



# Final Product/Process Change Notification

Document #:FPCN26062X

Issue Date:23 Dec 2024

<b>Title of Change:</b>	Au to PCC wire change, Leadframe material change from AG plated to Cu plated and add alternative mold compound for JFET assembled in SOT-23 package
<b>Proposed First Ship date:</b>	31 Mar 2025 or earlier if approved by customer
<b>Contact Information:</b>	Contact your local onsemi Sales Office
<b>PCN Samples Contact:</b>	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
<b>Additional Reliability Data:</b>	Contact your local onsemi Sales Office
<b>Type of Notification:</b>	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. onsemi will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a>
<b>Marking of Parts/ Traceability of Change:</b>	Changed material can be identified by lot code or date code
<b>Change Category:</b>	Assembly Change
<b>Change Sub-Category(s):</b>	Material Change

<b>Sites Affected:</b>	
<b>onsemi Sites</b>	<b>External Foundry/Subcon Sites</b>
onsemi Leshan, China	None

## Description and Purpose:

Upon the expiration of this PCN, these devices will be built with PCC wire with Cu plated leadframe and additional alternative mold compound JSKH KHG300L at the same site. Other BOM remains unchanged. Datasheet specifications and product electrical performance remain unchanged. Reliability qualification and full electrical characterization over temperature will be performed. The PCC wire has higher thermal conductivity and lower resistivity which benefits for customer application.

	Before Change Description	After Change Description
<b>LeadFrame</b>	Ag plated leadframe	Cu plated leadframe
<b>Bond Wire</b>	0.8 mils Au Wire	0.8 mils PCC wire
<b>Mold compound</b>	Hysol GR640HV/ SDM GE 200F	Hysol GR640HV/ SDM GE 200F/JSKH KHG300L

There is no product marking change as a result of this change.



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## Reliability Data Summary:

**QV DEVICE NAME: MMBFJ176**

**RMS: 97376, 100645**

**PACKAGE: SOT-23 J176 MARKED 6X**

Test	Specification	Condition	Interval	Result
HTGB	JESD22-A108	Ta=150°C, 100% max rated V	1008hrs	0/84
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/84
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/84
H3TRB	JESD22-A101	Temp = 85°C, 85% RH, bias	1008hrs	0/84
TC	JESD22-A104	Ta= -55°C to +150°C, mount on board	1000 cyc	0/84
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/84
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/84
RSH	JESD22- B106	Ta = 268C, 10 sec		0/84

**QV DEVICE NAME: 5449-NB54014**

**RMS: 97409**

**PACKAGE: SOT23 3L AU SNGL HPBF HE**

Test	Specification	Condition	Interval	Result
HTGB	JESD22-A108	Ta=150°C, 100% max rated V	1008hrs	0/84
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/84
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/84
HAST	JESD22-A110	Temp = 130C, 85% RH, ~ 18.8 psig, bias = 80% of rated V or 100V max	96 hrs	0/84
TC	JESD22-A104	Ta= -55°C to +150°C, mount on board	1000 cyc	0/84
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/84
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/84
RSH	JESD22- B106	Ta = 268C, 10 sec		0/84

## Electrical Characteristics Summary:

Electrical characteristics are not impacted.



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## List of Affected Parts:

**Note:** Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the **PCN Customized Portal**.

Part Number	Qualification Vehicle
MMBF4416A	5449-NB54014
MMBF4093	5449-NB54014
MMBFJ176	MMBFJ176
MMBFJ111	5449-NB54014
MMBF5486	5449-NB54014
MMBF5485	5449-NB54014
MMBFJ201	5449-NB54014
MMBFJ113	5449-NB54014
MMBFJ211	5449-NB54014
MMBFJ202	5449-NB54014
MMBFJ112	5449-NB54014
MMBF5484	5449-NB54014
MMBFJ270	MMBFJ176
MMBF4416	5449-NB54014
MMBF4117	5449-NB54014
BSR57	5449-NB54014
BSR58	5449-NB54014
MMBF5103	5449-NB54014
MMBF5457	5449-NB54014