



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:	1 April 2018							
Contact information:	Contact your local ON Semiconductor Sales Office or <Andy.Tao@onsemi.com>							
Samples:	Contact your local ON Semiconductor Sales Office							
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <ffvf9f @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:	At the expiration of this FPCN devices will be assembled with <i>Pd-coated Cu Wire</i> at ON Semiconductor's existing Leshan facility. Products assembled with Pd-coated Cu Wire from the ON Semiconductor facility will have a Finish Goods Date Code of WW13, 2018 or greater.							
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 Change/Addition <input checked="" type="checkbox"/> Material Change <input type="checkbox"/> Datasheet/Product Doc change <input type="checkbox"/> Manufacturing Process Change <input type="checkbox"/> Product specific change <input type="checkbox"/> Shipping/Packaging/Marking <input type="checkbox"/> Other: _____							
Sites Affected:	ON Semiconductor Sites: ON Leshan, China	External Foundry/Subcon Sites: None						
Description and Purpose:								
This is to notify customers of the qualification of Pd-coated Cu wire for the Discrete products built with bipolar transistor at ON Semiconductor's Leshan, China facility.								
<table border="1"> <thead> <tr> <th style="background-color: #d9ead3;">Material to be changed</th> <th style="background-color: #d9ead3;">Before Change Description</th> <th style="background-color: #d9ead3;">After Change Description</th> </tr> </thead> <tbody> <tr> <td>Wire</td> <td>0.8mil bare Cu wire</td> <td>0.8mil Pd-coated Cu wire</td> </tr> </tbody> </table>			Material to be changed	Before Change Description	After Change Description	Wire	0.8mil bare Cu wire	0.8mil Pd-coated Cu wire
Material to be changed	Before Change Description	After Change Description						
Wire	0.8mil bare Cu wire	0.8mil Pd-coated Cu wire						
Datasheet specifications and product electrical performance remain unchanged. Reliability Qualification and full electrical characterization over temperature has been performed.								
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 WW06, 2018 or greater.								
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.								



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. Electrical characterization result is available upon request.



List of affected Standard Parts:

Part Number	Qualification Vehicle
BC846BDW1T1G	SBC846BDW1T1G
BC846BPDW1T1G	SBC846BDW1T1G
BC847BDW1T1G	SBC846BDW1T1G
BC847BDW1T3G	SBC846BDW1T1G
BC847BPDW1T1G	SBC846BDW1T1G
BC847BPDW1T2G	SBC846BDW1T1G
BC847BPDW1T3G	SBC846BDW1T1G
BC847CDW1T1G	SBC846BDW1T1G
BC848CDW1T1G	SBC846BDW1T1G
BC848CPDW1T1G	SBC846BDW1T1G
BC856BDW1T1G	BC856BDW1T1G
BC856BDW1T3G	BC856BDW1T1G
BC857BDW1T1G	BC856BDW1T1G
MBT2222ADW1T1G	SBC846BDW1T1G
MBT3904DW1T1G	SBC846BDW1T1G
MBT3904DW1T1H	SBC846BDW1T1G
MBT3904DW1T3G	SBC846BDW1T1G
MBT3906DW1T1G	BC856BDW1T1G
MBT3906DW1T2G	BC856BDW1T1G
MBT3946DW1T1G	SBC846BDW1T1G
MBT3946DW1T2G	SBC846BDW1T1G
MUN5111DW1T1G	SMUN5211DW1T1G
MUN5112DW1T1G	SMUN5211DW1T1G
MUN5113DW1T1G	SMUN5211DW1T1G
MUN5114DW1T1G	SMUN5211DW1T1G
MUN5211DW1T1G	SMUN5211DW1T1G
MUN5212DW1T1G	SMUN5211DW1T1G
MUN5213DW1T1G	SMUN5211DW1T1G
MUN5213DW1T3G	SMUN5211DW1T1G
MUN5214DW1T1G	SMUN5211DW1T1G
MUN5216DW1T1G	SMUN5211DW1T1G
MUN5230DW1T1G	SMUN5211DW1T1G
MUN5232DW1T1G	SMUN5211DW1T1G
MUN5233DW1T1G	SMUN5211DW1T1G
MUN5234DW1T1G	SMUN5211DW1T1G
MUN5235DW1T1G	SMUN5211DW1T1G
MUN5236DW1T1G	SMUN5211DW1T1G



