Final Product/Process Change Notification

Document #:FPCN24342X
Issue Date:21 Dec 2021

Title of Change:	Changing wire bond from Au to Pd-coated Cu for JFETs assembled in SOT-23.
Proposed First Ship date:	16 Apr 2022 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Andy.Tao@onsemi.com
PCN Samples Contact:	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.
Additional Reliability Data:	Contact your local onsemi Sales Office or c.l.yang@lps.com.cn
Type of Notification:	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 PCN.Support@onsemi.com
Marking of Parts/ Traceability of Change:	At the expiration of this PCN devices will be assembled with 0.8 mils PD-coated Cu wire at onsemi existing Leshan facility. Products assembled with 0.8 mils PD-coated Cu wire from the onsemi facility will have a Finish Goods Date Code of WW15 2022 or greater.
Change Category:	Wafer Fab Change, Assembly Change
Change Sub-Category(s):	Material Change

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
Leshan Phoenix Semiconductor, China	None
onsemi Roznov, Czech Republic	

Description and Purpose:

onsemi is notifying customers of its use of 0.8 mils Pd-coated Cu wire for JFET devices assembled in SOT-23 at onsemi Leshan, China facility. The change requires wafer top metal thickness increase from 15 KÅ AlSi to 20 KÅ AlSi. Upon the expiration of this PCN, these devices will be built with 0.8 mils Pd-coated Cu wire and will use the thicker top at the same site. Datasheet specifications and product electrical performance remain unchanged. Reliability Qualification and full electrical characterization over temperature has been performed.

	Before Change Description	**After Change Description**
Bond Wire	0.8 mils Au wire	0.8 mils PD-coated Cu wire
Wafer top metal	15KA AlSi	20KA AlSi

Reliability Data Summary:

QV DEVICE NAME : SMMBFJ177LT1G
RMS: 79236
PACKAGE: SOT23

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta=150°C	2016 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30K cyc	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	2000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 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	-	-
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30
SD	JSTD002	Ta = 245C, 5 sec	-	0/30

QV DEVICE NAME : SMMBF4393LT1G
RMS: 79238
PACKAGE: SOT23

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/77
HTGB	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/77
HTSL	JESD22-A103	Ta=150°C	2016 hrs	0/77
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	30K cyc	0/77
TC	JESD22-A104	Ta= -65°C to +150°C	2000 cyc	0/77
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/77
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/77
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	-	-
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30
SD	JSTD002	Ta = 245C, 5 sec	-	0/10

Electrical Characteristics Summary:

Full characterization and ESD performance meet datasheet specification. Detail of electrical characterization result is available upon request.

Electrical characteristics are not impacted.

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
MMBFJ175LT3G	SMMBFJ175LT1G

MMBF4393LT3G	SMMBF4393LT1G
MMBFJ310LT3G	SMMBF4393LT1G
MMBFU310LT1G	SMMBF4393LT1G
MMBFJ175LT1G	SMMBFJ175LT1G
MMBFJ309LT1G	SMMBF4393LT1G
MMBF4391LT1G	SMMBF4393LT1G
MMBF4393LT1G	SMMBF4393LT1G
MMBF4392LT1G	SMMBF4393LT1G
MMBFJ177LT1G	SMMBFJ175LT1G
MMBFJ310LT1G	SMMBF4393LT1G