



Final Product/Process Change Notification

Document #:FPCN25167X

Issue Date:21 Jul 2023

Title of Change:	Au wire to Cu wire conversion for onsemi Leshan Zener and Transistor product	
Proposed First Ship date:	21 Oct 2023 or earlier if approved by customer	
Contact Information:	Contact your local onsemi Sales Office or Jim.Peng@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:	Assembly Date Code	
Change Category:	Assembly Change	
Change Sub-Category(s):	Material Change	
Sites Affected:		
onsemi Sites	External Foundry/Subcon Sites	
onsemi Leshan, China	None	
Description and Purpose:		
onsemi is notifying customer of its conversion from Au wire to bare Cu wire for below affected part number. Upon the expiration of this PCN, devices will be built with bare Cu wire at the same site. Datasheet specifications and product electrical performance remain unchanged. Reliability qualification and full electrical characterization over temperature were performed for qualification vehicle device. The Cu wire is with higher thermal conductivity and lower resistivity that benefits for customer application. This is to unify the wire material in assembly process.		
	From	To
Bond Wire	0.8 mils Au wire	0.8 mils bare Cu wire



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Reliability Data Summary:

Qual Vehicle Device: SMBT2000T1G

RMS: 39349, 43095

Package: SC-74

Test	Specification	Condition	Interval	Result
PC	JESD22-A113	MSL 1 @260 °C	Before TC, UHAST, HAST, IOL	0/924
HAST	JESD22-A110	Ta = 130°C, 85%RH, ~18.8 psig, 80% rated V	192 hrs	0/231
UHAST	JESD22-A118	Ta = 130°C, 85%RH, ~ 18.8 psig	96 hrs	0/231
TC	JESD22-A104	Ta = - 65°C to +150°C	1000 cycs	0/231
IOL	MIL-STD-750 Method 1037	Ta =25°C, Delta Tj=100C°, t(on)=t(off)= 2 min	30000 cycs	0/231
HTSL	JESD22- A103	Ta =150°C, no bias	2016 hrs	0/231
HTRB	JESD22-A108	Ta =150°C , bias = 100% of rated V	1008 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec	-	0/30
SD	J-STD-002, B102	Ta = 245°C, 5 sec	-	0/30

Qual Vehicle Device: SZMMBZ47VALT1G

RMS: 41154

Package: SOT-23

Test	Specification	Condition	Interval	Result
PC	JESD22-A113	MSL 1 @260 °C	Before TC, UHAST, HAST, IOL	0/924
HAST	JESD22-A110	Ta = 130°C, 85%RH, ~18.8 psig, 80% rated V	192 hrs	0/231
UHAST	JESD22-A118	Ta = 130°C, 85%RH, ~ 18.8 psig	96 hrs	0/231
TC	JESD22-A104	Ta = - 65°C to +150°C	1000 cycs	0/231
IOL	MIL-STD-750 Method 1037	Ta =25°C, Delta Tj=100C°, t(on)=t(off)= 2 min	30000 cycs	0/231
HTSL	JESD22- A103	Ta =150°C, no bias	2016 hrs	0/231
HTRB	JESD22-A108	Ta =150°C , bias = 100% of rated V	1008 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec	-	0/30
SD	J-STD-002, B102	Ta = 245°C, 5 sec	-	0/30

Qual Vehicle Device: SESD9L5.0ST5G

RMS: 76922

Package: SOD-923

Test	Specification	Condition	Interval	Result
PC	JESD22-A113	MSL 1 @260 °C	Before TC, UHAST, HAST	0/693
HAST	JESD22-A110	Ta = 130°C, 85%RH, ~18.8 psig, 80% rated V	192 hrs	0/231
UHAST	JESD22-A118	Ta = 130°C, 85%RH, ~ 18.8 psig	96 hrs	0/231
TC	JESD22-A104	Ta = - 65°C to +150°C	1000 cycs	0/231
HTSL	JESD22- A103	Ta =150°C, no bias	2016 hrs	0/231
HTRB	JESD22-A108	Ta =150°C , bias = 100% of rated V	1008 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec	-	0/30
SD	J-STD-002, B102	Ta = 245°C, 5 sec	-	0/30

Qual Vehicle Device: NUP1128HT1G

RMS: 50665

Package: SOD-323

Test	Specification	Condition	Interval	Result
PC	JESD22-A113	MSL 1 @260 °C	Before TC, UHAST, HAST, IOL	0/924
HAST	JESD22-A110	Ta = 130°C, 85%RH, ~18.8 psig, 80% rated V	192 hrs	0/231
UHAST	JESD22-A118	Ta = 130°C, 85%RH, ~ 18.8 psig	96 hrs	0/231
TC	JESD22-A104	Ta = - 65°C to +150°C	1000 cycs	0/231
IOL	MIL-STD-750 Method 1037	Ta =25°C, Delta Tj=100C°, t(on)=t(off)= 2 min	30000 cycs	0/231
HTSL	JESD22- A103	Ta =150°C, no bias	2016 hrs	0/231
HTRB	JESD22-A108	Ta =150°C , bias = 100% of rated V	2016 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec	-	0/30
SD	J-STD-002, B102	Ta = 245°C, 5 sec	-	0/30

Qual Vehicle Device: SZCM1213A-04SO

RMS: 76697

Package: SC-74

Test	Specification	Condition	Interval	Result
PC	JESD22-A113	MSL 1 @260 °C	Before TC, UHAST, HAST	0/693
HAST	JESD22-A110	Ta = 130°C, 85%RH, ~18.8 psig, 80% rated V	192 hrs	0/231
UHAST	JESD22-A118	Ta = 130°C, 85%RH, ~ 18.8 psig	96 hrs	0/231
TC	JESD22-A104	Ta = - 65°C to +150°C	1000 cycs	0/231
HTSL	JESD22- A103	Ta =150°C, no bias	2016 hrs	0/231
HTRB	JESD22-A108	Ta =150°C , bias = 100% of rated V	1008 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec	-	0/30
SD	J-STD-002, B102	Ta = 245°C, 5 sec	-	0/30

Electrical Characteristics Summary:

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
NSM6056MT1G	SMBT2000T1G
MMBZ5V6ALT3G	SZMMBZ47VALT1G
MMBZ5V6ALT1G	SZMMBZ47VALT1G
ESD9101P2T5G	SESD9L5.0ST5G
ESD8351XV2T1G	NUP1128HT1G
ESD7371HT1G	NUP1128HT1G



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ESD7351XV2T1G	NUP1128HT1G
ESD7351HT1G	NUP1128HT1G
ESD7002WTT1G	SZCM1213A-04SO
CM1213A-04S7	SZCM1213A-04SO

Appendix A: Changed Products

PCN#: FPCN25167X
Issue Date: Jul 20, 2023

DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NSM6056MT1G		SMBT2000T1G	NA	
MMBZ5V6ALT1G		SZMMBZ47VALT1G	NA	
ESD9101P2T5G		SESD9L5.0ST5G	NA	
ESD8351XV2T1G		NUP1128HT1G	NA	
ESD7371HT1G		NUP1128HT1G	NA	
ESD7351XV2T1G		NUP1128HT1G	NA	
ESD7351HT1G		NUP1128HT1G	NA	
ESD7002WTT1G		SZCM1213A-04SO	NA	
CM1213A-04S7		SZCM1213A-04SO	NA	
MMBZ5V6ALT3G		SZMMBZ47VALT1G	NA	