SCOPE: **PIN-PROGRAMMABLE PRECISION VOLT REFERENCE**

Device Type	Generic Number
01	MX584S(x)/883B
02	MX584T(x)/883B

Case Outline(s). The case outlines shall be designated in Mil-Std-1835 and as follows:

Outline Letter		Mil-Std-1835	Case Outline	Package Code
MAXIM	SMD			
H	G	MACY1-X3	8 Lead TO-99 Can	G99
Q	P	GDIP1-T8 or CDIP2-T8	8 Lead CERDIP	J8

Absolute Maximum Ratings

Input Voltage to GND 40V

Lead Temperature (soldering, 10 seconds) ..... +300°C
Storage Temperature ..... -65°C to +150°C

Continuous Power Dissipation ..... T_A=+70°C
8-Pin TO-99 Can(derate 6.1mW/°C above +70°C) 533mW
8-Pin CERDIP(derate 8.0mW/°C above +70°C) 640mW
Junction Temperature T_J ..... +150°C
Thermal Resistance, Junction to Case, ΘJC:
8-Pin TO-99 Can ..... 45°C/W
8-Pin CERDIP ..... 55°C/W
Thermal Resistance, Junction to Ambient, ΘJA:
8-Pin TO-99 Can ..... 150°C/W
8-Pin CERDIP ..... 125°C/W

Recommended Operating Conditions

Supply Voltage Range (V_{IN}) ..... 4.5V min to 30V max
Ambient Operating Range (T_A) ..... -55°C to +125°C

Stresses beyond those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

TABLE 1 ELECTRICAL TESTS

TEST	Symbol	CONDITIONS -55 °C ≤T_A≤ +125°C V_{CC}=+15V, 10V output, I_L=0mA Unless otherwise specified	Group A Subgroup	Device type	Limits Min 1/	Limits Max 1/	Units
Quiescent Current	I_Q	V_{IN}=38V, V_O=10V	1	All	0	1.0	mA
Output Voltage Error	V_{OUT1}	10V Output	1	01 02	9.97 9.99	10.03 10.01	mV
	V_{OUT2}	7.5V Output	1	01 02	7.478 7.492	7.522 7.508	
	V_{OUT3}	5.0V Output	1	01 02	4.985 4.994	5.015 5.006	
	V_{OUT4}	2.5V Output	1	01 02	2.4925 2.4965	2.5075 2.5035	
Line Regulation NOTE 1	VR_{LINE1}	12.5V≤V_{IN}≤15V, V_O=10V	1 2,3	All		±.005 ±.010	%/V
	VR_{LINE2}	15V≤V_{IN}≤30V, V_O=10V	1 2,3			±.002 ±.005	
Load Regulation	VR_{LOAD} 1,2,3,4	I_L=0mA to 5mA, Output=10V, 7.5V, 5V, 2.5V	1 2,3	All		±50 ±100	ppm/mA
Output Short Circuit Current	I_{OS}	V_O=10V	1,2,3	All		-55	mA
Output Voltage Temperature Coefficient	$\Delta V_{OUT}1/\Delta T$	10V Output	2,3	01 02		±0.3 ±0.15	%FS
	$\Delta V_{OUT}2/\Delta T$	7.5V Output	2,3	01 02		±0.3 ±0.15	
	$\Delta V_{OUT}3/\Delta T$	5.0V Output	2,3	01 02		±0.3 ±0.15	
	$\Delta V_{OUT}4/\Delta T$	2.5V Output	2,3	01 02		±0.3 ±0.2	
Output Noise	N_O	V_O=10V, 0.1Hz≤BW≤10Hz	4	All		50	µVp-p
		V_O=10V, 10Hz≤BW≤100H=kHz				150	µV rms
Settling Time 0.1% of final value (power up)	$t_{S(p)}$	V_O=10V, I_L=0mA NOTE 2	9	All		1000	µs
		V_O=10V, I_L=5mA NOTE 2				1000	

NOTE 1: The limiting terms "min" (minimum) and "max" (maximum) shall be considered to apply to magnitudes only. Negative current is defined as conventional currrent flow out of a device.

NOTE 2: Guaranteed, if not tested, to the limits specified in Table 1.

ORDERING INFORMATION:

Device	Maxim Part Number	SMD Number
01	MX584SH/883B	5962-3812803MGC
01	MX584SQ/883B	5962-3812803MPA
02	MX584TH/883B	5962-3812804MGC
02	MX584TQ/883B	5962-3812804MPA

PIN CONFIGURATIONS:

PIN	J8/G99
1	10.0V
2	5.0V
3	2.5V
4	GND
5	STROBE
6	V_{BG}
7	CAP
8	V_{CC}

QUALITY ASSURANCE

Sampling and inspection procedures shall be in accordance with MIL-Prf-38535, Appendix A as specified in Mil-Std-883.

Screening shall be in accordance with Method 5004 of Mil-Std-883. Burn-in test Method 1015:

1. Test Condition, A, B, C, or D.
2. TA = +125°C minimum.
3. Interim and final electrical test requirements shall be specified in Table 2.

Quality conformance inspection shall be in accordance with Method 5005 of Mil-Std-883, including Groups A, B, C, and D inspection.

Group A inspection:

1. Tests as specified in Table 2.
2. Selected subgroups in Table 1, Method 5005 of Mil-Std-883 shall be omitted.

Group C and D inspections:

a. End-point electrical parameters shall be specified in Table 1.
b. Steady-state life test, Method 1005 of Mil-Std-883:
   1. Test condition A, B, C, D.
   2. TA = +125°C, minimum.
   3. Test duration, 1000 hours, except as permitted by Method 1005 of Mil-Std-883.

TABLE 2. ELECTRICAL TEST REQUIREMENTS

Mil-Std-883 Test Requirements	Subgroups per Method 5005, Table 1
Interim Electric Parameters Method 5004	1
Final Electrical Parameters Method 5005	1*, 2, 3, 4, 9
Group A Test Requirements Method 5005	1, 2, 3, 4, 9
Group C and D End-Point Electrical Parameters Method 5005	1

* PDA applies to Subgroup 1 only.