



Title of Change:	Gold wire to copper wire and mold compound conversion for X2DFN2 devices.																				
Proposed First Ship date:	1 April 2020																				
Contact Information:	Contact your local ON Semiconductor Sales Office or <Jim.Peng@onsemi.com>																				
Samples:	<p>Samples should be available after completion of qualification.</p> <p>Contact your local ON Semiconductor Sales Office or <PCN.Samples@onsemi.com></p> <p>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.</p> <p>Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.</p>																				
Type of Notification:	<p>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.</p> <p>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 90 days prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com></p>																				
Change Part Identification:	<p>Products assembled with bare copper wire and EME-G700HCD.M mold compound from ON Semiconductor Leshan facility will have a Finish Goods Date Code of Apr, 2020 or later.</p> <p>Products assembled with Pd coated copper wire and EME-G770HMD mold compound from ON Semiconductor Seremban facility will have a Finish Goods Date Code of Apr, 2020 or later.</p>																				
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):	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"><input type="checkbox"/> Manufacturing Site Addition</div> <div style="width: 33%;"><input checked="" type="checkbox"/> Material Change</div> <div style="width: 33%;"><input type="checkbox"/> Datasheet/Product Doc change</div> <div style="width: 33%;"><input type="checkbox"/> Manufacturing Site Transfer</div> <div style="width: 33%;"><input type="checkbox"/> Product specific change</div> <div style="width: 33%;"><input type="checkbox"/> Shipping/Packaging/Marking</div> <div style="width: 33%;"><input type="checkbox"/> Manufacturing Process Change</div> <div style="width: 33%;"><input type="checkbox"/> Other: _____</div> </div>																				
Sites Affected:	ON Semiconductor Sites: ON Seremban, Malaysia ON Leshan, China	External Foundry/Subcon Sites: None																			
Description and Purpose: <p>Upon the expiration of this PCN, these devices will be built with copper wire and 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.</p> <p>The copper wire is with higher thermal conductivity and lower resistivity which benefits for customer application. The new mold compound is with better flow ability. This is to unify the wire and mold compound material in process also.</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr style="background-color: #92d050;"> <th>Sites Affected</th> <th>Material to be change</th> <th>Before Change Description</th> <th>After Change Description</th> </tr> </thead> <tbody> <tr> <td rowspan="2">ON Leshan, China</td> <td>Bond Wire</td> <td>1.5 mils gold wire</td> <td>1.5 mils bare copper wire</td> </tr> <tr> <td>Mold Compound</td> <td>EME-G750N</td> <td>EME-G770HCD.M</td> </tr> <tr> <td rowspan="2">ON Seremban, Malaysia</td> <td>Bond Wire</td> <td>1.5 mils gold wire</td> <td>1.5 mils Pd coated copper wire</td> </tr> <tr> <td>Mold Compound</td> <td>EME-G760</td> <td>EME-G770HMD</td> </tr> </tbody> </table> <p>There is no product marking change as a result of this change.</p>				Sites Affected	Material to be change	Before Change Description	After Change Description	ON Leshan, China	Bond Wire	1.5 mils gold wire	1.5 mils bare copper wire	Mold Compound	EME-G750N	EME-G770HCD.M	ON Seremban, Malaysia	Bond Wire	1.5 mils gold wire	1.5 mils Pd coated copper wire	Mold Compound	EME-G760	EME-G770HMD
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**Qualification Plan:****Qual Vehicle Device: NSPU3051N2T5G****RMS: 53127/60336****Package: X2DFN2**

Test	Specification	Condition	Interval
PC	JESD22-A113	MSL 1 @ 260 °C	Before TC, UHAST, HAST, IOL
UHAST	JESD22 A118	Ta=130C, 85% RH, no bias, 96 hrs	96 hrs
TC	JESD22 A104	Ta= - 65°C to +150°C	2000 cyc
HAST	JESD22 A110	130C/85%RH, 80% rated V or 42V max, 192 hours.	192 hrs
IOL	MIL-STD-750	Ta=+25°C, delta Tj=100°C, On/off = 2 min	30000 cyc
HTRB	JESD22-A108	Tj= max, V=100% rated V, 1008 Hrs	1008hrs
HTSL	JESD22-A103	Temp.=150°C,no bias,2016hours	2016hrs
RSH	JESD22- B106	Ta = 265C, 10 sec	-

Estimated date for qualification completion: **10 November 2019****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
NSPM3031MXT5G	NSPU3051N2T5G
NSPM3041MXT5G	
NSPM3042MXT5G	
NSPU3051N2T5G	
NSPU3061N2T5G	
NSPU3071N2T5G	