

Automotive Qualification Report
MAX9210EUM

			✓	✓	✓	□	✓	✓	✓	✓	✓						
			Lot # 1 (QFB0BQ002D)	Lot # 2 (QFB6AQ002C)	Lot # 3 (QFE0AQ003C)	Lot # 4 (QWB2AQ001A)	Lot # 5 (QFE2AQ001Q)	Lot # 6 (QIO0BQ002E)	Lot # 7 (Q43ACQ001B)								
Programmable DC-Balanced 21-Bit Serializer	Maxim Part Number	MAX9210EUM															
	Description (Note 1)	AEC-Q100															
	Operating Temperature	-40C to +85C															
	Temperature Grade	3															
	Fab Location	TSMC Fab 9															
	Fab Process	.35um 1P4M															
	Die	HS31Z															
	Assembly Location	Anam/Amkor Philippines															
	Die Size (mils)	92 x 108															
	Package	48-Lead TSSOP															
	Wire Bond Material	Au .001"															
	Mold Compound	G700K															
	Die Attach	8290															
	Lead Frame	Copper															
	Lead Finish	85/15 Sn/Pb															
Reliability Lot Number	A050011																
			Fails/Sample Size			Fails/Sample Size			Fails/Sample Size			Fails/Sample Size					
AEC-Q100 Rev. F Tests	#	Conditions	+25C	+85C	-40C	+25C	+85C	-40C	+25C	+85C	-40C	+25C	+85C	-40C	+25C	+85C	-40C
MSL 3 - Preconditioning (PC)	A1	240C (Sn/Pb)				0/215			0/215								0/150
		260C (100% Sn)										0/449					
=>CSAM									0/22								
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours															0/44
Biased HAST (HAST)	A2	130C/85%RH 96 Hours				0/45	0/45		0/48	0/48		0/135					
Autoclave (AC)	A3	121C/85%RH 168 Hours										0/231					0/77
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours				0/45			0/50	0/50							
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles				0/77	0/77		0/80	0/80		0/231					
=>Wirebond Pull (WBP)		>3 grams				0/240			0/200								
High Temperature Storage (HTSL)	A6	+150C 1000 Hours				0/77	0/77		0/79	0/79		0/231					0/71
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours				0/45	0/45	0/45	428 Hrs. 0/47	428 Hrs. 0/47	428 Hrs. 0/47	0/134		0/48	0/48	0/48	0/78
Early Life Failure Rate (ELFR)	B2	+135C 48 Hours															(Note 4) 0/845
Maxim Infant Mortality Evaluation		+135C 12 Hours															(Note 4) 0/845
Wire Bond Shear (WBS)	C1					(Note 3)			(Note 3)								0/2637
Wire Bond Pull (WBP)	C2					(Note 3)			(Note 3)			0/678					
Solderability (SD)	C3					0/15			0/15			0/45					
Physical Dimensions (PD)	C4					0/15			7 Oct.			0/45					
Lead Integrity (LI)	C6					0/15			0/10			0/15					
(EM, TDDb, HCl)	D1-3		TSMC			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
Human Body Model ESD (HBM)	E2		0/6	0/6													
Machine Model ESD (MM)	E2																
Charged Device Model ESD (CDM)	E3		750V	750V													
Latch-Up (LU)	E4		2500V	2500V													
Electrothermal Gate Leakage (GL)	E8																

(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, per AEC-Q100 ELFR requirements.

✓ = Complete

□ = Open