INITIAL PRODUCT/PROCESS CHANGE NOTIFICATION #20068

Generic Copy

Issue Date: 01-May-2013

TITLE: Qualify OSPI as alternate supplier of SOIC16, SOIC20, SOIC24, SOIC28, & TSSOP16 packages

PROPOSED FIRST SHIP DATE:

SOIC 16L,SOIC 20L & TSSOP 16L – Sep 1’st, 2013
SOIC 24L, & SOIC 28L – Dec 1st, 2013

AFFECTED CHANGE CATEGORY(S): Assembly Manufacturing Site and BOM

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION: Contact your local ON Semiconductor Sales Office or Ovidiu Tol ovidiu.tol@onsemi.com or Francis Santos francis.santos@onsemi.com

SAMPLES: Samples should be available after completion of Qualification. Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Francis.Lualhati@onsemi.com

NOTIFICATION TYPE:

Initial Product/Process Change Notification (IPCN)

First change notification 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.

DESCRIPTION AND PURPOSE:

Qualify OSPI as assembly site for SOIC16, SOIC20, SOIC24, SOIC28, & TSSOP16. OSPI is already a qualified source of SOIC and TSSOP packages and is TS16949 certified.

OSPI will be using its standard Bill of Materials and Process Flow with no expected impact to form, fit, and function.

For wide body SOICs, ON Semiconductor has re-classified the Moisture Sensitivity Level on the affected parts from MSL1-260C to MSL3-260C. The reason for this MSL re-classification is a new lead frame had to be qualified due to the Thailand flooding some time ago.

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QUALIFICATION PLAN:

Estimated Date for Qualification Completion:

SOIC 16L & TSSOP 16L – May15, 2013
SOIC 20L, SOIC 24L, SOIC 28L – Aug 01, 2013

AEC#	TEST	TEST CONDITIONS	REFERENCE	END POINT REQUIREMENTS	TEST RESULTS READ POINT	COMMENTS
PC	A1	Preconditioning: ; Moisture Preconditioning for HAST, AC, TC, & PTC; **MSL3**, Peak Reflow Temp = 260C	JESD22 A113 J-STD-020	(Test @ Rm)		
HAST + PC	A2	Highly Accelerated Stress Test: 130°C/85%RH	JESD22 A101 JESD22 A110	(Test @ Rm)	Post Precond	
					96 hrs	
AC + PC	A3	Autoclave: 121°C/100%RH, 15psig	JESD22 A102 or JESD22 A118	(Test @ Rm)	Post Precond	
					96 hrs	
TC + PC	A4	Temperature Cycle: Grade 1:-65°C/+150°C	JESD22 A104	(Test @ Rm)	Post Precond	
					100 cyc	
					500 cyc	
					1000 cyc	
HTSL	A6	High Temperature Storage Life: Grade 1: 150°C	JESD22 A103	(Test @ Rm)	Initial Electrical	
					168 hrs	
					504 hrs	
					1008 hrs	
SD	C3	Solderability:	JESD22 B102	(>95% coverage)		
DPA	---	DeProcessing Analysis at Post 500 cyc TC+PC	12MSB17722C	N/A		
SAT	---	Scanning Acoustic Topography	12MSB17722C	pre and post MSL		
WBP	C2	Wire Bond Pull: ; Each bonder used	Mil-STD-883 Method 2011	(Ppk > 1.67 and Cpk > 1.33)		PE to request data as part of EBR for Assembly. PE to forward data to Rel.
PD	C4	Physical Dimensions:	JESD22 B100, JESD22 B108	(Ppk > 1.67 and Cpk > 1.33)		PE to request data as part of EBR for Assembly. PE to forward data to Rel.
TEST	E1	Pre and Post Stress Function/Parameter	User/Supplier Specification			PE responsible for testing. Data to be provided to Rel eng
HBM / MM	E2	Electrostatic Discharge, Human Body Model / Machine Model: ; (2KV HBM / 200V MM) At least one of these models must be performed.	AEC-Q100-002 AEC-Q100-003	(Test @ Rm/Hot)		PE responsible for testing. Data to be provided to Rel eng
CDM	E3	Electrostatic Discharge, Charged Device Model:	AEC-Q100-011	(Test @ Rm/Hot)		PE responsible for testing. Data to be provided to Rel eng
LU	E4	Latch-Up:	AEC-Q100-004	(Test @ Rm/Hot)		PE responsible for testing. Data to be provided to Rel eng
ED	E5	Electrical Distributions:	AEC-Q100-009	(Test @ Rm/Hot/Cold)		PE responsible for testing. Data to be provided to Rel eng

CHANGED PART IDENTIFICATION:

The parts assembled in OSPI will have letter “P’ marked on the front at the location that identifies the assembly house.

