

Automotive Qualification Report
MAX5023LASA

		✓	✓	□	✓	✓		
		Lot # 1 (N6R0DA010A)	Lot # 2 (N6Y0FA039B)	Lot # 3 (NF11CA019C)	Lot # 4 (Note 2)	Lot # 5 (NNPAF2001Q)		
65V, Low-Quiescent-Current, High-Voltage Linear Regulator with μP Reset and Watchdog Timer	Maxim Part Number	MAX5023LASA	MAX5035AASA	MAX4080TASA	MAX5913EMH	MAX2601ESA+ (Note 5)		
	Description (Note 1)	AEC-Q100	AEC-Q100	AEC-Q100	Maxim	Maxim		
	Operating Temperature	-40C to +125C	-40C to +125C	-40C to +125C	-40C to +85C	-40C to +85C		
	Temperature Grade	1	1	1	3	3		
	Fab Location	Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton		
	Fab Process	BCD80N (BiCMOS)	BCD80N (BiCMOS)	BCD80N (BiCMOS)	BCD80N (BiCMOS)	GST20 (Bipolar)		
	Die	NP33X	NP25V	OY07Z-1Z	NP35Y	WR15Z		
	Assembly Location	Anam/Amkor Philippines	Unisem	NSEB, Thailand	Anam/Amkor Philippines	Anam/Amkor Philippines		
	Die Size (mils)	85 x 112	85 x 145	61 x 80	190 x 198	43 x 45		
	Package	8-Lead NSOIC (EP)	8-Lead NSOIC	8-Lead NSOIC	44-Lead MQFP (10x10)	8-Lead NSOIC (EP w/DB)		
	Wire Bond Material	Au .001"	Au .001"	Au .001"	Au .001"	Au .0012"		
	Mold Compound	G600	EME6300H	EME6600CS	EME7304LC	G600		
	Die Attach	8290	84-1LMISR4	84-1LMISR4	84-1LMISR4	8290		
	Lead Frame	Copper	Copper	Copper	Copper	Copper		
	Lead Finish	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb	100% Matte Sn		
Reliability Lot Number	A050018, DC 0433	A050017, DC 0527	A050019, DC 0527	R010587A/B/C, DC 0219	R040008A/B/C, DC 0346			
		Failures/Sample Size		Failures/Sample Size		Failures/Sample Size		
AEC-Q100 Rev. F Tests	#	Conditions	+25C	+125C	-40C	+25C	+125C	-40C
MSL 1 - Preconditioning (PC)	A1	240C (Sn/Pb)	0/215					
		260C (100% Sn)						0/450
=>CSAM		J-STD-020C (1 lot)	0/22					
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours						500 Hrs. 0/135
Biased HAST (HAST)	A2	130C/85%RH 96 Hours	0/47	0/47				
Autoclave (AC)	A3	121C/85%RH 168 Hours						0/231
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours	0/48	0/48				
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles	0/80	0/80				
=>Wirebond Pull (WBP)		>3 grams	0/50					
High Temperature Storage (HTSL)	A6	+150C 1000 Hours	0/80	0/80				
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours	0/45	0/45	0/45			
Early Life Failure Rate (ELFR)	B2	+135C 48 Hours						
Maxim Infant Mortality Evaluation		+135C 12 Hours						
Wire Bond Shear (WBS)	C1		(Note 3)					(Note 3)
Wire Bond Pull (WBP)	C2		(Note 3)				0/730	0/354
Solderability (SD)	C3		0/15					0/45
Physical Dimensions (PD)	C4		0/10					0/45
Lead Integrity (LI)	C6		0/10					
(EM, TDDb, HCI)	D1-3							
Pre- and Post-Stress Electrical (TEST)	E1		All	All	All	All		All
Human Body Model ESD (HBM)	E2	JESD22/A114	2000V	2000V				
Machine Model ESD (MM)	E2	JESD22/A115						
Charged Device Model ESD (CDM)	E3	AEC-Q100-011	750V	750V				
Latch-Up (LU)	E4	JESD78, Class I	0/6	0/6				

(Note 1) AEC-Q100 test performed per Rev. F guidelines. Maxim tests performed to internal specification 10-3006.

(Note 2) Tests performed on three wafer lots: N490E1008C, N490E1009B, and N490E1011B.

(Note 3) Monitor data from assembly subcontractor.

(Note 4) HTOL testing performed on the MAX4081TASA (Die OY07Z-4Z), Wafer lot NF14CA004A.

(Note 5) Tests performed on three assembly lots.

✓ = Complete

□ = Open