

Automotive Qualification Report
MAX5035AASA

**1A, 76V,
High-Efficiency
MAXPower
Step-Down
DC-DC Converter**

Grade 1

8-Lead SO (.150)

		✓ Lot # 1 (N6Y0FA039B)	✓ Lot # 2 (N6R0DA010A)	□ Lot # 3 (NF11CA019C)	✓ Lot # 4 (Note 2)							
Maxim Part Number		MAX5035AASA	MAX5023LASA	MAX4080TASA	MAX5913EMH							
Description (Note 1)		AEC-Q100	AEC-Q100	AEC-Q100	Maxim							
Operating Temperature		-40C to +125C	-40C to +125C	-40C to +125C	-40C to +85C							
Temperature Grade		1	1	1	3							
Fab Location		Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton	Maxim, Beaverton							
Fab Process		BCD80N	BCD80N	BCD80N	BCD80N							
Die		NP25V	NP33X	OY07Z-1Z (Note 4)	NP35Y							
Assembly Location		Unisem	Anam/Amkor Philippines	NSEB, Thailand	Anam/Amkor Philippines							
Die Size (mils)		85 x 145	85 x 112	61 x 80	190 x 198							
Package		8-Lead NSOIC	8-Lead NSOIC (EP)	8-Lead NSOIC	44-Lead MQFP (10x10)							
Wire Bond Material		Au .001"	Au .001"	Au .001"	Au .001"							
Mold Compound		EME6300H	G600	EME6600CS	EME7304LC							
Die Attach		84-1LMISR4	8290	84-1LMISR4	84-1LMISR4							
Lead Frame		Copper	Copper	Copper	Copper							
Lead Finish		85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb	85/15 Sn/Pb							
Reliability Lot Number		A050017, DC 0527	A050018, DC 0433	A050019, DC 0527	R010587A/B/C, DC 0219							
		Failures/Sample Size			Failures/Sample Size							
AEC-Q100 Rev. F Tests		#	Conditions	+25C	+125C	-40C	+25C	+125C	-40C	+25C	+85C	-40C
MSL 1 - Preconditioning (PC)		A1	240C (Sn/Pb)	0/200			0/215		Pending			
			260C (100% Sn)									
=>CSAM			J-STD-020C (1 lot)	0/22			0/22		Pending			
Temperature Humidity-Bias (THB)		A2	85C/85%RH 1000 Hours									
Biased HAST (HAST)		A2	130C/85%RH 96 Hours	0/48	0/48		0/47	0/47	Pending	Pending		0/135
Autoclave (AC)		A3	121C/85%RH 168 Hours									0/231
Unbiased HAST (UHAST)		A3	130C/85%RH 96 Hours	0/50	0/50		0/48	0/48	Pending	Pending		
Temperature Cycle (TC)		A4	-65 to +150C 1000 Cycles	0/80	0/80		0/80	0/80	Pending	Pending		0/231
=>Wirebond Pull (WBP)			>3 grams	0/70			0/50		Pending			
High Temperature Storage (HTSL)		A6	+150C 1000 Hours	0/80	0/80		0/80	0/80	Pending	Pending		0/180
High Temperature Op Life (HTOL)		B1	+135C 1000 Hours	0/48	0/48	0/48	0/45	0/45	0/45	Pending	Pending	Pending
Early Life Failure Rate (ELFR)		B2	+135C 48 Hours									
Maxim Infant Mortality Evaluation			+135C 12 Hours									
Wire Bond Shear (WBS)		C1		(Note 3)			(Note 3)		(Note 3)			
Wire Bond Pull (WBP)		C2		(Note 3)			(Note 3)		(Note 3)			0/730
Solderability (SD)		C3		0/15			0/15		Pending			
Physical Dimensions (PD)		C4		0/10			0/10		Pending			
Lead Integrity (LI)		C6		0/10			0/10		Pending			
(EM, TDDb, HCI)		D1-3										
Pre- and Post-Stress Electrical (TEST)		E1		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									
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 wafer lots: N490E1008C, N490E1009B, and N490E1011B.

(Note 3) Monitor data from assembly subcontractor.

(Note 4) HTOL testing performed on the MAX4081TASA (Die OY07Z-4Z), Wafer lot NF14CA004A.

✓ = Complete

□ = Open