

Automotive Qualification Report
MAX9236EUM

			□	□	✓	✓	□	✓	✓														
			Lot # 1 (QFE0AQ003C)	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	Maxim Part Number	MAX9236EUM		MAX9234EUM	MAX9213EUM+	MAX9209EUM	MAX9222EUM	MAX1471ATJ	MAX1499EHJ														
	Description (Note 1)	AEC-Q100		AEC-Q100	Maxim (Note 2)	AEC-Q100	AEC-Q100	AEC-Q100	Maxim														
	Operating Temperature	-40C to +85C		-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C	-40 to +125C	-40C to +85C														
	Temperature Grade	3		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	TSMC Fab 9														
	Fab Process	.35um 1P4M		.35um 1P4M	.35um 2P4M	.35um 2P4M	.35um 1P4M	.35um 2P3M	.35um 2P4M														
	Die	HS37Z-3Z		HS37Z-2Z	HS30Z-2Z	HS30Z	HS31Z-6Z	SC71Z	AC12Y														
	Assembly Location	Anam/Amkor Philippines		Anam/Amkor Philippines	Anam/Amkor Philippines	Anam/Amkor Philippines	Anam/Amkor Philippines	NSEB Thailand	Carsem-S Malaysia														
	Die Size (mils)	97 x 139		97 x 139	88 x 117	88 x 117	92 x 108	90 x 78	85 x 87														
	Package	48-Lead TSSOP		48-Lead TSSOP	48-Lead TSSOP	48-Lead TSSOP	48-Lead TSSOP	32-Lead TQFN	32-Lead TQFP														
	Wire Bond Material	Au .001"		Au .001"	Au .001"	Au .001"	Au .001"	Au .001"	Au .001"														
	Mold Compound	G700K		G700K	G700K	G700K	G700K	G770HC	EME7320CR														
	Die Attach	8290		8290	8290	8290	8290	AB8200T	84-1LMISR4														
	Lead Frame	Copper		Copper	Copper	Copper	Copper	Copper	Copper														
	Lead Finish	85/15 Sn/Pb		85/15 Sn/Pb	100% Matte Sn	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb														
	Reliability Lot Number	A050021		A050012	R040020	A050002	A050010	A050005	R020068B														
			Fails/Sample Size			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	+125C	-40C	+25C	+85C	-40C				
MSL 3 - Preconditioning (PC)			A1	240C (Sn/Pb)				0/215			0/215			0/22						0/150			
				260C (100% Sn)						0/449													
=>CSAM								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				0/48	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)				>3 grams				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				428 Hrs. 0/47	428 Hrs. 0/47	428 Hrs. 0/47	0/134			0/45	0/45	0/45	+115C 0/47	+115C 0/47	+115C 0/47	0/48	0/48	0/48	0/78
Early Life Failure (Note 4) (ELFR)			B2	+135C 48 Hours																	(Note 4) 0/845	(Note 4) 0/845	
Maxim Infant Mortality				+135C 12 Hours																		0/2637	
Wire Bond Shear (WBS)			C1					(Note 3)					(Note 3)										
Wire Bond Pull (WBP)			C2					(Note 3)		0/678			(Note 3)										
Solderability (SD)			C3					0/15			0/45		0/15										
Physical Dimensions (PD)			C4					Pending			0/45		0/15										
Lead Integrity (LI)			C6					0/10			0/15		0/15										
(EM, TDD, HCI)			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	
Human Body Model ESD (HBM)			E2		2500V	2500V																	
Machine Model ESD (MM)			E2																				
Charge Device Model ESD (CDM)			E3		Pending	Pending																	
Latch-Up (LU)			E4		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