SCOPE: Dual, SPST, CMOS, TTL-Compatible Analog Switch

Device Type:	**Generic Number:**
-1	**DG200AA(x)/883B**

Case Outline(s).

Outline Letter	Mil-Std-1835	Case Outline	Package Code
K	GDIP1-T14 or CDIP2-T14	14 LEAD CERDIP	J14
A	MACY1-X10	10 Pin TO-100	A10

Absolute Maximum Ratings

V+ to V- 44V
V+ to GND 25V
Digital Input Overvoltage Range ..... (V^- -2V) to (V^+ +2V)
Continuous Current, Any terminal 30mA
Current, S or D (Pulsed at 1ms, 10% duty cycle max) 100mA
Lead Temperature (soldering, 10 seconds) ..... +300°C
Storage Temperature ..... -65°C to +150°C

Continuous Power Dissipation ..... T_A=+70°C
10 lead Can (derate 6.7mW/°C above +70°C) 533mW
14 lead CERDIP(derate 10mW/°C above +70°C) 727mW
Junction Temperature T_J ..... +150°C
Thermal Resistance, Junction to Case, ΘJC:
Case Outline 10 lead Can ..... 45°C/W
Case Outline 14 lead CERDIP..... 55°C/W
Thermal Resistance, Junction to Ambient, ΘJA:
Case Outline 10 lead Can ..... 150°C/W
Case Outline 14 lead CERDIP..... 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 $-55°C \le T_A \le +125°C$ V+=15V, V-=-15V, GND=0V, V_{INH}=2.4V, V_{INL}=0.8V Unless otherwise specified	GROUP A Subgroup	Device type	Limits Min	Limits Max	Units
Analog-Signal Range	V_{ANALOG}	V_S=±15V	1,2,3	All	-15	15	V
Drain-Source On Resistance	$r_{DS(ON)}$	V_{IN}=0.8V, I_S=-1mA, V_D=±10V	1 2,3	All		70 100	Ω
Source-Off Leakage Current	$I_{S(OFF)}$	V_{IN}=2.4V, V_S=+/-14V, V_D=-/+14V	1 2	All	-2 -100	2 100	nA
Drain-Off Leakage Current	$I_{D(OFF)}$	V_{IN}=2.4V, V_S=+/-14V, V_D=-/+14V	1 2	All	-2 -100	2 100	nA
Channel-On Leakage Current	$I_{D(ON)}$ + $I_{S(ON)}$	V_{IN}=0.8V, V_S=V_D=±14V	1 2	All	-2 -200	2 200	nA
Input Current with Voltage High	I_{INH}	V_{IN}=2.4V	1 2,3	All	-0.5 -1.0		µA
		V_{IN}=15V	1 2,3			0.5 1.0	
Input Current with Voltage Low	I_{INL}	V_{IN}=0V	1 2,3	All	-0.5 -1.0		µA
Positive Supply Current	I+	Both channels on or off	1,2,3	All		2	mA
Negative Supply Current	I-	Both channels on or off	1,2,3	All	-1.0		mA
DYNAMIC							
Turn-On Time	t_{ON}	Figure 1, NOTE 1	9 10,11	All		1000 1500	ns
Turn-Off Time	t_{OFF}	Figure 1, NOTE 1	9 10,11	All		425 800	ns

NOTE 1: Figure 1, See Commercial datasheet.

PIN CONFIGURATIONS:

	14-Pin CERDIP	10 Pin Can	LOGIC	SWITCH
1	IN2	IN1	**0**	**ON**
2	NC	IN2	**1**	**OFF**
3	GND	GND		
4	NC	S2		
5	S2	D2		
6	D2	V-		
7	V-	NC		
8	NC	D1		
9	D1	S1		
10	S1	V+ (substrate and case)		
11	NC			
12	V+ (substrate)			
13	NC			
14	IN1			

ORDERING INFORMATION:

10 Lead Can	DG200AAA/883B
14 CERDIP	DG200AAK/883B

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. T_A = +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. T_A = +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
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.

** Subgroups 10 and 11, if not tested, shall be guaranteed to the limits in Table 1.