ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16808

Generic Copy

Issue Date: 22-Feb-2012

TITLE: Transfer Assembly Site for NCT75DMR2G Micro 8 Package to Carsem Malaysia

PROPOSED FIRST SHIP DATE: 22-May-2012

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Assembly Site

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

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or <nicky.siu@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:

This is a Final Process Change Notice notifying customers of the transfer of assembly location for NCT75DMR2G Micro 8 package. The NCT75DMR2G is currently assembled at the ON Semiconductor assembly facility located in Malaysia. At the expiration of this Final PCN, this device will be processed Carsem Malaysia.

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RELIABILITY DATA SUMMARY:

Based on Reliability test results, the Micro8 package at Carsem, Malaysia is qualified and rated at MSL-1@260 degree Celsius. NCT75 was selected as qualification vehicle. Reliability tests on 3 assembly lots sample, in addition of related assembly test are required for each of the qualification vehicle.

Carsem and SBN packages have the same case outline.

Reliability Test Results:

Device	NCT75DMR2G	**Wafer Fab Site**	Gresham	Oregon, USA
Package	Micro-8	**Assembly Site**	Carsem-M	Malaysia
MSL Level	MSL 1 @260°C	**Final Test Site**	OSPI	Carmona, Philippines
Wafer Technology	ONC25			
Final Lead Finish	Matte Sn	**Package Code**	0360	

Qualification Results and Analysis:

#	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	
3	SAT	Scanning Acoustic Tomography	Compare for Delamination before and after PC - MSL 1 @260°C	Per 12MSB17722C	Results	0/5	0/5	0/5	
4	PC	Moisture Preconditioning	MSL 1 @ 260°C	c = 0, Room	After PC	0/154	0/154	0/154	
5	AC-PC	Precond. Autoclave	TA = 121°C, RH = 100%, PSIG = 15	c = 0, Room	**96hrs**	0/77	0/77	0/77	
6	TC-PC	Precond. Temp Cycle	-65/+150°C air to air	c = 0, Room	250 cycs	0/77	0/77	0/77	CDPA after TC500cycs – 2 units/lot – Passed.
					500 cycs	0/77	0/77	0/77	
7	RSH	Resistance to Solder Heat	JESD22 – B106 260°C Immersion	c = 0, Room	Results	0/30	0/30	0/30	
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	ESD	Electro-static Discharge	Human Body Model (HBM)	Room	Results	±2.5kV			Class 2
			Machine Model (MM)	Room	Results	±500V			Class C
11	LU	Latch-up	JESD 78	Room	**+/-100mA**	0/6			Class 1 Level A
12	ED	Electrical Distribution	Per ON Datasheet Critical Parameter	Room, Hot, Cold **Cpk ≥ 1.67**	Results	Pass			

Table 1: Reliability Evaluation Results for NCT75, maskset Y09J, in Micro-8 package
Qualification Points in BOLD

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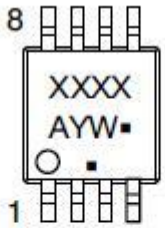
ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical characteristic exceeds the device specification.

CHANGED PART IDENTIFICATION:

Seremban Assembly Site marking: A = R
Carsem Assembly Site marking : A = M1



XXXX	= Specific Device Code
A	= Assembly Location
Y	= Year
W	= Work Week
▪	= Pb−Free Package

(Note: Microdot may be in either location)

List of affected General Parts:
NCT75DMR2G