TABLE 1 ELECTRICAL TESTS

PARAMETER	Symbol	CONDITIONS -55 °C <=T_A<= +125°C V_{IN}=+3.0V Unless otherwise specified	Group A Subgroup	Device type	Limits Min 1/	Limits Max 1/	Units
Operating Voltage	$+V_S$	Voltage at V_{OUT}	1,2,3	All	2.4	16.4	V
Start-up Voltage	V_{SU}	Voltage at V_{OUT}	1 2,3	All	1.5 2.0		V
Supply Current NOTE 2	I_S	L_X Off, V_{OUT}=+5V L_X Off, V_{OUT}=+12V L_X Off, V_{OUT}=+15V	1,2,3	01,02 03,04 05,06		0.4 2.0 2.5	mA
Reference Voltage	V_{REF}		1 2,3	All	1.24 1.20	1.38 1.42	µA
Output Voltage	V_{OUT}	No load, V_{FB}=GND, NOTE 2	1,2,3	01 02 03 04 05 06	4.75 4.5 11.4 10.8 14.25 13.5	5.25 5.5 12.6 13.2 15.75 16.5	V
Line Regulation	VR_{LINE}	R3=816kΩ, R4=100kΩ NOTE 3 3V<V_{IN}<6V	1,2,3	All		0.2	%/V_{OUT}
Load Regulation	VR_{LOAD}	R3=816kΩ, R4=100kΩ NOTE 3 V_{IN}=6V, I_{OUT}=1mA, 20mA	1,2,3	All		1.0	%/V_{OUT}
Oscillator Duty Cycle	O_{DC}	NOTE 2	4	All	40	60	%
LX On Resistance	R_{LXON}	I_X=100mA, V_{OUT}=5V	1	All		12	Ω
Low-Battery Input Bias Current	I_{LBI}		1	All		10	nA
Leakage Current	I_{LX}	V_{LX}=16.5V	1 2,3	All		1 100	µA
Low Battery Input Threshold Voltage	V_{LBI}		1	All	1.18	1.44	V
Low-Battery Output Current	I_{LBO}	V_{LBO}=0.4V, V_{LBI}=1.18V	1,2,3	All	500		µA
Oscillator Frequency Range NOTE 2	f_O	V_{OUT}=+5V	4	01 02	40 35	50 60	kHz
		V_{OUT}=+12V	4	03 04	45.5 40	56 65	
		V_{OUT}=+15V	4	05 06	45.5 40	56 65	
VFB Input Bias Current	I_{FB}		1	All		10	nA
Diode Forward Voltage	V_F	I_F=100mA	1	All		1.0	V
On Resistance, CP Leakage Current	RCP_{ON}	V_{OUT}=5.0V, I_{OUT}=±10mA	1	All		140	Ω
Low Battery Output Leakage Current	I_{LBOL}	V_{LBO}=+16.5V, V_{LBI}=+1.44V	1,2,3	All		3.0	µA

NOTE 1: The algebraic convention, whereby the most negative value is a minimum and the most positive a maximum, is used in this table. Negative current shall be defined as conventional current flow out of a device terminal.

NOTE 2: S1 set to B and S2 open provides a nominal output voltage of 5 volts for device types 01 and 02; 12 volts for device types 03 and 04; 15 volts for device types 05, 06.

NOTE 3: R3 and R4 give a nominal output voltage of 12 volts with S1 set to A and S2 closed.

ORDERING INFORMATION	MAXIM PART NUMBER	SMD NUMBER
01	MAX631AMJA/883B	5962-9214101MPA
02	MAX631BMJA/883B	5962-9214102MPA
03	MAX632AMJA/883B	5962-9214103MPA
04	MAX632BMJA/883B	5962-9214104MPA
04	MAX633AMJA/883B	5962-9214105MPA
05	MAX633BMJA/883B	5962-9214106MPA

TERMINAL NUMBER	8 LEAD CERDIP
1	LBI
2	LBO
3	GND
4	LX
5	VOUT
6	CP
7	V_{FB}
8	COMP

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
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.

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