PCN # 1375

DATE: February 20, 2014

Quality Assurance
160 Rio Robles
San Jose, CA 95134

www.maximintegrated.com

[X] PROCESS CHANGE NOTICE
[ ] PRODUCT CHANGE NOTICE

MAXIM INTEGRATED HEREBY ISSUES NOTIFICATION OF CHANGE THAT MAY AFFECT THE FOLLOWING CATEGORIES:

[ ] DESIGN	[X] WAFER FAB	[ ] ASSEMBLY	[ ] TEST	[ ] ELEC/MECH SPECS

AFFECTED PRODUCT:

Ordering P/N: (See PN listing XLS in PCN ZIP file)

CHANGE FROM: Maxim Fab North (MFN) 6” wafer processing – S12EIFW	CHANGE TO: MFN 8” wafer processing – B12EIFW Please note that the same mask set is being used; it is stepped on an 8” wafer process.

JUSTIFICATION: Updating the MFN fab technology to the 8” process - B12EIFW.

1) 8” process has lower defect density.
2) 8” process is mainstream with current tools.
3) 8” process provides for more capacity.
4) 6” processes are being reduced.

Please see the attached AECQ100 Report.

TRACEABILITY: Maxim Integrated maintains full traceability by device marking, packaging labels and shipment documents.

Maxim Integrated's Change Notification System is designed to keep our customer base apprised of major product, manufacturing, or facility improvements.

Deborah Meeker / PCN Coordinator

For further information, please contact either of the people listed below.

Contact your local Maxim Integrated Company Representative or Deborah Meeker, PCN Coordinator
408-601-5618 / pcn.coordinator@maximintegrated.com

MAX6008AEUR/V+
1µA SOT23 Precision Shunt Voltage Reference
Temperature Grade 3
3L SOT23
U3+1

MAX6008AEUR/V+
1µA SOT23 Precision Shunt Voltage Reference

Summary:

This report summarizes the results of the reliability tests performed by Maxim to qualify the 8" MFN B12 process for MAX6008AEUR/V+.

Conclusion:

The MAX6008AEUR/V+ on 8" MFN B12 process successfully meets the reliability requirements performed by Maxim.

AEC-Q100 Qualification Requirements/Acceptance Criteria:

	Stress	ABV	AEC #	#of Lots	SS/Lot	ACC	ATE Temp	Method
Device Specific Tests	Electrostatic Discharge (Human Body/Machine Model)	ESD (HBM/MM)	E2	1	25	HBM:2000V MM:200V	RH	AEC-Q100-002 AEC-Q100-003
	Electrostatic Discharge (Device Model)	ESD (CDM)	E3	1	15	750V corner pins, 500V all other pins	RH	AEC-Q100-011
	Latch-Up	LU	E4	1	6	0	RH	AEC-Q100-004
	Electrical Distribution	ED	E5	3 *1	30	Cpk > 1.33	RHC	AEC-Q100-009
Package/ Process Related Tests	Preconditioning	PC	A1	3	77	0	R	J-STD-020 JESD22- A113
	Temperature Humidity Bias	HAST/THB	A2	3	77	0	RH	JESD22- A101 or A110
	Unbiased HAST	UHAST	A3	3	77	0	R	JESD22- A102, A118, or A101
	Temperature Cycle	TC	A4	3	77	0	RH	JESD22-A104 and Appendix 3
	Wire Bond Pull	WBP	C2	3	5	0	N/A	MIL-STD883 Method 2011
	High Temp Storage	HTSL	A6	1	45	0	RH	JESD22- A103
	Solderability	SD	C3	1	15	0	N/A	JESD22-B102
	High Temp Operating Life *2	HTOL	B1	3	77	0	RHC	JESD22-A108
	Early Life Failure Rate *3	ELFR	B2	3	800	0	RH	AEC Q100-008

Note *1 – One lot process skewed may be used
*2 – Grade 1 (1000hrs), Grade 2 (500hrs), Grade 3 (192hrs)
*3 – Grade 1 (48hrs), Grade 2 (24hrs), Grade 3 (12hrs)

Test Results/Lot information (Wafer Process Technology):

Table 1:

Lot Number:		JAKM9Q001DB			JAKM9Q003HX			JAKM9A005DX		
Part Number:		MAX6008AEUR/V+			MAX6008AEUR/V+			MAX6008AEUR/V+		
Temperature Grade:		3			3			3		
Fab Site:		MFN			MFN			MFN		
Fab Process Core:		B12			B12			B12		
Fab Process Tech:		B12EIFW 8” 1.2um			B12EIFW 8” 1.2um			B12EIFW 8” 1.2um		
Metallization/# Layers:		AlCu / 2			AlCu / 2			AlCu / 2		
Passivation:		SiN / SiO2			SiN / SiO2			SiN / SiO2		
Die Type:		RF28Z-2Z			RF28Z-2Z			RF28Z-2Z		
Package Assembly Site:		CARSEM-M			CARSEM-M			CARSEM-M		
Die Size:		44 x 31			44 x 31			44 x 31		
Package Type:		3L SOT23			3L SOT23			3L SOT23		
Wire Bond Material/Dia.:		Au 1.0 mil			Au 1.0 mil			Au 1.0 mil		
Mold Compound:		CEL9220HF13			CEL9220HF13			CEL9220HF13		
Die Attach:		8006NS-2X			8006NS-2X			8006NS-2X		
Leadframe Material:		COPPER			COPPER			COPPER		
Lead Finish:		100% MATTE TIN			100% MATTE TIN			100% MATTE TIN		
Date Code:		1308			1345			1345		
Rel Lot Number:		R26737A			R26737B			R26737C		
AEC #	**Test**	**Results** *SS*		*Temp*	**Results** *SS*		*Temp*	**Results** *SS*		*Temp*
A1	**Preconditioning**	0/231		R	0/231		R	0/231		R
A2	**HAST**	0/77		RH	0/77		RH	0/77		RH
A3	**Unbiased HAST**	0/77		R	0/77		R	0/77		R
A4	**Temperature Cycle**	500x – 0/77		RH	500x – 0/77		RH	500x – 0/77		RH
A6	**High Temp Storage**	500hrs – 0/45		RH	-		N/A	-		N/A
B1	**High Temp Operating Life**	192hrs – 0/77		RHC	192hrs – 0/77		RHC	192hrs – 0/77		RHC
B2	**Early Life Failure Rate**	12hrs – 0/800		RH	12hrs – 0/800		RH	12hrs – 0/800		RH
E2	**ESD (HBM)**	1500V		RH	-		N/A	-		N/A
E3	**ESD (CDM)**	750V		RH	-		N/A	-		N/A
E4	**Latch-Up**	CI 0/6	OV 0/6	RH	CI -	OV -	N/A	CI -	OV -	N/A

Written By: 

Steve Yee
Reliability Engineer

Approved By: 

Jeff Aquino
Manager, Reliability

Revision and Release Date	Description of Revision and Author	Approved By	Effective By (Date)
A 19 Feb 2014	Initial release for PCN 1375; Steve Yee	J. Aquino	19 Feb 2014