



Title of Change:	Change of Au Alloy to AlTiNiAg as a new Back Metal scheme for Small Signal Transistor devices in TSOP6 package.						
Proposed Changed Material First Ship Date:	17 August 2018						
Current Material Last Order Date:	11 February 2018 Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability.						
Current Material Last Delivery Date:	11 May 2018 The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory.						
Product Category:	Active components – Discrete components						
Contact information	Contact your local ON Semiconductor Sales Office or farrah.omar@onsemi.com						
Samples	Contact your local ON Semiconductor Sales Office to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification.						
Sample Availability Date:	1 November 2017						
PPAP Availability Date:	1 November 2017						
Additional Reliability Data	Contact your local ON Semiconductor Sales Office or MohdAzizi.Azman@onsemi.com .						
Type of Notification	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 12 months prior to implementation of the change or earlier upon customer approval. ON Semiconductor will consider this proposed change and its conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com .						
Change Category	Type of Change						
Process – Wafer Production	New / change of metallization (specifically chip backside)						
Description and Purpose: ON Semiconductor is notifying customers of ISMF Fabrication facility (Seremban, Malaysia) to perform back metal scheme change (from Au Alloy to AlTiNiAg) in order to continue meeting or exceeding ON Semiconductor standards. The ISMF Fab facility is an ON Semiconductor owned wafer fab that has been producing products for ON Semiconductor that is TS 16949, ISO-9001 and ISO-14000 certified. Reliability Qualification has been performed. Datasheet specifications and product electrical performance remain unchanged.							
<table border="1"> <thead> <tr> <th>Material to be changed</th><th>Before Change Description</th><th>After Change Description</th></tr> </thead> <tbody> <tr> <td>Back Metal type</td><td>Au Alloy</td><td>AlTiNiAg</td></tr> </tbody> </table>		Material to be changed	Before Change Description	After Change Description	Back Metal type	Au Alloy	AlTiNiAg
Material to be changed	Before Change Description	After Change Description					
Back Metal type	Au Alloy	AlTiNiAg					
Reason / Motivation for Change:	- Quality improvement : Yes. Eliminate backmetal protrusion (lump) at the back of wafer. - Change benefits for customer : Product electrical performance remain unchanged. - Risk for late release for customer : Longer lead time due to limited flexibility in terms of manufacturing and capacity planning.						


Anticipated impact on fit, form, function, reliability, product safety or manufacturability

The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by ON Semiconductor in relation to the PCN, associated risks are verified and excluded.

No anticipated impacts.

Sites Affected:

☐ All site(s)
 ☐ not applicable
 ☒ ON Semiconductor site(s) : **ON ISMF, Malaysia**
 ☐ External Foundry/Subcon site(s)

Marking of Parts/ Traceability of Change:

After the expiration of this FPCN, devices will be produced with AlTiNiAg back metal scheme. New products will have a Date Code of WW32, 2018 or greater.

Reliability Data Summary:

DEVICE NAME: SMBT35200MT1G

RMS: S30328

PACKAGE: TSOP6

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
TC	JESD22-A104	Ta = -65°C to +150°C	1000 cyc	0/231
H3TRB	JESD22-A110	85°C, 85% RH, 18.8psig, bias	1008 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/924
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 10 sec		0/45

Note: AEC-1pager is attached.

To access file attachments on pdf copy of PCN, please be guided by the steps below:

1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file/s

Electrical Characteristic Summary:

Electrical characteristics are not impacted.

**List of Affected Standard Parts:**

Current Part Number	Qualification Vehicle
SMBT35200MT1G	SMBT35200MT1G
SNSS30201MR6T1G	
SNSS35200MR6T1G	
NSVT489AMT1G	