



Final Product/Process Change Notification

Document #:FPCN25811XA

Issue Date:27 Dec 2024

Title of Change:	Transfer Backgrind/Backmetal Site and Additional Mold Compound Qualification for SOT23 Package
Proposed First Ship date:	05 Apr 2025 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office
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
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:	Lot traceability will identify by datecode
Change Category:	Wafer Fab Change, Assembly Change
Change Sub-Category(s):	Manufacturing Site Transfer, Material Change

Sites Affected:	
onsemi Sites	External Foundry/Subcon Sites
onsemi Leshan, China	None
onsemi, ISMF Malaysia	

Description and Purpose:

This Product Change Notification is to notify customer that onsemi is having 2 changes as stated below:

- Transfer back grind back metal process for Mosfet technology in SOT23 package, to onsemi ISMF site located in Seremban, Malaysia
- New mold compound qualification for SOT223 package

	From	To
Back Grind Back Metal Site	onsemi Bucheon, South Korea JS Foundry, Japan	onsemi Bucheon, South Korea onsemi ISMF, Malaysia
Mold Compound	GR640	GR640 KHG300L

No change to orderable part number.

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

Reliability Data Summary:

QV DEVICE NAME: BSS138-G

RMS: S91915

PACKAGE: SOT23

Test	Specification	Condition	Interval	Result
HTGB	JESD22-A108	Tj = 150C, bias = 100% of rated V	1008 hours	0/231
HTRB	JESD22-A108	Tj = 150C, bias =100% of rated V (Not to exceed max rated)	1008 hours	0/231
PC	J STD 020, JESD22-A113	IR reflow at 245C or 260C (pkg dependant)		0/924
HAST+PC	JESD22-A110	Temp = 130C, 85% RH, ~ 18.8 psig, bias = 80% of rated V or 100V max	96 hours	0/231
TC+PC	JESD22-A104	Temp = -55°C to +150°C; for 1000 cycles	1000 cycles	0/231
UHAST+ PC	JESD22-A118	Temp = 130C, RH=85%, ~ 18.8 psig	96 hours	0/231
IOL + PC	MIL STD750, M 1037 AEC Q101	Ta=+25°C, deltaTj=100°C max, 2 min= Ton=Toff (pkg dependent)	15000 cycles	0/231

QV DEVICE NAME: BSS123LT1G

RMS: L92302

PACKAGE: SOT23

Test	Specification	Condition	Interval	Results
High Temperature Reverse Bias	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
High Temperature Gate Bias	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C		
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias 80% of rated V or 100V max	192hrs	0/231
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only	-	0/30
Solderability	JSTD002	Ta = 245°C, 5 sec	-	0/45
Physical Dimension	JESD22-B120		-	0/15

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
FDV305N	BSS123LT1G, BSS138-G
BSS138-G	BSS123LT1G, BSS138-G
NDS0605	BSS123LT1G, BSS138-G
BSS84	BSS123LT1G, BSS138-G