Part Number	Qualification Vehicle
MUN5311DW1T1G	SMUN5211DW1T1G
MUN5311DW1T2G	SMUN5211DW1T1G
MUN5312DW1T1G	SMUN5211DW1T1G
MUN5312DW1T2G	SMUN5211DW1T1G
MUN5313DW1T1G	SMUN5211DW1T1G
MUN5314DW1T1G	SMUN5211DW1T1G
MUN5316DW1T1G	SMUN5211DW1T1G
MUN5330DW1T1G	SMUN5211DW1T1G
MUN5332DW1T1G	SMUN5211DW1T1G
MUN5333DW1T1G	SMUN5211DW1T1G
MUN5334DW1T1G	SMUN5211DW1T1G
MUN5335DW1T1G	SMUN5211DW1T1G
MUN5335DW1T2G	SMUN5211DW1T1G
MUN5336DW1T1G	SMUN5211DW1T1G
NSB1706DMW5T1G	SMUN5211DW1T1G
NST45010MW6T1G	BC856BDW1T1G
NSTB60BDW1T1G	SBC846BDW1T1G
UMC3NT1G	SMUN5211DW1T1G
UMC5NT1G	SMUN5211DW1T1G
UMC5NT2G	SMUN5211DW1T1G



Appendix A: Changed Products

Product	Customer Part Number	Qualification Vehicle
BC846BDW1T1G		SBC846BDW1T1G
BC846BPDW1T1G		SBC846BDW1T1G
BC847BDW1T1G		SBC846BDW1T1G
BC847BDW1T3G		SBC846BDW1T1G
BC847BPDW1T1G		SBC846BDW1T1G
BC847BPDW1T2G		SBC846BDW1T1G
BC847BPDW1T3G		SBC846BDW1T1G
BC847CDW1T1G		SBC846BDW1T1G
BC848CDW1T1G		SBC846BDW1T1G
BC848CPDW1T1G		SBC846BDW1T1G
BC856BDW1T1G		BC856BDW1T1G
BC856BDW1T3G		BC856BDW1T1G
BC857BDW1T1G		BC856BDW1T1G
MBT2222ADW1T1G		SBC846BDW1T1G
MBT3904DW1T1G		SBC846BDW1T1G
MBT3904DW1T1H		SBC846BDW1T1G
MBT3904DW1T3G		SBC846BDW1T1G
MBT3906DW1T1G		BC856BDW1T1G
MBT3906DW1T2G		BC856BDW1T1G
MBT3946DW1T1G		SBC846BDW1T1G
MBT3946DW1T2G		SBC846BDW1T1G
MUN5111DW1T1G		SMUN5211DW1T1G
MUN5112DW1T1G		SMUN5211DW1T1G
MUN5113DW1T1G		SMUN5211DW1T1G
MUN5114DW1T1G		SMUN5211DW1T1G
MUN5211DW1T1G		SMUN5211DW1T1G
MUN5212DW1T1G		SMUN5211DW1T1G
MUN5213DW1T1G		SMUN5211DW1T1G
MUN5213DW1T3G		SMUN5211DW1T1G
MUN5214DW1T1G		SMUN5211DW1T1G
MUN5216DW1T1G		SMUN5211DW1T1G
MUN5230DW1T1G		SMUN5211DW1T1G
MUN5232DW1T1G		SMUN5211DW1T1G
MUN5233DW1T1G		SMUN5211DW1T1G
MUN5234DW1T1G		SMUN5211DW1T1G
MUN5235DW1T1G		SMUN5211DW1T1G
MUN5236DW1T1G		SMUN5211DW1T1G
MUN5311DW1T1G		SMUN5211DW1T1G
MUN5311DW1T2G		SMUN5211DW1T1G
MUN5312DW1T1G		SMUN5211DW1T1G
MUN5312DW1T2G		SMUN5211DW1T1G
MUN5313DW1T1G		SMUN5211DW1T1G
MUN5314DW1T1G		SMUN5211DW1T1G
MUN5316DW1T1G		SMUN5211DW1T1G
MUN5330DW1T1G		SMUN5211DW1T1G
MUN5332DW1T1G		SMUN5211DW1T1G
MUN5333DW1T1G		SMUN5211DW1T1G
MUN5334DW1T1G		SMUN5211DW1T1G
MUN5335DW1T1G		SMUN5211DW1T1G
MUN5335DW1T2G		SMUN5211DW1T1G
MUN5336DW1T1G		SMUN5211DW1T1G
NSB1706DMW5T1G		SMUN5211DW1T1G
NST45010MW6T1G		BC856BDW1T1G
NSTB60BDW1T1G		SBC846BDW1T1G
UMC3NT1G		SMUN5211DW1T1G
UMC5NT1G		SMUN5211DW1T1G
UMC5NT2G		SMUN5211DW1T1G