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List of affected General Parts:

SOIC 28 Ld

CAT4026V-T1

SOIC 16 Ld

CAT4024V-GT2
CAT9554WI-GT2
CAT9557WI-GT2
CAT9534WI-GT2
CAT9554WI-G
CAT9534WI-G
CAT9554AWI-GT2

TSSOP 16 Ld

CAT9554AYI-GT2
CAT9534YI-G
CAT9534YI-GT2
CAT9554AYI-G
CAT9554YI-G
CAT9554YI-GT2
CAT9557YI-G
CAT9557YI-GT2

SOIC 24 Ld

CAT5401WI-00-T1
CAT5401WI00
CAT5401WI-10-T1
CAT5401WI10
CAT5401WI-25-T1
CAT5401WI25
CAT5401WI-50-T1
CAT5401WI50
CAT5411WI-00-T1
CAT5411WI00
CAT5411WI-10-T1
CAT5411WI10
CAT5411WI-25-T1
CAT5411WI25
CAT5411WI-50-T1
CAT5411WI50
CAT5409WI-00-T1
CAT5409WI00
CAT5409WI-10-T1
CAT5409WI10
CAT5409WI-25-T1
CAT5409WI25
CAT5409WI-50-T1
CAT5409WI50
CAT5419WI-00-T1
CAT5419WI00
CAT5419WI-10-T1
CAT5419WI10
CAT5419WI-25-T1
CAT5419WI25
CAT5419WI-50-T1
CAT5419WI50
CAT5251WI-00-T1
CAT5251WI00
CAT5251WI-50-T1
CAT5251WI50
CAT5261WI-00-T1
CAT5261WI00
CAT5261WI-50-T1
CAT5261WI50
CAT5259WI-00-T1
CAT5259WI00
CAT5259WI-50-T1
CAT5259WI50
CAT5269WI-00-T1
CAT5269WI00
CAT5269WI-50-T1
CAT5269WI50
CAT9532WI-T1
CAT9532WI
CAT9552WI-T1
CAT9555WI-T1
CAT9555WI
CAT4016W-T1

SOIC 20 Ld

CAT310W-T1
CAT5221WI00
CAT5221WI-00-T1
CAT5221WI10
CAT5221WI-10-T1
CAT5221WI25
CAT5221WI-25-T1
CAT5221WI50
CAT5221WI-50-T1
CAT5241WI00
CAT5241WI-00-T1
CAT5241WI10
CAT5241WI-10-T1
CAT5241WI25
CAT5241WI-25-T1
CAT5241WI50
CAT5241WI-50-T1

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List of affected Customer Specific Parts:

SOIC 24 Ld

CAT5401WI-10T-QJ
CAT5401WI-10-QJ
CAT5411WI-10T-QJ
CAT5411WI-10-QJ
CAT5409WI-10T-QJ
CAT5409WI-10-QJ
CAT5419WI-10T-QJ
CAT5419WI-10-QJ
CAT5251WI-00T-QJ
CAT5251WI-00-QJ
CAT5251WI-50T-QJ
CAT5261WI-00T-QJ
CAT5261WI-00-QJ
CAT5261WI-50T-QJ
CAT5259WI-00T-QJ
CAT5259WI-00-QJ
CAT5259WI-50T-QJ
CAT5259WI-50-QJ
CAT5269WI-50T-QJ
CAT5269WI-50-QJ

SOIC 20 Ld

CAT5241WI-10T-QJ
CAT5241WI-10-QJ
CAT5241WI-50T-QJ
CAT5241WI-50-QJ
CAT5221WI-00T-QJ
CAT5221WI-00-QJ
CAT5221WI-10-QJ
CAT5221WI-50T-QJ
CAT5221WI-50-QJ