



Title of Change:	Lead frame raw material change from C50710 to C19400 of SSOP16 (225mil) and SSOP30 (275mil)																																																														
Proposed first ship date:	30 January 2017																																																														
Contact information:	Contact your local ON Semiconductor Sales Office or <Takeshi2.Hoshino@onsemi.com>, <Yutaka.Okamura@onsemi.com>, <Shinya.Okada@onsemi.com>, <Hiroshi.Kojima@onsemi.com>, <Tetsuya.Fukushima@onsemi.com>																																																														
Samples:	Contact your local ON Semiconductor Sales Office																																																														
Additional Reliability Data:	Contact your local ON Semiconductor 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. 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:	Affected products will be identified with date code.																																																														
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:	<input type="checkbox"/> All site(s) <input type="checkbox"/> not applicable <input checked="" type="checkbox"/> ON Semiconductor site(s) : ON Tarlac City, Philippines <input type="checkbox"/> External Foundry/Subcon site(s)																																																														
Description and Purpose:																																																															
<p>This is a Final Process Change to announce the replacement of existing lead frame raw material from C50710 to C19400 (C50710/C19400: ASTM code). The reason is that the existing lead frame raw material will no longer be available.</p> <p>The table below shows comparison of mechanical and chemical properties between the two materials</p>																																																															
<table border="1"> <thead> <tr> <th colspan="2">Material Name</th> <th>C50710 (Before Change)</th> <th>C19400 (After Change)</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">Mechanical properties</td> </tr> <tr> <td>Coefficient of Thermal Expansion</td> <td>X10⁻⁶/K</td> <td>17.0</td> <td>17.6</td> </tr> <tr> <td>Thermal Conductivity</td> <td>W (m · K)</td> <td>155</td> <td>262</td> </tr> <tr> <td>Electrical Resistivity</td> <td>μΩm</td> <td>0.054</td> <td>0.025</td> </tr> <tr> <td>Electrical Conductivity</td> <td>%IACS</td> <td>32</td> <td>65</td> </tr> <tr> <td>Modulus Elasticity</td> <td>KN/mm²</td> <td>115</td> <td>121</td> </tr> <tr> <td colspan="4" style="text-align: center;">Chemical properties</td> </tr> <tr> <td>Cu</td> <td>%</td> <td>Remain</td> <td>Remain</td> </tr> <tr> <td>Zn</td> <td>%</td> <td>Max 0.20</td> <td>0.05 ~ 0.20</td> </tr> <tr> <td>Pb</td> <td>%</td> <td>Max 0.02</td> <td>Max 0.03</td> </tr> <tr> <td>Fe</td> <td>%</td> <td>Max 0.10</td> <td>2.10 ~ 2.60</td> </tr> <tr> <td>P</td> <td>%</td> <td>Max 0.15</td> <td>0.01 ~ 0.15</td> </tr> <tr> <td>Sn</td> <td>%</td> <td>1.70 ~ 2.30</td> <td>None</td> </tr> <tr> <td>Ni</td> <td>%</td> <td>0.10 ~ 0.40</td> <td>None</td> </tr> </tbody> </table>				Material Name		C50710 (Before Change)	C19400 (After Change)	Mechanical properties				Coefficient of Thermal Expansion	X10 ⁻⁶ /K	17.0	17.6	Thermal Conductivity	W (m · K)	155	262	Electrical Resistivity	μΩm	0.054	0.025	Electrical Conductivity	%IACS	32	65	Modulus Elasticity	KN/mm ²	115	121	Chemical properties				Cu	%	Remain	Remain	Zn	%	Max 0.20	0.05 ~ 0.20	Pb	%	Max 0.02	Max 0.03	Fe	%	Max 0.10	2.10 ~ 2.60	P	%	Max 0.15	0.01 ~ 0.15	Sn	%	1.70 ~ 2.30	None	Ni	%	0.10 ~ 0.40	None
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**Reliability Data Summary:**

QV DEVICE NAME : LV8860V-TLM-H

PACKAGE : SSOP16

Test	Specification	Condition	Interval	Results
HTSL	JEITA ED-4701/200	Ta=150°C	1008 hrs	0/22
AC	JEITA ED-4701-3	Ta=121°C, 15psig	96 hrs	0/22
TC	JEITA ED-4701/100	Ta= -65°C to +150°C	100 cyc	0/22
SD	JEITA ED-4701/301	Ta = 245°C, 5 sec	-	PASS
PC	JEITA ED-4701/300	MSL 3 @ 260 °C	2 times-	PASS

QV DEVICE NAME : LV23401V-N-TLM-H

PACKAGE : SSOP30

Test	Specification	Condition	Interval	Results
HTSL	JEITA ED-4701/200	Ta=150°C	1008 hrs	0/22
AC	JEITA ED-4701-3	Ta=121°C, 15psig	96 hrs	0/22
TC	JEITA ED-4701/100	Ta= -65°C to +150°C	100 cyc	0/22
SD	JEITA ED-4701/301	Ta = 245°C, 5 sec	-	PASS
PC	JEITA ED-4701/300	MSL 3 @ 260 °C	2 times-	PASS

Electrical Characteristic Summary:

Electrical characteristics are not impacted.

List of affected Standard Parts:

Part Number	Qualification Vehicle
LB11867FV-TLM-E	LV8860V-TLM-H
LB11867RV-TLM-H	LV8860V-TLM-H
LB8503V-TLM-E	LV8860V-TLM-H
LV5710V-TLM-E	LV8860V-TLM-H
LB11696V-TLM-E	LV23401V-N-TLM-H
LB11697V-TLM-E	LV23401V-N-TLM-H