	K
BCW33LT3G	5/1/08	K


Final Product/Process Change Notification # 16049

Manufacturing Part Number	May have Copper wire after this date	May be Copper wire with this date code or later
BCW66GLT1	5/1/08	K
BCW66GLT1G	5/1/08	K
BCW70LT1	5/1/08	K
BCW70LT1G	5/1/08	K
BCW72LT1	5/1/08	K
BCW72LT1G	5/1/08	K
BCX17LT1	5/1/08	K
BCX17LT1G	5/1/08	K
BCX18LT1	5/1/08	K
BCX18LT1G	5/1/08	K
BSS64LT1	5/1/08	K
BSS64LT1G	5/1/08	K
MMBT2222ALT1	5/1/08	K
MMBT2222ALT1G	5/1/08	K
MMBT2222ALT3	5/1/08	K
MMBT2222ALT3G	5/1/08	K
MMBT2222LT1	5/1/08	K
MMBT2222LT1G	5/1/08	K
MMBT2222LT3	5/1/08	K
MMBT2222LT3G	5/1/08	K
MMBT4126LT1	5/1/08	K
MMBT4126LT1G	5/1/08	K
MMBT4126LT3G	5/1/08	K
MMBT4401LT1	5/1/08	K
MMBT4401LT1G	5/1/08	K
MMBT4401LT3	5/1/08	K
MMBT4401LT3G	5/1/08	K
MMBT4403LT1	5/1/08	K
MMBT4403LT1G	5/1/08	K
MMBT4403LT3	5/1/08	K
MMBT4403LT3G	5/1/08	K
MMBT5550LT1	5/1/08	K
MMBT5550LT1G	5/1/08	K
MMBT5550LT3G	5/1/08	K
MMBT5551LT1	5/1/08	K
MMBT5551LT1G	5/1/08	K
MMBT5551LT3	5/1/08	K
MMBT5551LT3G	5/1/08	K
MMBTA05LT1	5/1/08	K
MMBTA05LT1G	5/1/08	K
MMBTA05LT3	5/1/08	K


Final Product/Process Change Notification # 16049

Manufacturing Part Number	May have Copper wire after this date	May be Copper wire with this date code or later
MMBTA05LT3G	5/1/08	K
MMBTA06LT1	5/1/08	K
MMBTA06LT1G	5/1/08	K
MMBTA06LT3	5/1/08	K
MMBTA06LT3G	5/1/08	K
MMBTA55LT1	5/1/08	K
MMBTA55LT1G	5/1/08	K
MMBTA55LT3	5/1/08	K
MMBTA55LT3G	5/1/08	K
MMBTA56LT1G	5/1/08	K
MMBTA56LT3	5/1/08	K
MMBTA56LT3G	5/1/08	K
MMBTA92LT1	5/1/08	K
MMBTA92LT1G	5/1/08	K
MMBTA92LT3	5/1/08	K
MMBTA92LT3G	5/1/08	K
MMBTA93LT1	5/1/08	K
MMBTA93LT1G	5/1/08	K
BC846BLT1	6/1/08	L
BC846BLT1G	6/1/08	L
BC846BLT3	6/1/08	L
BC846BLT3G	6/1/08	L
BC847BLT1	6/1/08	L
BC847BLT1G	6/1/08	L
BC847BLT3	6/1/08	L
BC847BLT3G	6/1/08	L
BC847CLT1	6/1/08	L
BC847CLT1G	6/1/08	L
BC847CLT3	6/1/08	L
BC847CLT3G	6/1/08	L
BC848BLT1	6/1/08	L
BC848BLT1G	6/1/08	L
BC848BLT3	6/1/08	L
BC848BLT3G	6/1/08	L
BC848CLT1	6/1/08	L
BC848CLT1G	6/1/08	L
BC849BLT1	6/1/08	L
BC849BLT1G	6/1/08	L
BC849BLT3	6/1/08	L
BC849BLT3G	6/1/08	L
BC849CLT1	6/1/08	L
BC849CLT1G	6/1/08	L


