

**Automotive Qualification Report**  
**MAX5529GUA+**

		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
		Lot # 1 (SMNCAQ002A)	Lot # 2 (S6M0E3008E)	Lot # 3 (S6D013020A)	Lot # 4 (SHY113024E)	Lot # 5 (D8VAGA77A)	Lot # 6 (D8VAGA056B)										
<b>64-Tap, One-Time Programmable, Linear-Taper Digital Potentiometer</b>	Maxim Part Number	MAX5529GUA+	MAX5231BEEE	MAX7432AEUD	MAX9755ETI+	MAX1790EUA+	MAX1790EUA+										
	Description (Note 1)	AEC-Q100	Maxim	Maxim	Maxim	Maxim	Maxim										
	Operating Temperature	-40°C to +105°C	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C									
	Temperature Grade	2	3	3	3	3	3										
	Fab Location	Maxim, San Jose	Maxim, San Jose	Maxim, San Jose	Maxim, San Jose	Maxim, Dallas	Maxim, Dallas										
	Fab Process	B6 (8", 0.6 um)	B6 (8", 0.6 um)	B6 (8", 0.6 um)	B6 (8", 0.6 um)	B8 (8", 0.8 um)	B8 (8", 0.8 um)										
	Die	DP31Z-2Z	DA90Y	AF21W	AU27Z-1Z	PY40Y	PY40Y										
	Assembly Location	NSEB, Thailand	Anam/Amkor Philippines	Anam/Amkor Philippines	NSEB, Thailand	NSEB, Thailand	NSEB, Thailand										
	Die Size (mils)	52 x 50	114 x 77	126 x 75	108 x 113	61 x 87	61 x 87										
	Package	8uMAX (Note 4)	16-Lead QSOP	14-Lead TSSOP	28-Lead TQFN (5x5)	8uMAX	8uMAX										
	Wire Bond Material	Au .001"	Au .001"	Au .001"	Au .001"	Au .001"	Au .001"										
	Mold Compound	KMC184-7	EME6600CS	EME7351T	G770L	KMC184-7	KMC184-7										
	Die Attach	84-1LMISR4	84-1LMISR4	84-1LMISR4	8006-2X	84-1LMISR4	84-1LMISR4										
	Lead Frame	Copper	Copper	Copper	Copper	Copper	Copper										
	Lead Finish	100% Matte Sn	85/15 Sn/Pb	85/15 Sn/Pb	100% Matte Sn	100% Matte Sn	100% Matte Sn										
Reliability Lot Number	A050027, DC 0527	R040140A, DC 0506	R040140B, DC 0503	R040140C, DC 0450	R040104A, DC 0430	R040104B, DC 0430											
	Fails/Sample Size	Fails/Sample Size	Fails/Sample Size	Fails/Sample Size	Fails/Sample Size	Fails/Sample Size											
<b>AEC-Q100 Rev. F Tests</b>	<b>#</b>	<b>Conditions</b>	<b>+25C</b>	<b>+105C</b>	<b>-40C</b>	<b>+25C</b>	<b>+85C</b>	<b>-40C</b>	<b>+25C</b>	<b>+85C</b>	<b>-40C</b>	<b>+25C</b>	<b>+85C</b>	<b>-40C</b>	<b>+25C</b>	<b>+85C</b>	<b>-40C</b>
MSL 1 - Preconditioning (PC)	A1	240C (Sn/Pb)				0/216			0/122								
		260C (100% Sn)	0/215									0/150			0/150		
=>CSAM		J-STD-020C (1 lot)	0/22														
		85C/85%RH 1000 Hours															
Temperature Humidity-Bias (THB)	A2	130C/85%RH 96 Hours				0/44			0/90			0/50			0/45		
Biased HAST (HAST)	A2	121C/85%RH 168 Hours	0/50	0/50		0/42			0/77			0/77			0/77		
Autoclave (AC)	A3	130C/85%RH 96 Hours				0/77			0/77			0/77			0/77		
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours	0/50	0/50													
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles	0/80	0/80		0/80			0/75			0/80			0/79		
=>Wirebond Pull (WBP)		>3 grams	0/80														
High Temperature Storage (HTSL)	A6	+150C 1000 Hours	0/80	0/80		0/80			0/76			0/77			0/77		
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours	0/43			0/76			0/48								
Early Life Failure Rate (ELFR)	B2	+135C 48 Hours															
Maxim Infant Mortality Evaluation		+135C 12 Hours				0/1456											
Wire Bond Shear (WBS)	C1	(Note 3)															
Wire Bond Pull (WBP)	C2	(Note 3)										0/200			0/200		
Solderability (SD)	C3	0/15															
Physical Dimensions (PD)	C4	0/15										0/15			0/15		
Lead Integrity (LI)	C6	0/5															
(EM, TDDb, HCI)	D1-3																
Pre- and Post-Stress Electrical (TEST)	E1		All	All	All	All			All			All			All		
Human Body Model ESD (HBM)	E2	JESD22/A114	2500V	2500V													
Machine Model ESD (MM)	E2	JESD22/A115															
Charged 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) HTOL performed using 8-Lead TDFN package, Lot SMNCAQ001C.

✓ = Complete

□ = Open