



Title of Change:	Pd-coated Cu wire qualification on SC88/88A transistor and Bias Resistor Transistor at ON Semiconductor, Leshan, China facility.	
Proposed first ship date:	15 March 2019	
Contact information:	Contact your local ON Semiconductor Sales Office or <Andy.Tao@onsemi.com>	
Samples:	Contact your local ON Semiconductor Sales Office or <PCN.samples@onsemi.com> 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.	
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Rui.Zhang@onsemi.com>	
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. ON Semiconductor 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>	
Change Part Identification:	Products assembled with 0.8 mils Pd-coated Cu wire from ON Semiconductor Leshan facility will have a Finish Goods Date Code of WW11, 2019 or later.	
Change Category:	<input type="checkbox"/> Wafer Fab Change <input checked="" type="checkbox"/> Assembly Change <input type="checkbox"/> Test Change <input type="checkbox"/> Other _____	
Change Sub-Category(s):	<input type="checkbox"/> Manufacturing Site Addition <input checked="" type="checkbox"/> Material Change <input type="checkbox"/> Datasheet/Product Doc change <input type="checkbox"/> Manufacturing Site Transfer <input type="checkbox"/> Product specific change <input type="checkbox"/> Shipping/Packaging/Marking <input type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Other: _____	
Sites Affected:	ON Semiconductor Sites: ON Leshan, China	External Foundry/Subcon Sites: None
Description and Purpose:		
<p>ON Semiconductor is notifying customers of its use of Pd-coated Cu wire for their impacted devices at ON Semiconductor's Leshan, China facility. Discrete products built with bipolar transistor are represented by this Process Change Notice. At the expiration of this PCN, these devices will be built with Pd-coated Cu wire at the same site. Datasheet specifications and product electrical performance remain unchanged. Reliability Qualification and full electrical characterization over temperature has been performed.</p> <p>Customers, that require to be sourced by automotive graded devices, have to change ordering code to automotive part number version prior the expiration of this PCN, which allows extended time for qualification and assures automotive PPAP coverage. The proposed change still needs to be qualified by customers affecting automotive devices as well. Change release for automotive versions is expected by WW11, 2019 or greater.</p> <p>In case customer will stay with standard device, general PCN rules are applied (90 days for PCN implementation), no PPAP coverage, no site and change control. ON Semiconductor Customer service will provide assistance in the backlog transfer process.</p>		
	Before Change Description	After Change Description
Bond Wire	0.8mil bare Cu wire	0.8mil Pd-coated Cu wire



Reliability Data Summary:

QV DEVICE NAME: SMUN5211DW1T1G

RMS: 40517

PACKAGE: SC88

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta= _150_ °C, 100__% max rated V	1008hrs	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	192hrs	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	-	0/1305
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30

QV DEVICE NAME: SBC846BDW1T1G

RMS: 40518

PACKAGE: SC88

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta= _150_ °C, 100__% max rated V	1008hrs	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	192hrs	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	-	0/1305
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30



QV DEVICE NAME: BC856BDW1T1G

RMS: 40519

PACKAGE: SC88

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 100% max rated V	1008hrs	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
H3TRB	JESD22-A101	85°C, 85% RH, V=80% rated V or 100V max.	2016 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	-	0/1305
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30

Electrical Characteristic Summary:

Three temperature 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:

Part Number	Qualification Vehicle
MUN5135DW1T1G	SMUN5211DW1T1G
BC857CDW1T1G	BC856BDW1T1G
MUN5215DW1T1G	SMUN5211DW1T1G
MUN5237DW1T1G	SMUN5211DW1T1G
NST45011MW6T1G	SBC846BDW1T1G
MBT6429DW1T1G	SBC846BDW1T1G
UMZ1NT1G	SMUN5211DW1T1G
NST65011MW6T1G	SBC846BDW1T1G
MUN5115DW1T1G	SMUN5211DW1T1G
MUN5116DW1T1G	SMUN5211DW1T1G
MUN5231DW1T1G	SMUN5211DW1T1G
MUN5131DW1T1G	SMUN5211DW1T1G
NST65010MW6T1G	BC856BDW1T1G
MUN5331DW1T1G	SMUN5211DW1T1G



MUN5133DW1T1G	SMUN5211DW1T1G
MUN5132DW1T1G	SMUN5211DW1T1G
MUN5130DW1T1G	SMUN5211DW1T1G
MUN5134DW1T1G	SMUN5211DW1T1G
MUN5136DW1T1G	SMUN5211DW1T1G
MUN5137DW1T1G	SMUN5211DW1T1G
MUN5315DW1T1G	SMUN5211DW1T1G
NSB4904DW1T1G	SMUN5211DW1T1G



Appendix A: Changed Products

Product	Customer Part Number	Qualification Vehicle
BC857CDW1T1G		BC856BDW1T1G
MBT6429DW1T1G		SBC846BDW1T1G
MUN5115DW1T1G		SMUN5211DW1T1G
MUN5116DW1T1G		SMUN5211DW1T1G
MUN5130DW1T1G		SMUN5211DW1T1G
MUN5131DW1T1G		SMUN5211DW1T1G
MUN5132DW1T1G		SMUN5211DW1T1G
MUN5133DW1T1G		SMUN5211DW1T1G
MUN5134DW1T1G		SMUN5211DW1T1G
MUN5135DW1T1G		SMUN5211DW1T1G
MUN5136DW1T1G		SMUN5211DW1T1G
MUN5137DW1T1G		SMUN5211DW1T1G
MUN5215DW1T1G		SMUN5211DW1T1G
MUN5231DW1T1G		SMUN5211DW1T1G
MUN5237DW1T1G		SMUN5211DW1T1G
MUN5315DW1T1G		SMUN5211DW1T1G
MUN5331DW1T1G		SMUN5211DW1T1G
NSB4904DW1T1G		SMUN5211DW1T1G
NST45011MW6T1G		SBC846BDW1T1G
NST65010MW6T1G		BC856BDW1T1G
NST65011MW6T1G		SBC846BDW1T1G
UMZ1NT1G		SMUN5211DW1T1G