Final Product/Process Change Notification # 16049

Manufacturing Part Number	May have Copper wire after this date	May be Copper wire with this date code or later
BC850BLT1	6/1/08	L
BC850BLT1G	6/1/08	L
BC850CLT1	6/1/08	L
BC850CLT1G	6/1/08	L
BC856BLT1	6/1/08	L
BC856BLT1G	6/1/08	L
BC856BLT3	6/1/08	L
BC856BLT3G	6/1/08	L
BC857BLT1	6/1/08	L
BC857BLT1G	6/1/08	L
BC857BLT3	6/1/08	L
BC857BLT3G	6/1/08	L
BC858BLT1	6/1/08	L
BC858BLT1G	6/1/08	L
BC858BLT3	6/1/08	L
BC858BLT3G	6/1/08	L
BC858CLT1	6/1/08	L
BC858CLT1G	6/1/08	L
BC858CLT3	6/1/08	L
BC858CLT3G	6/1/08	L
BC859BLT1	6/1/08	L
BC859BLT1G	6/1/08	L
BC859BLT3	6/1/08	L
BC859BLT3G	6/1/08	L
BC859CLT1	6/1/08	L
BC859CLT1G	6/1/08	L
MMBD2835LT1	6/1/08	L
MMBD2835LT1G	6/1/08	L
MMBD2836LT1	6/1/08	L
MMBD2836LT1G	6/1/08	L
MMBD2837LT1	6/1/08	L
MMBD2837LT1G	6/1/08	L
MMBD2838LT1	6/1/08	L
MMBD2838LT1G	6/1/08	L
MMBD6050LT1	6/1/08	L
MMBD6050LT1G	6/1/08	L
MMBD6050LT3	6/1/08	L
MMBD6050LT3G	6/1/08	L
MMBD6100LT1	6/1/08	L
MMBD6100LT1G	6/1/08	L
MMBD6100LT3	6/1/08	L
MMBD6100LT3G	6/1/08	L


Final Product/Process Change Notification # 16049

Manufacturing Part Number	May have Copper wire after this date	May be Copper wire with this date code or later
MMBD7000LT1	6/1/08	L
MMBD7000LT1G	6/1/08	L
MMBD7000LT3	6/1/08	L
MMBD7000LT3G	6/1/08	L
MMBD914LT1	6/1/08	L
MMBD914LT1G	6/1/08	L
MMBD914LT3	6/1/08	L
MMBD914LT3G	6/1/08	L
BC807-25LT1	8/1/08	P
BC807-25LT1G	8/1/08	P
BC807-25LT3	8/1/08	P
BC807-25LT3G	8/1/08	P
BC807-40LT1	8/1/08	P
BC807-40LT1G	8/1/08	P
BC807-40LT3	8/1/08	P
BC807-40LT3G	8/1/08	P
BC808-25LT1	8/1/08	P
BC808-25LT1G	8/1/08	P
BC808-40LT1	8/1/08	P
BC808-40LT1G	8/1/08	P
BC817-25LT1	8/1/08	P
BC817-25LT1G	8/1/08	P
BC817-25LT3	8/1/08	P
BC817-25LT3G	8/1/08	P
BC817-40LT1	8/1/08	P
BC817-40LT1G	8/1/08	P
BC817-40LT3	8/1/08	P
BC817-40LT3G	8/1/08	P
MMBT3904LT1	9/1/08	U
MMBT3904LT1G	9/1/08	U
MMBT3904LT3	9/1/08	U
MMBT3904LT3G	9/1/08	U
MMBT3906LT1	9/1/08	U
MMBT3906LT1G	9/1/08	U
MMBT3906LT3	9/1/08	U
MMBT3906LT3G	9/1/08	U



Final Product/Process Change Notification # 16049

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 qual vehicle device will be performed to the following requirements:

- 1) Three temperature characterization on 30 units from 3 lots
- 2) ESD performance (HBM, MM) on 15 units from 1 lot

ELECTRICAL CHARACTERIZATION RESULTS:

Available upon request

CHANGED PART IDENTIFICATION:

Date codes for changes will be listed in the FPCN. Phase 1 change "E", phase 2 change "H", phase 3 change "K", phase 4 change "L", phase 5 change "P", and phase 6 change "U" or greater.

