



<b>Title of Change:</b>	Qualification of Lead Frame raw material change used in the ON Semiconductor from C50710 to C19400 of SSOP16, SSOP20, TSSOP20 (225mil) and SSOP24, SSOP30, TSSOP30, TSSOP36 (275mil).
<b>Proposed first ship date:</b>	21 October 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>,<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>Additional Reliability Data:</b>	Contact your local ON Semiconductor Sales Office
<b>Type of notification:</b>	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>.
<b>Change Part Identification:</b>	Affected products will be identified with 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)
------------------------	---

**Description and Purpose:**

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.

The table below shows comparison of mechanical and chemical properties between the two materials.

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



## 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 : LV8011V-MPB-E

PACKAGE : SSOP20

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

QV DEVICE NAME : LB1939T-MPB-E

PACKAGE : TSSOP20

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 : LB11948T-MPB-E

PACKAGE : TSSOP30

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
LA4814JA-AE	LV8011V-MPB-E
LA4814JA-ZE	LV8011V-MPB-E
LA6584JA-AH	LV8011V-MPB-E
LA73076V-TLM-E	LV8860V-TLM-H
LA77000V-A-TLM-E	LV8860V-TLM-H
LA77000V-TLM-E	LV8860V-TLM-H
LB11660FV-TLM-E	LV8860V-TLM-H
LB11660FV-TLM-H	LV8860V-TLM-H
LB11660FV-W-AH	LV8860V-TLM-H
LB11660RV-TLM-E	LV8860V-TLM-H
LB11660RV-TLM-H	LV8860V-TLM-H
LB11660RV-W-AH	LV8860V-TLM-H
LB11696V-TRM-E	LV23401V-N-TLM-H
LB11861JA-AH	LV8011V-MPB-E
LB11867FV-TLM-H	LV8860V-TLM-H
LB11867RV-TLM-E	LV8860V-TLM-H
LB11921T-TLM-E	LB11948T-MPB-E
LB11948T-TLM-E	LB11948T-MPB-E
LB11961V-TLM-E	LV8860V-TLM-H
LB11961V-TLM-H	LV8860V-TLM-H
LB11967V-TLM-E	LV8011V-MPB-E
LB11967V-TLM-H	LV8011V-MPB-E



LB11967V-W-AH	LV8011V-MPB-E
LB1843V-TLM-E	LV8011V-MPB-E
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
LC72122V-TLM-E	LV8011V-MPB-E
LC72148V-TLM-E	LV23401V-N-TLM-H
LC72725KV-TLM-E	LV8860V-TLM-H
LC87F0N04AUJD-H	LV8860V-TLM-H
LC89091JA-AH	LV8860V-TLM-H
LC89091JA-H	LV8860V-TLM-H
LV2105V-TLM-E	LV8860V-TLM-H
LV23400V-A-TLM-E	LV23401V-N-TLM-H
LV4910T-MPB-E	LB11948T-MPB-E
LV4910T-TLM-E	LB11948T-MPB-E
LV5050NV-TLM-E	LV8011V-MPB-E
LV5052V-TLM-E	LV23401V-N-TLM-H
LV5066V-TLM-H	LV8860V-TLM-H
LV5068V-TLM-H	LV8860V-TLM-H
LV5234VZ-TLM-H	LV23401V-N-TLM-H
LV5609V-HAS-TLM-E	LV8011V-MPB-E
LV5609V-MPB-E	LV8011V-MPB-E
LV5609V-TLM-E	LV8011V-MPB-E
LV5725JA-AH	LV8860V-TLM-H
LV5725JAZ-AH	LV8860V-TLM-H
LV5768V-A-TLM-E	LV8860V-TLM-H
LV5769VZ-TLM-E	LV8860V-TLM-H
LV8019V-TLM-E	LV8860V-TLM-H
LV8127T-TLM-H	LB11948T-MPB-E
LV8136V-TLM-H	LV23401V-N-TLM-H
LV8139JA-AH	LV23401V-N-TLM-H
LV8291T-TLM-E	LB11948T-MPB-E
LV8400V-TLM-E	LV8860V-TLM-H
LV8401V-TLM-E	LV8860V-TLM-H
LV8402V-TLM-E	LV8860V-TLM-H
LV8405V-TLM-E	LV8860V-TLM-H



LV8850GA-AH	LB11948T-MPB-E
LV8862JA-AH	LV8860V-TLM-H

**List of affected Customer Specific Parts:**

Part Number	Qualification Vehicle
C9902-TLM-E	LV23401V-N-TLM-H
LA6584-TLM-H	LV8011V-MPB-E
LB11867FV-NMB-TLM-E	LV8860V-TLM-H
LB11967V-NMB-TLM3-E	LV8011V-MPB-E
LB1979VS-TLM-E	LV8011V-MPB-E
LC24006G-15C-H	LV23401V-N-TLM-H
LC709W01AGA-FH	LB1939T-MPB-E
LC72725KV-UKS-TLM-E	LV8860V-TLM-H
LC72725KV-UMTI-TLM-E	LV8860V-TLM-H
LC72725KV-UONK-TLM-E	LV8860V-TLM-H
LC98500JT-18H-AH	LV8860V-TLM-H