



<b>Title of Change:</b>	Lead frame raw material change from C64730 to C19400 of QFP80, TQFP100, TQFP120, TQFP128 (14X14), QFP256J(28X28), SQFP64 (10X10), QIP100E (14X20), SQFP144(20X20).																																																																
<b>Proposed first ship date:</b>	12 May 2017																																																																
<b>Contact information:</b>	Contact your local ON Semiconductor Sales Office or <Takeshi2.Hoshino@onsemi.com>,<Yutaka.Okamura@onsemi.com>,<Takehito.Tsukui@onsemi.com>,<Shuichi.Takahashi@onsemi.com>,<Naoki.Koyama@onsemi.com>,<Shinya.Okada@onsemi.com>,<Ikuo.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 type="checkbox"/> not applicable <input checked="" type="checkbox"/> ON Semiconductor site(s) : ON Tarlac City, Philippines <input type="checkbox"/> External Foundry/Subcon site(s)																																																																
<b>Description and Purpose:</b>	<p>The reason is that the existing lead frame raw material will be end of life by 2016. We will replace the existing lead frame raw material C64730 with C19400 (C64730/C19400: ASTM code).</p> <p>The table below shows comparison of mechanical and chemical properties between two materials.</p> <table border="1"> <thead> <tr> <th>Material Name</th> <th></th> <th>C19400(Alternative)</th> <th>C64730(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>150</td> </tr> <tr> <td>Electrical Resistivity</td> <td>μΩm</td> <td>0.025</td> <td>0.049</td> </tr> <tr> <td>Electrical Conductivity</td> <td>%IACS</td> <td>65</td> <td>35</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>0.2 ~ 0.5</td> </tr> <tr> <td>Pb</td> <td>%</td> <td>Max 0.03</td> <td>None</td> </tr> <tr> <td>Fe</td> <td>%</td> <td>2.10 ~ 2.60</td> <td>None</td> </tr> <tr> <td>P</td> <td>%</td> <td>0.01 ~ 0.15</td> <td>None</td> </tr> <tr> <td>Sn</td> <td>%</td> <td>None</td> <td>1.0 ~ 1.5</td> </tr> <tr> <td>Ni</td> <td>%</td> <td>None</td> <td>2.9 ~ 3.5</td> </tr> <tr> <td>Si</td> <td>%</td> <td>None</td> <td>0.5 ~ 0.9</td> </tr> </tbody> </table>	Material Name		C19400(Alternative)	C64730(Existing)	Mechanical properties				Coefficient of Thermal Expansion	x10 <sup>-8</sup> /K	17.6	17.0	Thermal Conductivity	W (m·K)	262	150	Electrical Resistivity	μΩm	0.025	0.049	Electrical Conductivity	%IACS	65	35	Modulus Elasticity	KN/mm <sup>2</sup>	121	125	Chemical properties				Cu	%	Remain	Remain	Zn	%	0.05 ~ 0.20	0.2 ~ 0.5	Pb	%	Max 0.03	None	Fe	%	2.10 ~ 2.60	None	P	%	0.01 ~ 0.15	None	Sn	%	None	1.0 ~ 1.5	Ni	%	None	2.9 ~ 3.5	Si	%	None	0.5 ~ 0.9
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**Qualification Plan:**

Estimated date for qualification completion: 15 January 2016

**QV DEVICE NAME :LC75056PE****PACKAGE :QIPO100**

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 :LC98800DFA****PACKAGE :QFP256**

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 :LC786961PW****PACKAGE :SQFP144**

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 :LC75040WS****PACKAGE :SQFP208**

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
LC75055PE-6158-H	LC75056PE-H
LC75056PE-H	LC75056PE-H
LC75805PEH-3H	LC75056PE-H
LC75805PES-3H	LC75056PE-H
LC75810E-8725-E	LC75056PE-H
LC75813E-E	LC75056PE-H
LC75813ES-E	LC75056PE-H
LC87F83P7PAU-QIP-E	LC75056PE-H
LC87F83P7PBU-QIP-E	LC75056PE-H
LC88F40D0PAU-QIP-H	LC75056PE-H
LC88F40F0PAU-QIP-H	LC75056PE-H
LC74736PT-E	LC823410-10S4-H
LC75806PT-H	LC823410-10S4-H
LC75806PTS-T-H	LC823410-10S4-H
LC75809PT-H	LC823410-10S4-H
LC75809PTS-H	LC823410-10S4-H
LC75809PTS-T-H	LC823410-10S4-H
LC75810T-8725-E	LC823410-10S4-H
LC75810TS-8725-E	LC823410-10S4-H
LC75812PTH-8565-H	LC823410-10S4-H
LC75812PTS-8565-H	LC823410-10S4-H
LC75813TS-E	LC823410-10S4-H
LC749000PT-8B15H	LC823410-10S4-H
LC75818PT-8560-H	LC823410-10S4-H
LC75847T-E	LC823410-10S4-H
LC75847TS-E	LC823410-10S4-H

**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.*