

Final Product/Process Change Notification Document #: FPCN21392XA

Issue Date: 26 July 2016

Title of Change:	Qualification of Lead Frame raw material change used in the ON Semiconductor QIP100E(14X20) package types.		
Proposed first ship date:	2 November 2016		
Contact information:	Contact your local ON Semiconductor Sales Office or <takeshi2.hoshino@onsemi.com>,<yutaka.okamura@onsemi.com>,<takehito.tsukui@onsemi.com>,<shuic hi.Takahashi@onsemi.com>,<naoki.koyama@onsemi.com>,<shinya.okada@onsemi.com>,<ikuo.saeki@onse mi.com>,<hiroshi.kojima@onsemi.com>,<tetsuya.fukushima@onsemi.com></tetsuya.fukushima@onsemi.com></hiroshi.kojima@onsemi.com></ikuo.saeki@onse </shinya.okada@onsemi.com></naoki.koyama@onsemi.com></shuic </takehito.tsukui@onsemi.com></yutaka.okamura@onsemi.com></takeshi2.hoshino@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>.</pcn.support@onsemi.com>		
Change Part Identification:	Affected products will be identified with date code.		
Change category:	☐ Wafer Fab Change ☐ Assembly Change ☐ Test Change ☐ Other		
Change Sub-Category(s): Manufacturing Site Change/a Manufacturing Process Chan	3 Shipping/Packaging/Ivialking		
Sites Affected: All site(s) not ap	oplicable ON Semiconductor site(s): External Foundry/Subcon site(s) ON Tarlac City, Philippines		

Description and Purpose:

This is a Final Process Change Notice to announce the replacement of existing lead frame raw material from C64730 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)	C64730(Existing)			
Mechanical properties						
Coefficient of Thermal Expansion	X10 ⁻⁸ /K	17.6	17.0			
Thermal Conductivity	W (m·K)	262	150			
Electrical Resistivity	μΩm	0.025	0.049			
Electrical Conductivity	%IACS	65	65 35			
Modulus Elasticity	KN/mm ²	121	125			
Chemical properties						
Cu	%	Remain	Remain			
Zn	%	0.05 ~ 0.20	0.2 ~ 0.5			
Pb	Pb % Max 0.03 None		None			
Fe	Fe % 2.10 ~ 2.60 Non		None			
Р	%	0.01 ~ 0.15	None			
Sn	%	None	1.0 ~ 1.5			
Ni	Ni % None 2.9 ~ 3.5		2.9 ~ 3.5			
Si %		None	0.5 ~ 0.9			

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Reliability Data Summary:

QV DEVICE NAME: LC75056PE-H PACKAGE : QIP100

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	
LC79401KNE-E	LC75056PE-H	
LC79431KNE-E	LC75056PE-H	

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