

**Automotive Qualification Report
MAX488EESA+**

		Lot # 1 (NIKGCA970B)	Lot # 2 (SOBAEQ001Q)	Lot # 3 (NDNACA596A)	Lot # 4 (NDNACA481D)	Lot # 5 (NDNACA497A)		
Low-Power, Slew-Rate-Limited RS-485 / RS-422 Transceiver	Maxim Part Number	MAX488EESA+	MAX1977EEI+ (Note 2)	MAX603CSA+ (Note 2)	MAX603ESA	MAX603ESA		
	Description (Note 1)	AEC-Q100	Maxim	Maxim	Maxim	Maxim		
	Operating Temperature	-40C to +85C	-40C to +85C	0C to +70C	-40C to +85C	-40C to +85C		
	Temperature Grade	3	3	4	3	3		
	Fab Location	Maxim, Beaverton	Maxim, San Jose	Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton		
	Fab Process	S3E, (6", 3 um MOS)	B8 (8", 0.8 um MOS)	S3E, (6", 3 um MOS)	S3E, (6", 3 um MOS)	S3E, (6", 3 um MOS)		
	Die	RS29Y-6Z	PX65Y	PW50Z	PW50Z	PW50Z		
	Assembly Location	NSEB Thailand	NSEB Thailand	Anam/Amkor Philippines	Anam/Amkor Philippines	Anam/Amkor Philippines		
	Die Size (mils)	85 x 128	86 x 169	104 x 100	104 x 100	104 x 100		
	Package	8-Lead NSOIC	28-Lead QSOP (Note 5)	8-Lead NSOIC	8-Lead NSOIC	8-Lead NSOIC		
	Wire Bond Material	Au .0013"	Au .0013"	Au .0013"	Au .0013"	Au .0013"		
	Mold Compound	G600	G600	G600	EME6600CS	EME6600CS		
	Die Attach	AB2200D	AB2200D	84-3J	84-3J	84-3J		
	Lead Frame	Copper	Copper	Copper	Copper	Copper		
	Lead Finish	100% Matte Sn	100% Matte Sn	100% Matte Sn	85/15 Sn/Pb	85/15 Sn/Pb		
Reliability Lot Number	A050022, DC 0526	R030168A/B/C, DC 0338	R040128A/B/C, DC 0439	R030036, DC 0318	R030099, DC 0328			
		Failures/Sample Size		Failures/Sample Size		Failures/Sample Size		
AEC-Q100 Rev. F Tests	#	Conditions	+25C	+85C	-40C	+25C	+85C	-40C
MSL 1 - Preconditioning (PC)	A1	240C (Sn/Pb)				0/154		
		260C (100% Sn)	0/215					
=>CSAM		J-STD-020C (1 lot)	0/22					
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours						
Biased HAST (HAST)	A2	130C/85%RH 96 Hours	0/45	0/45		0/77		0/77
Autoclave (AC)	A3	121C/85%RH 168 Hours						0/77
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours	0/45	0/45				
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles	0/77	0/77		0/77		0/77
=>Wirebond Pull (WBP)		>3 grams	0/40					
High Temperature Storage (HTSL)	A6	+150C 1000 Hours	0/77	0/77		0/77		0/77
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours	(Note 4) 0/95	(Note 4) 0/95	(Note 4) 0/95	0/129		0/77
Early Life Failure Rate (ELFR)	B2	+135C 48 Hours						
Maxim Infant Mortality Evaluation		+135C 12 Hours					0/4010	0/4015
Wire Bond Shear (WBS)	C1		(Note 3)					
Wire Bond Pull (WBP)	C2		(Note 3)			0/600		
Solderability (SD)	C3		0/15			0/45		
Physical Dimensions (PD)	C4		0/10			0/45		
Lead Integrity (LI)	C6		0/5			0/45		
(EM, TDDb, HCI)	D1-3							
Pre- and Post-Stress Electrical (TEST)	E1		All	All	All	All	All	All
Human Body Model ESD (HBM)	E2	JESD22/A114	2500V	2500V				
Machine Model ESD (MM)	E2	JESD22/A115	200V	200V				
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 MAX489ECPD (PDIP), Lot NIKHCA800A (Die RS29Y-7Z).

(Note 5) 16-Lead NSOIC and smaller qualified by extension from the 28-Lead QSOP due to similar body dimensions and identical materials.

✓ = Complete

□ = Open