



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
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03 Apr 2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification #16232

TITLE: Final PCN for Assembly Qualification of PTC Products (former ADI Parts) MSOP8 and MSOP10 Packages in ON Semiconductor facility in Seremban, Malaysia

PROPOSED FIRST SHIP DATE: 03 Jul 2009

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Assembly Site

AFFECTED PRODUCT DIVISION(S):

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Wyler Montoya <Wyler.Montoya@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Nicky Siu <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 your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

This is a Final Process Change Notice to IPCN 16152 available at www.onsemi.com notifying customers of the capacity expansion of the ON Semiconductor assembly location at Seremban, Malaysia (SBN) for MSOP8 and MSOP10 packages. The affected devices listed on this FPCN are assembled at the CARSEM assembly facility located in Malaysia. At the expiration of this Final PCN, these devices may be processed at either location.



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RELIABILITY DATA SUMMARY:

Based on Reliability test results, the Micro-8/10 package at Seremban, Malaysia is qualified and rated at MSL-1 @260 degree Celsius. ADP3611 and ADT7461 are selected as qualification vehicle.

MSOP-8/10 and Micro-8/10 have the same case outline, but with different naming only. The qualification vehicles are selected from the affected devices based on package, die size, die to flag size ratio and volume run rate – ADP3611 (Micro-10) and ADT7461 (Micro-8). Reliability tests on 3 assembly lots sample, in addition of related assembly test are required for each of the qualification vehicle.

Reliability Test Results:

Mirco-8 Qual Vehicle: ADT7461ARMZ

Device	ADT7461ARMZ	Wafer Fab Site	TSMC	Taiwan
Package	Micro-8	Assembly Site	SBN	Seremban, Malaysia
MSL Level	MSL 1 @260°C	Final Test Site	OSPI	Seremban, Malaysia
Technology	TSMC 0.5µm CMOS			
Final Lead Finish	Matte Sn	Package Code	0364	

Mirco-10 Qual Vehicle: ADP3611JRMZ

Device	ADP3611JRMZ	Wafer Fab Site	TSMC	Taiwan
Package	Micro-10	Assembly Site	SBN	Seremban, Malaysia
MSL Level	MSL 1 @260°C	Final Test Site	OSPI	Seremban, Malaysia
Technology	TSMC 0.35µm LD20			
Final Lead Finish	Matte Sn	Package Code	0369	

Reliability Evaluation Result for Device ADT7461 in Micro-8 package assembled at SBN.

#	Test	Name	Test Conditions	End Point Req's	Test Results	Lot A	Lot B	Lot C	Remark
						(rej/ ss)	(rej/ ss)	(rej/ ss)	
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 – MSL 1@ 260°C	Per 12MSB17722C	Results	0/5	0/5	0/5	
3	PC	Moisture Preconditioning	MSL 1 @ 260°C	c = 0, Room	After PC	0/231	0/231	0/231	
4	AC-PC	Precond. Autoclave	TA = 121°C, RH = 100%, PSIG = 15	c = 0, Room	96 hrs	0/77	0/77	0/77	
5	TC-PC	Precond. Temp Cycle	-65/+150°C air to air	c = 0, Room	500 eyes	0/77	0/77	0/77	
6	HAST-PC	Precond. HAST	TA = +130°C, RH = 85%, PSIG = 18.8, bias	c = 0, Room	96 hrs	0/77	0/74	0/77	
7	BPS	Bond Pull Strength	MS83 Method 2011 Cond C	30 bonds from 5 units Cpk ≥ 1.67	Results	0/30	0/30	0/30	
8	BS	Bond Shear Test	AEC-Q100-001	30 bonds from 5 units Cpk ≥ 1.67	Results	0/30	0/30	0/30	
9	PD	Physical Dimension	JB100	Per case outline Ppk > 1.66, Cpk > 1.33	Result	0/30			
10	RSH	Resistance to Solder Heat	JESD22 – B106 260°C Immersion	c = 0, Room	Results	0/30			



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Reliability Evaluation Result for Device ADP3611 in Micro-10 package assembled at SBN.

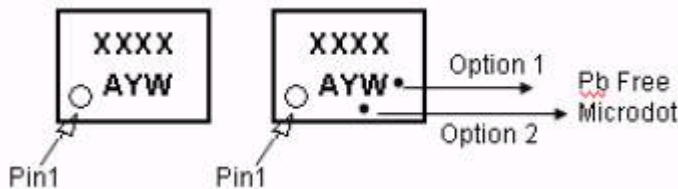
#	Test	Name	Test Conditions	End Point Req's	Test Results	Lot A (rej/ ss)	Lot B (rej/ ss)	Lot C (rej/ ss)	Remark
1	Prep	Sample preparation and initial part testing	various	---	Initial Electrical	Done	Done	Done	
2	SAT	Scanning Acoustic Tomography	Compare for Delamination before and after PC - MSL 1 @ 260°C	Per 12MSB17722C	Results	0/5	0/5	0/5	
3	PC	Moisture Preconditioning	MSL 1 @ 260°C	c = 0, Room	After PC	0/231	0/231	0/231	
4	AC-PC	Precond. Autoclave	TA = 121°C, RH = 100%, PSIG = 15	c = 0, Room	96 hrs	0/77	0/77	0/77	
5	TC-PC	Precond. Temp Cycle	-65/+150°C air to air	c = 0, Room	500 eyes	0/77	0/77	0/77	
6	HAST-PC	Precond. HAST	TA = +130°C, RH = 85%, PSIG = 18.8, bias	c = 0, Room	96 hrs	0/77	0/77	0/77	
7	BPS	Bond Pull Strength	M883 Method 2011 Cond C	30 bonds from 5 units Cpl ≥ 1.67	Results	0/30	0/30	0/30	
8	BS	Bond Shear Test	AEC-Q100-001	30 bonds from 5 units Cpl ≥ 1.67	Results	0/30	0/30	0/30	
9	PD	Physical Dimension	JB100	Per case outline Ppk > 1.66, Cpl > 1.33	Result	0/30			
10	RSH	Resistance to Solder Heat	JESD22 - B106 260°C Immersion	c = 0, Room	Results	0/30			

ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical characteristic exceeds the device specification.

CHANGED PART IDENTIFICATION:

At the expiration of this FPCN, CARSEM and Seremban facility will follow the ON Semiconductor standard marking for Micro-8 and Micro-10 packages.





AFFECTED DEVICE LIST

Orderable Part Number	Web Part Number	Package Type
AD51/057Z-000	ADM1032	MSOP 8
AD51/057Z-0REEL	ADM1032	MSOP 8
AD51/057Z-0REEL7	ADM1032	MSOP 8
ADM1032ARMZ	ADM1032	MSOP 8
ADM1032ARMZ-2RL7	ADM1032	MSOP 8
ADM1032ARMZ-R7	ADM1032	MSOP 8
ADM1032ARMZ-002	ADM1032	MSOP 8
ADM1032ARMZ-001	ADM1032	MSOP 8
ADM1032ARMZ-1RL	ADM1032	MSOP 8
ADM1032ARMZ-2R	ADM1032	MSOP 8
ADM1032ARMZ-REEL	ADM1032	MSOP 8
ADP34190091RMZR	ADP3419	MSOP 10
ADP3419JRMZ-REEL	ADP3419	MSOP 10
ADP3419JRM-REEL	ADP3419	MSOP 10
ADP3611JRMZ-REEL	ADP3611	MSOP 10
ADT7421ARMZ-REEL	ADT7421	MSOP 8
ADT7421ARMZ-2RL	ADT7421	MSOP 8
ADT7421ARMZ-2RL7	ADT7421	MSOP 8
ADT7421ARMZ-RL7	ADT7421	MSOP 8
AD51/067ARMZ-2RL	ADT7461	MSOP 8
AD51/067ARMZ-R	ADT7461	MSOP 8
ADT7461ARMZ	ADT7461	MSOP 8
ADT7461ARM-REEL	ADT7461	MSOP 8
ADT7461ARM-REEL7	ADT7461	MSOP 8
ADT7461ARMZ-002	ADT7461	MSOP 8
ADT7461ARM	ADT7461	MSOP 8
ADT7461ARMZ-2R	ADT7461	MSOP 8
ADT7461ARMZ-2RL7	ADT7461	MSOP 8
ADT7461ARMZ-R7	ADT7461	MSOP 8
ADT7461A0002RMZR	ADT7461A	MSOP 8
ADT7461AARMZ-2RL	ADT7461A	MSOP 8
ADT7461A0001RMZR	ADT7461A	MSOP 8
ADT7461AARMZ-R	ADT7461A	MSOP 8
ADT7461AARMZ-002	ADT7461A	MSOP 8
ADT7461AARMZ-RL7	ADT7461A	MSOP 8
ADT7461AARMZ	ADT7461A	MSOP 8
ADT7461AARMZ2RL7	ADT7461A	MSOP 8
ADT7481ARMZ-R7	ADT7481	MSOP 10
ADT7481ARMZ	ADT7481	MSOP 10
ADT7481ARMZ-1R7	ADT7481	MSOP 10
ADT7481ARMZ-1RL	ADT7481	MSOP 10
ADT7481ARMZ-REEL	ADT7481	MSOP 10
ADT7481ARMZ-001	ADT7481	MSOP 10
ADT7482ARMZ-REEL	ADT7482	MSOP 10



Orderable Part Number	Web Part Number	Package Type
ADT7482ARMZ-RL7	ADT7482	MSOP 10
ADT7482ARMZ	ADT7482	MSOP 10
ADT7484AARMZ-R7	ADT7484A	MSOP 8
ADT7484AARMZ-RL	ADT7484A	MSOP 8
ADT7485ARMZ-RL7	ADT7485A	MSOP 8
ADT7485AARMZ-R	ADT7485A	MSOP 10
ADT7485AARMZ-R7	ADT7485A	MSOP 10
ADT7486AARMZ-RL	ADT7486A	MSOP 10
ADT7486AARMZ-R7	ADT7486A	MSOP 10
ADT7488AARMZ-RL7	ADT7488A	MSOP 10
ADT7488AARMZ-RL	ADT7488A	MSOP 10