

Automotive Qualification Report
MAX9238EUM

		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
		Lot # 1 (QWB1AQ001B)	Lot # 2 (QWB2AQ001A)	Lot # 3 (QFE2AQ001Q)	Lot # 4 (QFE0AQ003C)	Lot # 5 (QFB6AQ002C)	Lot # 6 (QIO0BQ002E)	Lot # 7 (Q43ACQ001B)																			
Hot-Swappable 21-Bit DC-Balanced LVDS Deserializers Grade 3 48-Lead TSSOP	Maxim Part Number	MAX9238EUM																									
	Description (Note 1)	AEC-Q100																									
	Operating Temperature	-40C to +85C																									
	Temperature Grade	3																									
	Fab Location	TSMC Fab 9																									
	Fab Process	.35um 1P4M																									
	Die	HS37Z-1Z																									
	Assembly Location	Anam/Amkor Philippines																									
	Die Size (mils)	97 x 139																									
	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	A050020, DC 0503																									
		Failures/Sample Size			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	+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			0/22									0/150			
		260C (100% Sn)																									
		J-STD-020C (1 lot)																									
		=>CSAM																									
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours																						0/44			
Biased HAST (HAST)	A2	130C/85%RH 96 Hours							0/48	0/48		0/135			0/45	0/45											
Autoclave (AC)	A3	121C/85%RH 168 Hours										0/231												0/77			
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours							0/50	0/50					0/45												
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles							0/80	0/80		0/231			0/77	0/77											
		=>Wirebond Pull (WBP)							0/200						0/240												
High Temperature Storage (HTSL)	A6	+150C 1000 Hours							0/79	0/79		0/231			0/77	0/77								0/71			
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours							+115C	+115C	+115C	+115C			+115C	+115C	+115C	+115C						0/48	0/48	0/48	0/78
Early Life Failure (Note 4) (ELFR)	B2	+135C 48 Hours																						(Note 4)	(Note 4)		
		Maxim Infant Mortality																						0/845	0/845		
		+135C 12 Hours																						0/2637			
Wire Bond Shear (WBS)	C1																										
Wire Bond Pull (WBP)	C2																										
Solderability (SD)	C3																										
Physical Dimensions (PD)	C4																										
Lead Integrity (LI)	C6																										
(EM, TDDb, HCl)	D1-3																										
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		
Human Body Model ESD (HBM)	E2	JESD22/A114	2500V	2500V																							
Machine Model ESD (MM)	E2	JESD22/A115																									
Charge 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 assembly lots.

(Note 3) Monitor data from assembly subcontractor.

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

✓ = Complete

□ = Open