

Not Recommended for New Designs

This product was manufactured for Maxim by an outside wafer foundry using a process that is no longer available. It is not recommended for new designs. The data sheet remains available for existing users.

A Maxim replacement or an industry second-source may be available. Please see the QuickView data sheet for this part or contact technical support for assistance.

For further information, [contact Maxim's Applications Tech Support](#).

Device Type

01

Generic Number

MAX674M(x)/883B

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

<u>Outline Letter</u>		<u>Mil-Std-1835</u>	<u>Case Outline</u>	<u>Package Code</u>
MAXIM	SMD			
TV	G	MACY1-X3	8 Lead TO-99 Can	G99
JA	P	GDIP1-T8 or CDIP2-T8	8 Lead Cerdip	J8
LP	2	CQCC3-N20	20 Leadless Chip	L20

Absolute Maximum Ratings

Input Voltage 40V
 Output Short-circuit Duration (to GND or V_{IN}) Indefinite

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

Continuous Power Dissipation $T_A = +70^\circ\text{C}$
 8-Pin TO-99 Can (derate 6.7mW/°C above +70°C) 533mW
 8-Pin Cerdip (derate 8.0mW/°C above +70°C) 640mW
 20 Pin Leadless Chip (derate 9.1mW/°C above +70°C) 727mW
 Junction Temperature T_J +150°C
 Thermal Resistance, Junction to Case, θ_{JC} :

8-Pin TO-99 Can 45°C/W
 8-Pin Cerdip 55°C/W
 20-Pin LCC 20°C/W

Thermal Resistance, Junction to Ambient, θ_{JA} :

8-Pin TO-99 Can 150°C/W
 8-Pin Cerdip 125°C/W
 20-Pin LCC 110°C/W

Recommended Operating Conditions

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 _{IN} = +15V Unless otherwise specified	Group A Subgroup	Device type	Limits Min	Limits Max	Units
Output Voltage Tolerance		I _L = 0mA	1,2,3	All		±15	mV
Output Voltage Change with Temperature	TCV _O		4,5,6	All		20	ppm/°C
Output Adjustment Range	V _{TRIM}	RP = 10kΩ	1	All	±300		mV
Line Regulation		V _{IN} = 13V to 33V NOTE 1	1 2,3	All		0.01 0.02	%/V
Load Regulation		I _L = 0mA to 10mA NOTE 1	1 2,3	All		0.002 0.004	%/mA
Quiescent Supply Current	I _Q	No Load	1 2,3	All		1400 2000	μA
Noise	en p-p	0.1Hz to 10Hz NOTE 2	4	All		150	μVp-p
Sink Current	I _S		1	All	-0.3		mA
Load Current	I _L	NOTE 3	1 2,3	All		10 8	mA
Short-circuit Current	I _{SC}	V _O = 0	1	All		40	mA

NOTE 1: Line and Load Regulation specifications include the effect of self heating.

NOTE 2: Noise is sample tested.

NOTE 3: Minimum Load Current is guaranteed by Load Regulation test.

PIN CONFIGURATION

PIN	J8/G99	L20	L20	
1	NC	NC	11	NC
2	V _{IN}	NC	12	TRIM
3	NC	NC	13	NC
4	GND	NC	14	NC
5	TRIM	V _{IN}	15	V _{OUT}
6	V _{OUT}	NC	16	NC
7	NC	NC	17	NC
8	NC	NC	18	NC
9		NC	19	NC
10		GND	20	NC

ORDERING INFORMATION

Device	Package	Maxim Part Number	SMD NUMBER
01	J8	MAX674MJA/883B	5962-9468102MPA
01	G99 Can	MAX674MTV/883B	5962-9468102MGC
01	LCC20	MAX674MLP/883B	5962-9468102M2C

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
Group A Test Requirements Method 5005	1, 2, 3, 4
Group C and D End-Point Electrical Parameters Method 5005	1

* PDA applies to Subgroup 1 only.