

Automotive Qualification Report
MAX6316 _____ -

			□	□	✓	✓	✓
			Lot # 1 (SQLAHA013C)	Lot # 2 (S57FDA010A)	Lot # 3 (S4BAJ1001D)	Lot # 4 (SHLCV1001B)	Lot # 5 (SM2BFA055Q)
µP Supervisory Circuit with Watchdog and Manual Reset	Maxim Part Number	MAX6316MUK47BY					
	Description (Note 1)	AEC-Q100 (Note 4)					
	Operating Temperature	-40°C to +85°C					
	Temperature Grade	3					
	Fab Location	Maxim, San Jose					
	Fab Process	B12 (8", 1.2 um MOS)					
	Die	MS13X					
	Assembly Location	Hana-AYT, Thailand					
	Die Size (mils)	43x38					
	Package	5 SOT23-5					
	Wire Bond Material	Au .001"					
	Mold Compound	MP8000AN					
	Die Attach	84-1LMISR4					
	Lead Frame	Copper					
	Lead Finish	85/15 Sn/Pb					
Reliability Lot Number	A050033, DC 0520						
			Failures/Sample Size				
AEC-Q100 Rev. F Tests			#	Conditions	+25C	+85C	-40C
MSL 1 - Preconditioning (PC)			A1	240C (Sn/Pb)	0/211		
				260C (100% Sn)			
=>CSAM				J-STD-020C (1 lot)	0/22		
Temperature Humidity-Bias (THB)			A2	85C/85%RH 1000 Hours			0/465
Biased HAST (HAST)			A2	130C/85%RH 96 Hours	0/50		
Autoclave (AC)			A3	121C/85%RH 168 Hours			0/135
Unbiased HAST (UHAST)			A3	130C/85%RH 96 Hours	0/48		
Temperature Cycle (TC)			A4	-65 to +150C 1000 Cycles	0/80		
=>Wirebond Pull (WBP)				>3 grams	0/50		
High Temperature Storage (HTSL)			A6	+150C 1000 Hours	0/79		
High Temperature Op Life (HTOL)			B1	+135C 1000 Hours	Pending /77		
Early Life Failure Rate (ELFR)			B2	+135C 48 Hours			
Maxim Infant Mortality (IME)				+135C 12 Hours		0/4994	
Wire Bond Shear (WBS)			C1		(Note 3)		(Note 3)
Wire Bond Pull (WBP)			C2		(Note 3)		(Note 3)
Solderability (SD)			C3		0/15		0/45
Physical Dimensions (PD)			C4		0/10		0/45
Lead Integrity (LI)			C6		0/5		0/45
(EM, TDDb, HCI)			D1-3				
Pre- and Post-Stress Electrical (TEST)			E1		All		All
Human Body Model ESD (HBM)			E2	JESD22/A114	2000V		
Machine Model ESD (MM)			E2	JESD22/A115			
Charged Device Model ESD (CDM)			E3	AEC-Q100-011	1000V		
Latch-Up (LU)			E4	JESD78, Class II	Pending		

(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.

(Note 4) Pre- and post-stress testing performed at 25°C only.

(Note 5) Tin whisker inspection data available upon request.

✓ = Complete

□ = Open