



# Initial Product/Process Change Notification

Document # : IPCN21121X

Issue Date: 21 January 2016

<b>Title of Change:</b>	Lead frame raw material change from C50710 to C19400 of SSOP16, SSOP20, TSSOP20 (225mil) and SSOP24, SSOP30, TSSOP30, TSSOP36 (275mil).																																																												
<b>Proposed first ship date:</b>	27 May 2016																																																												
<b>Contact information:</b>	Contact your local ON Semiconductor Sales Office or <Takeshi2.Hoshino@onsemi.com>,<Yutaka.Okamura@onsemi.com>,<Takehito.Tsukui@onsemi.com>,<Shuchi.Takahashi@onsemi.com>,<Naoki.Koyama@onsemi.com>,<Shinya.Okada@onsemi.com>,<lkuo.Saeki@onsemi.com>,<Hiroshi.Kojima@onsemi.com>,<Tetsuya.Fukushima@onsemi.com>																																																												
<b>Samples:</b>	Contact your local ON Semiconductor Sales Office.																																																												
<b>Type of notification:</b>	This is an Initial Product/Process Change Notification (IPCN) sent to customers. IPCNs are issued at least 120 days prior to implementation of the change. An IPCN is 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 90 days prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com>.																																																												
<b>Change Part Identification:</b>	Identification via date code																																																												
<b>Change category:</b>	<input type="checkbox"/> Wafer Fab Change <input checked="" type="checkbox"/> Assembly Change <input type="checkbox"/> Test Change <input type="checkbox"/> Other _____																																																												
<b>Change Sub-Category(s):</b>	<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: _____																																																												
<b>Sites Affected:</b>	<input type="checkbox"/> All site(s) <input checked="" type="checkbox"/> not applicable <input checked="" type="checkbox"/> ON Semiconductor site(s) : <input type="checkbox"/> External Foundry/Subcon site(s) ON Tarlac City, Philippines																																																												
<b>Description and Purpose:</b>																																																													
This is an Initial Process Change to announce the replacement of existing lead frame raw material of C50710 to C19400 (C50710/C19400: ASTM code). The reason is that the existing lead frame raw material will be end of life of 2016.																																																													
The table below shows comparison of mechanical and chemical properties between two materials.																																																													
<table border="1"> <thead> <tr> <th colspan="2">Material Name</th> <th>C19400(Alternative)</th> <th>C50710(Existing)</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<sup>-8</sup>/K</td> <td>17.6</td> <td>17.0</td> </tr> <tr> <td>Thermal Conductivity</td> <td>W (m·K)</td> <td>262</td> <td>155</td> </tr> <tr> <td>Electrical Resistivity</td> <td>μΩm</td> <td>0.025</td> <td>0.054</td> </tr> <tr> <td>Electrical Conductivity</td> <td>%IACS</td> <td>65</td> <td>32</td> </tr> <tr> <td>Modulus Elasticity</td> <td>KN/mm<sup>2</sup></td> <td>121</td> <td>125</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>0.05 ~ 0.20</td> <td>Max 0.20</td> </tr> <tr> <td>Pb</td> <td>%</td> <td>Max 0.03</td> <td>Max 0.02</td> </tr> <tr> <td>Fe</td> <td>%</td> <td>2.10 ~ 2.60</td> <td>Max 0.10</td> </tr> <tr> <td>P</td> <td>%</td> <td>0.01 ~ 0.15</td> <td>Max 0.15</td> </tr> <tr> <td>Sn</td> <td>%</td> <td>None</td> <td>1.70 ~ 2.30</td> </tr> <tr> <td>Ni</td> <td>%</td> <td>None</td> <td>0.10 ~ 0.40</td> </tr> </tbody> </table>		Material Name		C19400(Alternative)	C50710(Existing)	Mechanical properties				Coefficient of Thermal Expansion	X10 <sup>-8</sup> /K	17.6	17.0	Thermal Conductivity	W (m·K)	262	155	Electrical Resistivity	μΩm	0.025	0.054	Electrical Conductivity	%IACS	65	32	Modulus Elasticity	KN/mm <sup>2</sup>	121	125	Chemical properties				Cu	%	Remain	Remain	Zn	%	0.05 ~ 0.20	Max 0.20	Pb	%	Max 0.03	Max 0.02	Fe	%	2.10 ~ 2.60	Max 0.10	P	%	0.01 ~ 0.15	Max 0.15	Sn	%	None	1.70 ~ 2.30	Ni	%	None	0.10 ~ 0.40
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**Qualification Plan:**

Estimated date for qualification completion: 15 January 2016

QV DEVICE NAME :LC70F520VQ

PACKAGE :SSOP16

Test	Specification	Condition	Interval
HTSL	JESD22-A103	Ta=150°C	1008 hrs
AC	JESD22-A102	Ta=121°C , 15psig	96 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
SD	JSTD002	Ta = 245°C , 10 sec	
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C	

