

Automotive Qualification Report
MAX1479ATE

			✓ Lot # 1 (QOL0CQ003C)			✓ Lot # 2 (Q43ACQ001B)			✓ Lot # 3 (QFE0AQ003C)			✓ Lot # 4 (QFB6AQ002C)			✓ Lot # 5 (QFE2AQ001Q)			✓ Lot # 6 (QIO0BQ002E)			✓ Lot # 7 (SWA0BQ001Q)			
300MHz to 450MHz Low-Power, Crystal-Based +10dBm ASK/FSK Transmitter Grade 1 16-Lead TQFN 3 x 3 mm	Maxim Part Number	MAX1479ATE	MAX1479ATE			MAX1499EHJ			MAX9209EUM			MAX9222EUM			MAX9213EUM+ (Note 2)			MAX1471ATJ			MAX8620YETD+ (Note 2)			
	Description (Note 1)	AEC-Q100	AEC-Q100			AEC-Q100			AEC-Q100			AEC-Q100			AEC-Q100			AEC-Q100						
	Operating Temperature	-40 to +125C	-40C to +85C			-40C to +85C			-40C to +85C			-40C to +85C			-40 to +125C			-40C to +85C						
	Temperature Grade	1	3			3			3			3			1			3						
	Fab Location	TSMC Fab 9	TSMC Fab 9			TSMC Fab 9			TSMC Fab 9			TSMC Fab 9			TSMC Fab 9			Maxim, San Jose						
	Fab Process	.35um 2P3M	.35um 2P4M			.35um 2P4M			.35um 1P4M			.35um 2P4M			.35um 2P3M			B8 (8", 0.8 um)						
	Die	SC79Z	AC12Y			HS30Z			HS31Z-6Z			HS30Z-2Z			SC71Z			PN95Z						
	Assembly Location	NSEB Thailand	Carsem-S Malaysia			Anam/Amkor Philippines			Anam/Amkor Philippines			Anam/Amkor Philippines			NSEB Thailand			NSEB Thailand						
	Die Size (mils)	55 x 53	85 x 87			88 x 117			92 x 108			88 x 117			90 x 78			70 x 94						
	Package	16-Lead TQFN (3x3)	32-Lead TQFP			48-Lead TSSOP			48-Lead TSSOP			48-Lead TSSOP			32-Lead TQFN (5x5)			14-Lead TDFN (3x3)						
	Wire Bond Material	Au .001" (w/down bond)	Au .001"			Au .001"			Au .001"			Au .001"			Au .001" (w/down bonds)			Au .013"						
	Mold Compound	G770HC	EME7320CR			G700K			G700K			G700K			G770HC			G770HC						
	Die Attach	AB8200T	84-1LMISR4			8290			8290			8290			AB8200T			AB8200T						
	Lead Frame	Copper	Copper			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			85/15 Sn/Pb			100% Matte Sn						
Reliability Lot Number	A050007A	R020068FQ			A050002A			A050010A			R040020FQ			A050005A			R050019FQ							
			Fails/Sample Size			Fails/Sample Size			Fails/Sample Size			Fails/Sample Size			Fails/Sample Size			Fails/Sample Size						
AEC-Q100 Rev. F Tests	#	Conditions	+25C	+125C	-40C	+25C	+85C	-40C	+25C	+85C	-40C	+25C	+85C	-40C	+25C	+85C	-40C	+25C	+125C	-40C	+25C	+85C	-40C	
MSL 1 - Preconditioning (PC)	A1	240C (Sn/Pb)	0/212			0/150			0/215						0/449			0/215					0/350	
		260C (100% Sn)																						
=>CSAM			0/22						0/22									0/22						
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours				0/44																		
Biased HAST (HAST)	A2	130C/85%RH 96 Hours	0/43	0/43					0/45	0/45					0/135			0/47	0/47				0/134	
Autoclave (AC)	A3	121C/85%RH 168 Hours				0/77									0/231								0/231	
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours	0/80	0/80					0/45									0/80	0/80					
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles	0/80	0/80					0/77	0/77					0/231			0/80	0/80				0/231	
=>Wirebond Pull (WBP)		>3 grams	0/85						0/240									0/160						
High Temperature Storage (HTSL)	A6	+150C 1000 Hours	0/80	0/80		0/71			0/77	0/77					0/231			0/78	0/78				0/231	
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours	0/48	0/48	0/48	0/78			0/45	0/45	0/45	0/47	0/47	0/47	0/134			0/48	0/48	0/48			0/135	
Early Life Failure (Note 4) (ELFR)	B2	+135C 48 Hours				0/845	0/845																	
Maxim Infant Mortality (IME)		+135C 12 Hours				0/2637																		
Wire Bond Shear (WBS)	C1		(Note 3)															(Note 3)						
Wire Bond Pull (WBP)	C2		(Note 3)															(Note 3)					0/614	
Solderability (SD)	C3		0/15															0/15					0/45	
Physical Dimensions (PD)	C4		0/10															0/10						
Lead Integrity (LI)	C6		N/A															N/A						
(EM, TDDb, HCl)	D1-3		TSMC			TSMC			TSMC						TSMC			TSMC						
Pre- and Post-Stress Electrical (TEST)	E1		All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	All
Human Body Model ESD (HBM)	E2		800V	800V																				
Machine Model ESD (MM)	E2																							
Charge Device Model ESD (CDM)	E3		250V	250V																				
Latch-Up (LU)	E4		0/6	0/6																				
Electrothermal Gate Leakage (GL)	E8																	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 assembly lots.

(Note 3) Monitor data from assembly subcontractor.

(Note 4) Data from Lot Q43ACQ002B (Rel. A050009A), per AEC-Q100 ELFR requirements.

✓ = Complete

□ = Open