



Title of Change:	Rectifiers in TO277 package changes case outline from SMPC4.6 to SMPC4.6U
Proposed Changed Material First Ship Date:	31 Dec 2021 or earlier if approved by customer
Current Material Last Order Date:	31 Aug 2021 <i>Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability.</i>
Current Material Last Delivery Date:	30 Dec 2021 <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>
Product Category:	Active components – Discrete components
Contact information:	Contact your local ON Semiconductor Sales Office or Phuong.Hoang@onsemi.com
PCN Samples Contact:	Contact your local ON Semiconductor Sales Office to place sample order or <PCN.samples@onsemi.com> . Sample requests are to be submitted no later than 45 days after publication of this change notification. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Sample Availability Date:	31 May 2021
PPAP Availability Date:	15 Jun 2021
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or songyong.sim@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. ON Semiconductor will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com .
Change Category	
Category	Type of Change
Process - Assembly	Change of mold compound, Change in leadframe dimensions

Description and Purpose:

This Final Product Change Notification (FPCN) announces the plan to qualify case SMPC4.6U outline for TO-277 packaged devices. This change is to improve solderability in front pins.

SMPC4.6	SMPC4.6u	Remarks
 <p>Wettable Flank design (U-shape)</p> <p>Non-Wettable Flank design</p>	 <p>Wettable Flank design (U-shape)</p>	<ul style="list-style-type: none"> Better AOI for wettable flank design SMPC4.6 wettable flank for heat sink only SMPC4.6u wettable flank for both heat sink and pins
		<ul style="list-style-type: none"> Exposed tie bar design

Upon the expiration of this FPCN, these affected products will be assembled with the new mold compound.

Item	Before Change Description	After Change Description
Clip	Copper C19210, dimple design	Copper C19210, flat design
Mold Compound	E'dale ELER-8-500C	Sumitomo G700LA
Case outline	SMPC4.6	SMPC4.6U
Case outline spec	340BQ	340BQ

There is no case outliner spec and no product marking change as a result of this change

Reason / Motivation for Change:	Quality improvement
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	<p>The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by ON Semiconductor in relation to the PCN, associated risks are verified and excluded.</p> <p>No anticipated impacts.</p>
Sites Affected:	
ON Semiconductor Sites	External Foundry/Subcon Sites
None	Taiwan Semiconductor (I-Lan) Co.,Ltd.
Marking of Parts/ Traceability of Change:	Clean date code can be advised upon of request

**Reliability Data Summary:****QV DEVICE NAME:** FS8M, FS8J**RMS:** SYSQR200320, SYSQR210512**PACKAGE:** TO277

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Tj=150°C, 100% max rated V	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias 42V max	96 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	-	0/924
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/90
SD	JSTD002	Ta = 245C, 5 sec	-	0/45

NOTE: AEC-1pager is attached.

To view attachments:

1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file/s

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](#).

Current Part Number	New Part Number	Qualification Vehicle
NRVFES6J	NA	FS8M
NRVFES6G	NA	FS8M
NRVFES6D	NA	FS8M