**Final Product/Process Change Notification # 16049****AFFECTED DEVICE LIST:****PART**

BAS16LT1
BAS16LT1G
BAS16LT3
BAS16LT3G
BAS19LT1
BAS19LT1G
BAS19LT3
BAS19LT3G
BAS20LT1
BAS20LT1G
BAS21LT1
BAS21LT1G
BAS21LT3
BAS21LT3G
BAS21SLT1G
BAV70LT1
BAV70LT1G
BAV70LT3
BAV70LT3G
BAV74LT1
BAV74LT1G
BAV74LT3
BAV74LT3G
BAV99LT1
BAV99LT1G
BAV99LT3
BAV99LT3G
BAW56LT1
BAW56LT1G
BAW56LT3
BAW56LT3G
BC807-25LT1
BC807-25LT1G
BC807-25LT3
BC807-25LT3G
BC807-40LT1
BC807-40LT1G
BC807-40LT3
BC807-40LT3G
BC808-25LT1
BC808-25LT1G
BC808-40LT1
BC808-40LT1G
BC817-25LT1
BC817-25LT1G
BC817-25LT3
BC817-25LT3G

**Final Product/Process Change Notification # 16049**

BC817-40LT1
BC817-40LT1G
BC817-40LT3
BC817-40LT3G
BC846BLT1
BC846BLT1G
BC846BLT3
BC846BLT3G
BC847BLT1
BC847BLT1G
BC847BLT3
BC847BLT3G
BC847CLT1
BC847CLT1G
BC847CLT3
BC847CLT3G
BC848BLT1
BC848BLT1G
BC848BLT3
BC848BLT3G
BC848CLT1
BC848CLT1G
BC849BLT1
BC849BLT1G
BC849BLT3
BC849BLT3G
BC849CLT1
BC849CLT1G
BC850BLT1
BC850BLT1G
BC850CLT1
BC850CLT1G
BC856BLT1
BC856BLT1G
BC856BLT3
BC856BLT3G
BC857BLT1
BC857BLT1G
BC857BLT3
BC857BLT3G
BC858BLT1
BC858BLT1G
BC858BLT3
BC858BLT3G
BC858CLT1
BC858CLT1G
BC858CLT3
BC858CLT3G
BC859BLT1

**Final Product/Process Change Notification # 16049**

BC859BLT1G
BC859BLT3
BC859BLT3G
BC859CLT1
BC859CLT1G
BCW30LT1
BCW30LT1G
BCW32LT1
BCW32LT1G
BCW33LT1
BCW33LT1G
BCW33LT3
BCW33LT3G
BCW66GLT1
BCW66GLT1G
BCW70LT1
BCW70LT1G
BCW72LT1
BCW72LT1G
BCX17LT1
BCX17LT1G
BCX18LT1
BCX18LT1G
BSS64LT1
BSS64LT1G
MMBD2835LT1
MMBD2835LT1G
MMBD2836LT1
MMBD2836LT1G
MMBD2837LT1
MMBD2837LT1G
MMBD2838LT1
MMBD2838LT1G
MMBD6050LT1
MMBD6050LT1G
MMBD6050LT3
MMBD6050LT3G
MMBD6100LT1
MMBD6100LT1G
MMBD6100LT3
MMBD6100LT3G
MMBD7000LT1
MMBD7000LT1G
MMBD7000LT3
MMBD7000LT3G
MMBD914LT1
MMBD914LT1G
MMBD914LT3
MMBD914LT3G

**Final Product/Process Change Notification # 16049**

MMBT2222ALT1
MMBT2222ALT1G
MMBT2222ALT3
MMBT2222ALT3G
MMBT2222LT1
MMBT2222LT1G
MMBT2222LT3
MMBT2222LT3G
MMBT2907ALT1
MMBT2907ALT1G
MMBT2907ALT3
MMBT2907ALT3G
MMBT3904LT1
MMBT3904LT1G
MMBT3904LT3
MMBT3904LT3G
MMBT3906LT1
MMBT3906LT1G
MMBT3906LT3
MMBT3906LT3G
MMBT4126LT1
MMBT4126LT1G
MMBT4126LT3G
MMBT4401LT1
MMBT4401LT1G
MMBT4401LT3
MMBT4401LT3G
MMBT4403LT1
MMBT4403LT1G
MMBT4403LT3
MMBT4403LT3G
MMBT5550LT1
MMBT5550LT1G
MMBT5550LT3G
MMBT5551LT1
MMBT5551LT1G
MMBT5551LT3
MMBT5551LT3G
MMBTA05LT1
MMBTA05LT1G
MMBTA05LT3
MMBTA05LT3G
MMBTA06LT1
MMBTA06LT1G
MMBTA06LT3
MMBTA06LT3G
MMBTA55LT1
MMBTA55LT1G
MMBTA55LT3



Final Product/Process Change Notification # 16049

MMBTA55LT3G
MMBTA56LT1G
MMBTA56LT3
MMBTA56LT3G
MMBTA92LT1
MMBTA92LT1G
MMBTA92LT3
MMBTA92LT3G
MMBTA93LT1
MMBTA93LT1G