SCOPE: QUAD, SPDT, CMOS ANALOG SWITCH

Device Type	Generic Number	SMD Number
01	MAX333M(x)/883B	5962-93180

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
SMD	Maxim			
R	JP	GDIP1-T20 or CDIP2-T20	20 LEAD CERDIP	J20

Absolute Maximum Ratings

Voltage Referenced to V^-

V^+ to V^- 44V
V^+ to GND 44V
V^- to GND ..... -44V
V_{IN}, V_{COM}, V_{NO}, V_{NC} ..... V^+ to V^-
V_{NO} to V_{NC} 32V
Current, Any terminal except V_{COM}, V_{NO}, or V_{NC} 30mA
Current, V_{COM}, V_{NO}, or V_{NC} 20mA
Peak Current, V_{COM}, V_{NO}, or V_{NC} (Pulsed at 1ms, 10% duty cycle max) 70mA
Lead Temperature (soldering, 10 seconds) ..... +300°C
Storage Temperature ..... -65°C to +150°C

Continuous Power Dissipation 1/ ..... T_A=+70°C
20 lead CERDIP(derate 11.1mW/°C above +70°C) 889mW
Junction Temperature T_J ..... +150°C
Thermal Resistance, Junction to Case, ΘJC:
Case Outline 20 lead CERDIP..... 40°C/W
Thermal Resistance, Junction to Ambient, ΘJA:
Case Outline 20 lead CERDIP..... 90°C/W

Recommended Operating Conditions

Ambient Operating Range (T_A) ..... -55°C to +125°C
Positive Supply Voltage (V^+) ..... +15V
Negative Supply Voltage (V^-) ..... -15V
V_{INL} (max) 0.8V
V_{INH} (min) 2.4V

1/ Device mounted with all leads soldered to PC board.

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^+=+15V, V^-=-15V, GND=0V V_{INH}=2.4V, V_{INL}=0.8V Unless otherwise specified	Group A Subgroup	Device type	Limits Min 2/	Limits Max 2/	Units
SWITCH							
Analog-Signal Range	V_{ANALOG}		1,2,3	All	-15	15	V
Drain-Source ON Resistance	$r_{DS(ON)}$	I_{COM} =1mA, V_{ANA}=±10V,	1 2,3	All		175 250	Ω
ON Leakage Current	$I_{L(ON)}$	V_{ANA}=±14V, V_{OFF}=±14V	1 2	All	-5 -200	5 200	nA
OFF Leakage Current	$I_{L(OFF)}$	V_{ANA}=±14V, V_{OFF}=±14V	1 2	All	-5 -100	5 100	nA
INPUT							
Input Current	I_{IN}		1,2,3	All	-10	10	µA
SUPPLY							
Positive Supply Current	I+	All channels on or off	1 2,3	All	-.25 -.50	.25 .50	mA
Negative Supply Current	I-	All channels on or off	1 2,3	All	-.25 -.50	.25 .50	mA
DYNAMIC							
Turn-On Time	t_{ON}		9 10,11	All		500 1000	ns
Turn-Off Time	t_{OFF}		9 10,11	All	 -200	1000 2000	ns
Break-Before-Make Delay 3/	t_{OPEN}		9 10,11	All	50 5		ns

NOTE 2: The algebraic convention whereby the most negative value is a minimum and the most positive value is a maximum, is used in this table. Negative current shall be defined as conventional current flow out of a device terminal.

NOTE 3: Guaranteed, but not tested.

ORDERING INFORMATION:	SMD Number
MAX333MJP/883B 20 CDIP	5962-9318001MRA

TERMINAL CONNECTIONS:

	MAX333MJP/883B
	J20
1	IN1
2	NO1
3	COM1
4	NC1
5	V-
6	GND
7	NC2
8	COM2
9	NO2
10	IN2
11	IN3
12	NO3
13	COM3
14	NC3
15	NC
16	V+
17	NC4
18	COM4
19	NO4
20	IN4

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, 9, 10, 11
Group A Test Requirements Method 5005	1, 2, 3, 9, 10, 11
Group C and D End-Point Electrical Parameters Method 5005	1

* PDA applies to Subgroup 1 only.