ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16491

Generic Copy

Issue Date: 24-Jun-2010

TITLE: MSOP 8/10 Lead Package Moisture Sensitivity Level Change

PROPOSED FIRST SHIP DATE: 04-Oct-2010

AFFECTED CHANGE CATEGORY(S):
Computer Products – Power Switching Group

8 lead MSOP package 8697
10 lead MSOP package 8698

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or David Short <david.short@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

The package kit for the current 8 and 10ld MSOP BOM has been changed to "Green" - Halogen Free mold compound and as a result the Moisture Sensitivity Level (MSL) rating will change to MSL1 from MSL3. The package will be rated at MSL-1 at 260°C solder reflow temperature as opposed to MSL-3 at 260°C per J-STD-020 requirements. Thus dry packing will not be required for shipments.

This new package kit will be effective from date code 1040 (year 2010, work week 40) onwards.
There is no change to physical dimensions for the package.

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RELIABILITY DATA SUMMARY:

8 lead MSOP package 8697

#	Test	Name	Test Conditions	End Point Req's	Test Results	Lot A (rej/ ss)	Lot B (rej/ ss)	Lot C (rej/ ss)	Remark
1	Prep	Sample preparation and initial part testing	various	---	Initial Electrical	Done	Done	Done	
2	HTSL	High Temp Storage Life	TA = 150°C for 1008hrs	c = 0, Room	504 hrs	0/80	0/80	0/80	
					1008hrs	0/80	0/80	0/80	
3	SAT	Scanning Acoustic Tomography	Compare for Delamination before and after PC	Per 12MSB17722C	Results	0/5	0/5	0/5	MSL 1@260°C
4	PC	Moisture Preconditioning	MSL 1 @ 260°C	c = 0, Room	After PC	0/240	0/240	0/240	
5	AC-PC	Precond. Autoclave	TA = 121°C, RH = 100%, PSIG = 15	c = 0, Room	**96 hrs**	0/80	0/80	0/80	
6	TC-PC	Precond. Temp Cycle	-65/+150°C air to air	c = 0, Room	250 cycs	0/80	0/80	0/80	
					500 cycs	0/80	0/80	0/80	
7	HAST-PC	Precond. HAST	TA= +130°C, RH = 85%, PSIG= 18.8, Bias	c = 0, Room	**96 hrs**	0/80	0/80	0/80	
8	BPS	Bond Pull Strength	M883 Method 2011 Cond C	30 bonds from 5 units **Cpk ≥ 1.67**	Results	0/30	0/30	0/30	
9	BS	Bond Shear Test	AEC-Q100-001	30 bonds from 5 units **Cpk ≥ 1.67**	Results	0/30	0/30	0/30	
10	PD	Physical Dimension	JB100	Per case outline **Ppk>1.66, Cpk>1.33**	Result	Pass	Pass	Pass	
11	RSH	Resistance to Solder Heat	JESD22 – B106 260°C Immersion	c = 0, Room	Results	0/30	0/30	0/30	

10 lead MSOP package 8698

#	Test	Name	Test Conditions	End Point Req's	Test Results	Lot A (rej/ ss)	Lot B (rej/ ss)	Lot C (rej/ ss)	Remark
1	Prep	Sample preparation and initial part testing	various	---	Initial Electrical	Done	Done	Done	
2	SAT	Scanning Acoustic Tomography	Compare for Delamination before and after PC	Per 12MSB17722C	Results	0/5	0/5	0/5	MSL 1@ 260°C
3	PC	Moisture Preconditioning	MSL 1 @ 260°C	c = 0, Room	After PC	0/160			
4	AC-PC	Precond. Autoclave	TA = 121°C, RH = 100%, PSIG = 15	c = 0, Room	**96 hrs**	0/80			
5	TC-PC	Precond. Temp Cycle	-65/+150°C air to air	c = 0, Room	250 cycs	0/80			
					500 cycs	0/80			
6	PD	Physical Dimension	JB100	Per case outline Ppk>1.66, Cpk>1.33	Result	0/30			