ON Semiconductor®

Initial Product/Process Change Notification

Document # : IPCN22701Z
Issue Date: 6 June 2019

Title of Change:	Mold compound conversion from EME-G750N to EME-G770HCD.M for X2DFN devices assembled in ON Semiconductor Leshan facility.
Proposed Changed Material First Ship Date:	1 October 2020
Current Material Last Order Date:	N/A
Current Material Last Delivery Date:	N/A
Product Category:	Active components – Discrete components
Contact information:	Contact your local ON Semiconductor Sales Office or <Jim.Peng@onsemi.com>
Samples:	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.
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Rui.Zhang@onsemi.com>.
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 12 months prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com>.
Change Category	**Type of Change**
Process – Assembly	Change of mold compound

Description and Purpose:

Upon the expiration of this PCN, these devices will be built with new mold compound at the same site. Datasheet specifications and product electrical performance remain unchanged. Reliability qualification and full electrical characterization over temperature will be performed.
The new mold compound is with better flow ability for manufacturability.

Material to be change	Before Change Description	After Change Description
Mold Compound	EME-G750N	EME-G770HCD.M

Reason / Motivation for Change:	**Change benefits for customer**: The new mold compound G770HCD.M has better flow ability to improve package encapsulation performance. **Risk for late release for customer**: Longer lead time due to limited flexibility in terms of manufacturing and capacity planning.
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	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. No anticipated impacts.

Sites Affected:	ON Semiconductor Sites: ON Leshan, China	External Foundry/Subcon Sites: None
Marking of Parts/ Traceability of Change:	Products assembled with EME-G700HCD.M mold compound from ON Semiconductor Leshan facility will have a Finish Goods Date Code of Oct, 2020 or later.	

Reliability Data Summary:

Qual Vehicle Device: NSPU3051N2T5G
RMS: 53127
Package: X2DFN2

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Tj= max, V=100% rated V	1008 hrs
HTSL	JEDS22- A103	Temp.=150°C,no bias	1008 hrs
PC	JESD22-A113	MSL 1 @ 260 °C	Before H3TRB, TC, UHAST, HAST, AC, IOL
HAST	JESD22 A110	130C/85%RH, 80% rated V or 100V max	192 hrs
TC	JESD22 A104	Ta= - 65°C to +150°C	1000 cyc
UHAST	JESD22 A118	Ta=130C, 85% RH, no bias	96 hrs
IOL	MIL-STD-750	Ta=+25°C, delta Tj=100°C, On/off = 2 min	15000 cycs
RSH	JESD22- B106	Ta = 265C, 10 sec	-

Qual Vehicle Device: SZESD7551MXWT5G
RMS: 55036
Package: X2DFN2

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Tj= max, V=100% rated V	1008 hrs
HTSL	JEDS22- A103	Temp.=150°C,no bias	1008 hrs
PC	JESD22-A113	MSL 1 @ 260 °C	Before H3TRB, TC, UHAST, HAST, AC, IOL
HAST	JESD22 A110	110C/85%RH, 80% rated V or 100V max	528 hrs
TC	JESD22 A104	Ta= - 65°C to +150°C	1000 cyc
UHAST	JESD22 A118	Ta=110C, 85% RH, no bias	264 hrs
IOL	MIL-STD-750	Ta=+25°C, delta Tj=100°C, On/off = 2 min	15000 cycs
RSH	JESD22- B106	Ta = 265C, 10 sec	-

Qual Vehicle Device: NSR0240MXWT5G
RMS: 55037
Package: X2DFN2

Test	Specification	Condition	Interval
PC	JESD22-A113	MSL 1 @ 260 °C	Before HAST
HAST	JESD22 A110	110C/85%RH, 80% rated V or 100V max.	528 hrs
HTRB	JESD22-A108	Tj= max, V=100% rated V, 1008 Hrs	1008hrs

Electrical Characteristic Summary:

Electrical characteristics are available when FPCN distribution.

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	Qualification Vehicle
SZESD7410N2T5G	NSPU3051N2T5G
SZESDM3551N2T5G	NSPU3051N2T5G
SZESD7241N2T5G	SZESD7551MXWT5G
SZESD7462N2T5G	SZESD7551MXWT5G
SZESD7551N2T5G	SZESD7551MXWT5G
SZESD7571N2T5G	SZESD7551MXWT5G
SZESD8551N2T5G	SZESD7551MXWT5G
NSVR201MXT5G	NSR0240MXWT5G