

Automotive Qualification Report
MAX1845EEI

		□	✓	✓	✓	✓	✓	✓
		Lot # 1 (TF90HA048C)	Lot # 2 (TF90HQ001D)	Lot # 3 (TUABGQ001A)	Lot # 4 (THLM1A009A)	Lot # 5 (S8I2CA015I)	Lot # 6 (TSD2DQ001B)	
Dual, High-Efficiency, Step-Down Controller with Accurate Current Limit	Maxim Part Number	MAX1845EEI	MAX1845EEI	MAX1715EEI+	MAX1904EAI+	MAX1972EEE	MAX1632AEAI	
	Description (Note 1)	AEC-Q100	Maxim	Maxim	AEC-Q100	AEC-Q100	Maxim	
	Operating Temperature	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C	-40C to +85C	
	Temperature Grade	3	3	3	3	3	3	
	Fab Location	Maxim, San Antonio	Maxim, San Antonio	Maxim, San Antonio	Maxim, San Antonio	Maxim, San Jose	Maxim, San Antonio	
	Fab Process	B12 (8", 1.2 um MOS)	B12 (8", 1.2 um MOS)	B12 (8", 1.2 um MOS)	B12 (8", 1.2 um MOS)	B8 (8", 0.8 um MOS)	B12 (8", 1.2 um MOS)	
	Die	PY74Y	PY74Y	PX64W-1Z	PW57R-12Z	PM30Z-2Z	PW57O-2Z	
	Assembly Location	Anam/Amkor Philippines	NSEB Thailand	NSEB Thailand	Anam/Amkor Philippines	Anam/Amkor Philippines	Anam/Amkor Philippines	
	Die Size (mils)	83 x 153	83 x 153	83 x 138 (die coat)	93 x 134 (die coat)	86 x 132	93 x 134 (die coat)	
	Package	28-Lead QSOP	28-Lead QSOP	28-Lead QSOP	28-Lead SSOP	16 QSOP	28-Lead SSOP	
	Wire Bond Material	Au .0013"	Au .0013"	Au .0013"	Au .0013"	Au .001"	Au .0013"	
	Mold Compound	EME6600CS	EME6600CS	G600	G600	EME6600CS	EME6600CS	
	Die Attach	84-1LMISR4	84-1LMISR4	8290	8290	84-1LMISR4	84-1LMISR4	
	Lead Frame	Copper	Copper	Copper	Copper	Copper	Copper	
Lead Finish	85/15 Sn/Pb	85/15 Sn/Pb	100% Matte Sn	100% Matte Sn	85/15 Sn/Pb	85/15 Sn/Pb		
Reliability Lot Number	A050035, DC 0545	R050061D, DC 0519	R050061E, DC 0519	A050030, DC 0531	A050026, DC 0536	R050061C, DC 0515		
		Failures/Sample Size	Failures/Sample Size	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)	0/214	0/214		0/378		
		260C (100% Sn)						
=>CSAM		J-STD-020C (1 lot)	0/22			0/215	0/215	
Temperature Humidity-Bias (THB)	A2	85C/85%RH 1000 Hours						0/22
Biased HAST (HAST)	A2	130C/85%RH 96 Hours	0/45	0/45		0/45	0/45	
Autoclave (AC)	A3	121C/85%RH 168 Hours				0/74		0/77
Unbiased HAST (UHAST)	A3	130C/85%RH 96 Hours	0/50	0/50		0/80	0/80	
Temperature Cycle (TC)	A4	-65 to +150C 1000 Cycles	0/79	0/79		0/80	0/69	0/69
=>Wirebond Pull (WBP)		>3 grams	Pending					0/98
High Temperature Storage (HTSL)	A6	+150C 1000 Hours	0/80	0/80		0/80	0/79	0/79
High Temperature Op Life (HTOL)	B1	+135C 1000 Hours	Pending	Pending	Pending	0/75	0/77	0/79
Early Life Failure Rate (ELFR)	B2	+135C 48 Hours				0/798	0/798	
Wire Bond Shear (WBS)	C1		(Note 2)					(Note 2)
Wire Bond Pull (WBP)	C2		(Note 2)					(Note 2)
Solderability (SD)	C3		0/15					0/15
Physical Dimensions (PD)	C4		0/10					0/10
Lead Integrity (LI)	C6		0/5					0/5
(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	500V	500V				
Machine Model ESD (MM)	E2	JESD22/A115						
Charged Device Model ESD (CDM)	E3	AEC-Q100-011	Pending	Pending				
Latch-Up (LU)	E4	JESD78, Class	0/12	0/12				

(Note 1) AEC-Q100 test performed per Rev. F guidelines. Maxim tests performed to internal specification 10-3006.

(Note 2) Monitor data from assembly subcontractor.

✓ = Complete

□ = Open