

Automotive Qualification Report
MAX1464AAI

		□	✓	✓	✓	✓	✓	✓										
		Lot # 1 (KXD0DQ004C)	Lot # 2 (K91BA008AY)	Lot # 3 (K2S0BA014A)	Lot # 4 (K91AAQ001C)	Lot # 5 (K9TABQ002C)	Lot # 6 (K3UABQ001J)											
Low-Power, Low-Noise Multichannel Sensor Signal Processor	Maxim Part Number	MAX1464AAI	MAX1452AAE	MAX1455AAE	MAX1452AAE	MAX1453AAE	MAX145105EEP											
	Description (Note 1)	AEC-Q100	AEC-Q100	AEC-Q100	Maxim	Maxim	Maxim											
	Operating Temperature	-40C to +125C	-40C to +125C	-40C to +125C	-40C to +125C	-40C to +125C	-40C to +125C	-40C to +85C										
	Temperature Grade	1	1	1	1	1	3											
	Fab Location	TSMC	TSMC	TSMC	TSMC	TSMC	TSMC											
	Fab Process	.50um 2P4M (w/memory)	.50um 2P4M (w/memory)	.50um 2P4M (w/memory)	.50um 2P4M (w/memory)	.50um 2P4M (w/memory)	.50um 2P4M (w/memory)	.50um 2P4M (w/memory)										
	Die	SC64Z	SC02Y	SC05Z	SC02Y	SC03Z	DA87Y											
	Assembly Location	Anam/Amkor Philippines	Anam/Amkor Philippines	Anam/Amkor Philippines	Anam/Amkor Philippines	Anam/Amkor Philippines	NSEB, Thailand											
	Die Size (mils)	115 x 127	91 x 98	91 x 87	91 x 98	90 x 81	84 x 128											
	Package	28-Lead SSOP	16-Lead SSOP	16-Lead SSOP	16-Lead SSOP	16-Lead SSOP	20-Lead QSOP											
	Wire Bond Material	Au .001"	Au .001"	Au .001"	Au .001"	Au .001"	Au .001"											
	Mold Compound	EME6600CS	EME6600CS	EME6600CS	MP8000AN	MP8000AN	EME6600CS											
	Die Attach	84-1LMISR4	84-1LMISR4	84-1LMISR4	84-1LMISR4	84-1LMISR4	84-1LMISR4											
	Lead Frame	Copper	Copper	Copper	Copper	Copper	Copper											
	Lead Finish	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb											
Reliability Lot Number	A050014, DC 0524	A050004, DC 0414	A050003, DC 0513	R000104, DC 0036	R000104, DC 0036	R000104, DC 0036												
		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	+125C	-40C	+25C	+125C	-40C	+25C	+125C	-40C	+25C	+125C	-40C	+25C	+85C	-40C	
MSL 1 - Preconditioning (PC)	A1	240C (Sn/Pb)	0/215			0/215												
=>CSAM		J-STD-020C (1 lot)	0/22			0/22												
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours																
Biased HAST (HAST)	A2	130C/85%RH 96 Hours	0/44	0/44		0/42	0/42		0/45			0/45				0/44		
Autoclave (AC)	A3	121C/85%RH 168 Hours							0/76			0/76				0/77		
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours	0/50	0/50		0/45	0/42		0/45	0/45								
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles	0/80	0/80		0/77	0/77		0/75			0/77				0/76		
=>Wirebond Pull (WBP)		>3 grams	0/130			0/176			0/144									
High Temperature Storage (HTSL)	A6	+150C 1000 Hours (Data Retention)	0/78	0/78		0/80	0/80		0/80	0/80		0/77						
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours	Pending	Pending	Pending	0/80	0/80	0/80	0/48	0/48	0/48	0/80		0/79		0/79		
Early Life Failure Rate (ELFR)	B2	+135C 48 Hours				0/800	0/800											
NVM Endurance, Data Retention (EDR)	B3	No HTOL, 1K Cycles							(Note 2) 0/77							0/77		
Wire Bond Shear (WBS)	C1		(Note 3)			(Note 3)			(Note 3)									
Wire Bond Pull (WBP)	C2	>5 grams	(Note 3)			(Note 3)			(Note 3)		0/160		0/130					
Solderability (SD)	C3		0/15			0/15			0/15									
Physical Dimensions (PD)	C4		0/10			0/15			0/15									
Lead Integrity (LI)	C6		0/10			0/10			0/10									
Pre- and Post-Stress Electrical (TEST)	E1		All	All	All	All	All	All	All	All	All	All	All	All	All	All	All	
Human Body Model ESD (HBM)	E2	JESD22/A114	1500V	1500V														
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														
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) Maxim data.

(Note 3) Monitor data from assembly subcontractor.

✓ = Complete

□ = Open