

Automotive Qualification Report
MAX2640EUT

		□	✓	✓	✓	✓	✓							
		Lot # 1 (NT3BD3049F)	Lot # 2 (NT3BC1001BA)	Lot # 3 (NR3AD1003/4A)	Lot # 4 (N8EFA006)	Lot # 5 (I2N0AQ001D)	Lot # 6							
400MHz to 2500MHz SiGe Ultra-Low-Noise Amplifier	Maxim Part Number	MAX2640EUT	MAX2640EUT	MAX2680EUT	MAX2321EUP	MAX4246AKA+ (Note 2)								
	Description (Note 1)	AEC-Q100	AEC-Q100	Maxim	Maxim	Maxim								
	Operating Temperature	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +125C								
	Temperature Grade	3	3	3	3	3								
	Fab Location	Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton	Maxim, San Jose								
	Fab Process	GST33 (SiGe Bipolar)	GST33 (SiGe Bipolar)	GST33 (SiGe Bipolar)	GST33 (SiGe Bipolar)	S8 (6", 0.8 um MOS)								
	Die	WR36Z-1Z	WR36Z-1Z	WR22Z	WR49Z	OX58Z								
	Assembly Location	Hana-AYT				Hana-AYT								
	Die Size (mils)	28 x 34	28 x 34	36 x 33	92 x 69	80 x 24								
	Package	6-Lead SOT-23	6-Lead SOT-23	6-Lead SOT-23	20-Lead TSSOP-EP	8-Lead SOT-23								
	Wire Bond Material	Au .001"	Au .001"	Au .001"	Au .0012"	Au .001"								
	Mold Compound	MP8000AN				MP8000AN								
	Die Attach	84-1LMISR4				84-1LMISR4								
	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	A050031, DC 0525	R990098F, DC 99xx	R990098F, DC 99xx	R990098F, DC 99xx	R2002114, DC 0225									
	Failures/Sample Size	Failures/Sample Size	Failures/Sample Size	Failures/Sample Size	Failures/Sample Size	Failures/Sample Size								
AEC-Q100 Rev. F Tests	#	Conditions	+25C	+85C	-40C	+25C	+85C	-40C	+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)	0/21											
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours				0/32		0/95				0/126		
Biased HAST (HAST)	A2	130C/85%RH 96 Hours	0/50										0/135	
Autoclave (AC)	A3	121C/85%RH 168 Hours				No Prec. 0/45		No Prec. 0/90		No Prec. 0/135		No Prec. 0/231		
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours	0/80	0/80										
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles	Pending	Pending		0/45		0/90		0/135		0/231		
=>Wirebond Pull (WBP)		>3 grams	Pending											
High Temperature Storage (HTSL)	A6	+150C 1000 Hours	0/77	0/77		0/45		0/90		0/135		0/231		
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours	Pending	Pending	Pending	0/48		115C 0/78		121C 0/136				
Early Life Failure Rate (ELFR)	B2	+135C 48 Hours												
Maxim Infant Mortality (IME)		+135C 12 Hours												
Wire Bond Shear (WBS)	C1		(Note3)									(Note3)		
Wire Bond Pull (WBP)	C2		(Note3)									0/600		
Solderability (SD)	C3		0/15									0/45		
Physical Dimensions (PD)	C4		0/10									0/45		
Lead Integrity (LI)	C6		0/5											
(EM, TDDb, HCl)	D1-3													
Pre- and Post-Stress Electrical (TEST)	E1		All	All	All	All		All		All		All		
Human Body Model ESD (HBM)	E2	JESD22/A114	500V	500V										
Machine Model ESD (MM)	E2	JESD22/A115	50V											
Charged Device Model ESD (CDM)	E3	AEC-Q100-011	750V	750V										
Latch-Up (LU)	E4	JESD78, Class II	0/12	0/12										

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

(Note 2) Tests performed on three assembly lots.

(Note 3) Monitor data from assembly subcontractor.

✓ = Complete

□ = Open