QV DEVICE NAME :LV8011V

PACKAGE :SSOP20

Test	Specification	Condition	Interval
HTSL	JESD22-A103	Ta=150°C	1008 hrs
AC	JESD22-A102	Ta=121°C , 15psig	96 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
SD	JSTD002	Ta = 245°C , 10 sec	
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C	

QV DEVICE NAME :LV23401V

PACKAGE :SSOP30

Test	Specification	Condition	Interval
HTSL	JESD22-A103	Ta=150°C	1008 hrs
AC	JESD22-A102	Ta=121°C , 15psig	96 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
SD	JSTD002	Ta = 245°C , 10 sec	
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C	

QV DEVICE NAME :LB1939T

PACKAGE :TSSOP20

Test	Specification	Condition	Interval
HTSL	JESD22-A103	Ta=150°C	1008 hrs
AC	JESD22-A102	Ta=121°C , 15psig	96 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
SD	JSTD002	Ta = 245°C , 10 sec	
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C	



QV DEVICE NAME :LC75843UGA

PACKAGE :TSSOP36

Test	Specification	Condition	Interval
HTSL	JESD22-A103	Ta=150°C	1008 hrs
AC	JESD22-A102	Ta=121°C , 15psig	96 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
SD	JSTD002	Ta = 245°C , 10 sec	
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C	

QV DEVICE NAME :LB11948T

PACKAGE :TSSOP30

Test	Specification	Condition	Interval
HTSL	JESD22-A103	Ta=150°C	1008 hrs
AC	JESD22-A102	Ta=121°C , 15psig	96 hrs
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc
SD	JSTD002	Ta = 245°C , 10 sec	
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C	



## List of Affected Standard Parts:

Part Number	Qualification Vehicle
LA72914V-TLM-H	LC70F520VQ-TLM-E
LA73076V-TLM-E	LC70F520VQ-TLM-E
LA77000V-A-TLM-E	LC70F520VQ-TLM-E
LA77000V-TLM-E	LC70F520VQ-TLM-E
LB11660FV-MPB-E	LC70F520VQ-TLM-E
LB11660FV-MPB-H	LC70F520VQ-TLM-E
LB11660FV-TLM-E	LC70F520VQ-TLM-E
LB11660FV-TLM-H	LC70F520VQ-TLM-E
LB11660RV-MPB-E	LC70F520VQ-TLM-E
LB11660RV-MPB-H	LC70F520VQ-TLM-E
LB11660RV-TLM-E	LC70F520VQ-TLM-E
LB11660RV-TLM-H	LC70F520VQ-TLM-E
LB11867FV-MPB-E	LC70F520VQ-TLM-E
LB11867FV-MPB-H	LC70F520VQ-TLM-E
LB11867FV-TLM-E	LC70F520VQ-TLM-E
LB11867FV-TLM-H	LC70F520VQ-TLM-E
LB11867RV-MPB-H	LC70F520VQ-TLM-E
LB11867RV-TLM-E	LC70F520VQ-TLM-E
LB11867RV-TLM-H	LC70F520VQ-TLM-E
LB11961V-MPB-E	LC70F520VQ-TLM-E
LB11961V-MPB-H	LC70F520VQ-TLM-E
LB11961V-TLM-E	LC70F520VQ-TLM-E
LB11961V-TLM-H	LC70F520VQ-TLM-E
LB1936V-TLM-E	LC70F520VQ-TLM-E
LB1973JA-AH	LC70F520VQ-TLM-E
LB8503V-MPB-E	LC70F520VQ-TLM-E
LB8503V-TLM-E	LC70F520VQ-TLM-E
LC72725KV-TLM-E	LC70F520VQ-TLM-E
LC87F0N04AUJD-H	LC70F520VQ-TLM-E
LC89091JA-AH	LC70F520VQ-TLM-E
LC89091JA-H	LC70F520VQ-TLM-E
LV2105V-TLM-E	LC70F520VQ-TLM-E
LV5066V-TLM-H	LC70F520VQ-TLM-E
LV5068V-TLM-H	LC70F520VQ-TLM-E
LV5710V-TLM-E	LC70F520VQ-TLM-E
LV5725JA-AH	LC70F520VQ-TLM-E
LV5725JAZ-AH	LC70F520VQ-TLM-E
LV5768V-A-TLM-E	LC70F520VQ-TLM-E
LV5769VZ-TLM-E	LC70F520VQ-TLM-E



LV8019V-MPB-E	LC70F520VQ-TLM-E
LV8019V-TLM-E	LC70F520VQ-TLM-E
LV8400V-MPB-E	LC70F520VQ-TLM-E
LV8400V-TLM-E	LC70F520VQ-TLM-E
LV8401V-MPB-E	LC70F520VQ-TLM-E
LV8401V-TLM-E	LC70F520VQ-TLM-E
LV8402V-MPB-E	LC70F520VQ-TLM-E
LV8402V-TLM-E	LC70F520VQ-TLM-E
LV8405V-MPB-E	LC70F520VQ-TLM-E
LV8405V-TLM-E	LC70F520VQ-TLM-E
LV8800V-MPB-E	LC70F520VQ-TLM-E
LV8800V-MPB-H	LC70F520VQ-TLM-E
LV8800V-TLM-E	LC70F520VQ-TLM-E
LV8800V-TLM-H	LC70F520VQ-TLM-E
LV8862JA-AH	LC70F520VQ-TLM-E
LA4814JA-AE	LV8011V-MPB-E
LA4814JA-ZE	LV8011V-MPB-E
LA6584JA-AH	LV8011V-MPB-E
LA6584JA-ZH	LV8011V-MPB-E
LB11861JA-AH	LV8011V-MPB-E
LB11861JA-ZH	LV8011V-MPB-E
LB11967V-MPB-E	LV8011V-MPB-E
LB11967V-MPB-H	LV8011V-MPB-E
LB11967V-TLM-E	LV8011V-MPB-E
LB11967V-TLM-H	LV8011V-MPB-E
LB11967V-W-AH	LV8011V-MPB-E
LB1843V-MPB-E	LV8011V-MPB-E
LB1843V-TLM-E	LV8011V-MPB-E
LC72122V-TLM-E	LV8011V-MPB-E
LV5050NV-TLM-E	LV8011V-MPB-E
LV5609V-HAS-TLM-E	LV8011V-MPB-E
LV5609V-MPB-E	LV8011V-MPB-E
LV5609V-TLM-E	LV8011V-MPB-E
LV8011V-MPB-E	LV8011V-MPB-E
LV8011V-TLM-E	LV8011V-MPB-E
LB1991V-MPB-E	LV23401V-N-TLM-H
LB1991V-TLM-E	LV23401V-N-TLM-H
LC72121V-D-MPB-E	LV23401V-N-TLM-H



LC72121V-D-TLM-E	LV23401V-N-TLM-H
LC72121V-TLM-E	LV23401V-N-TLM-H
LC72148V-TLM-E	LV23401V-N-TLM-H
LC74772V-9015-E	LV23401V-N-TLM-H
LC74772VH-9015-TLM-E	LV23401V-N-TLM-H
LA74330V-TLM-H	LV23401V-N-TLM-H
LB11696V-MPB-E	LV23401V-N-TLM-H
LB11696V-TLM-E	LV23401V-N-TLM-H
LB11696V-TRM-E	LV23401V-N-TLM-H
LB11697V-MPB-E	LV23401V-N-TLM-H
LB11697V-TLM-E	LV23401V-N-TLM-H
LB1950V-MPB-E	LV23401V-N-TLM-H
LB1950V-TLM-E	LV23401V-N-TLM-H
LV23400V-A-TLM-E	LV23401V-N-TLM-H
LV5052V-TLM-E	LV23401V-N-TLM-H
LV5234VZ-TLM-H	LV23401V-N-TLM-H
LV8136V-MPB-H	LV23401V-N-TLM-H
LV8136V-TLM-H	LV23401V-N-TLM-H
LV8139JA-AH	LV23401V-N-TLM-H
LB1939T-TLM-E	LB1939T-MPB-E
LB1940T-TLM-H	LB1939T-MPB-E
LB11948T-MPB-E	LB11948T-MPB-E
LB11948T-TLM-E	LB11948T-MPB-E
LV4910T-MPB-E	LB11948T-MPB-E
LV4910T-TLM-E	LB11948T-MPB-E
LV8291T-MPB-E	LB11948T-MPB-E
LV8291T-TLM-E	LB11948T-MPB-E
LB11921T-TLM-E	LB11948T-MPB-E
LV8127T-TLM-H	LB11948T-MPB-E
LV8850GA-AH	LB11948T-MPB-E
LV8850GA-ZH	LB11948T-MPB-E
LB11660FV-W-AH	LC70F520VQ-TLM-E
LB11660RV-W-AH	LC70F520VQ-TLM-E
LB11696V-W-AH	LV23401V-N-TLM-H
LB11697V-W-AH	LV23401V-N-TLM-H
LB11867FV-W-AH	LC70F520VQ-TLM-E
LB11867RV-W-AH	LC70F520VQ-TLM-E
LB8503V-W-AH	LC70F520VQ-TLM-E



**List of Affected Customer Specific Parts:**

*NOTE: Please be informed that parts impacted by this PDN/PCN are Special/Customer specific parts, thus MPN & CPN info will be available to affected customers only by clicking the "Custom PCN for Selected Company Button" in the Document Analysis page of PCMS/PCN Alert.*