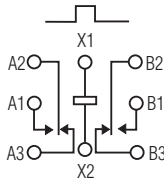


SMGS · SMGSD · SMGSDD

SMGS

SENSITIVE .100 GRID SURFACE MOUNT HIGH-PERFORMANCE RELAY

DESIGNED TO MIL-R-39016/41



TERMINAL VIEW

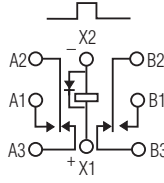
FEATURES

- Hermetically sealed
- High shock & vibration ratings
- Surface mount leads
- Excellent RF switching

SMGSD

SENSITIVE .100 GRID DIODE SUPPRESSED SURFACE MOUNT HIGH-PERFORMANCE RELAY

DESIGNED TO MIL-R-39016/42



TERMINAL VIEW

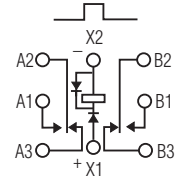
FEATURES

- Suppression diode
- Hermetically sealed
- High shock & vibration ratings
- Surface mount leads
- Excellent RF switching

SMGSDD

SENSITIVE .100 GRID DIODE SUPPRESSED/PROTECTED SURFACE MOUNT HIGH-PERFORMANCE RELAY

DESIGNED TO MIL-R-39016/43



TERMINAL VIEW

FEATURES

- Suppression & protection diodes
- Hermetically sealed
- High shock & vibration ratings
- Surface mount leads
- Excellent RF switching

ELECTRICAL CHARACTERISTICS

CONTACT ARRANGEMENT
2 Form C (DPDT)

CONTACT MATERIAL
Stationary:
Gold/platinum/palladium/silver (gold plated)
Moveable:
Gold/platinum/palladium/silver (gold plated)

CONTACT RESISTANCE
Before Life: 100 milliohms max. (measured @ 10 mA @ 6 Vdc)
After Life: 200 milliohms max. (measured @ 1 A @ 28 Vdc)

MECHANICAL LIFE EXPECTANCY
1 million operations

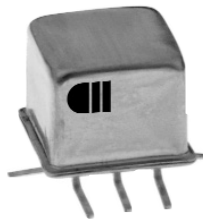
COIL VOLTAGE
5 to 26.5 Vdc

COIL POWER
565 mW max. @ 25°C

DUTY CYCLE
Continuous

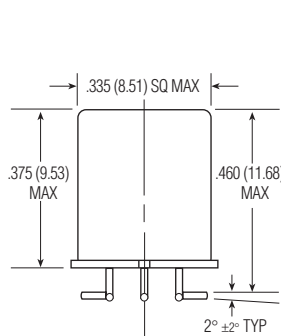
PICK-UP VOLTAGE
Approximately 50% of nominal coil voltage

PICK-UP SENSITIVITY
130 mW max. @ 25°C

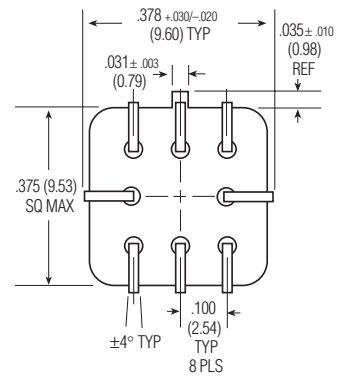


CONTACT RATINGS

CONTACT LOAD	TYPE	OPERATIONS MIN.
1.0 A @ 28 Vdc	Resistive	100,000
250 mA @ 115 Vac, 60 Hz & 400 Hz	Resistive (case not grounded)	100,000
100 mA @ 115 Vac, 60 Hz & 400 Hz	Resistive	100,000
0.2 A @ 28 Vdc	Inductive (0.32 Henry)	100,000
0.1 A @ 28 Vdc	Lamp	100,000
30 µA @ 50 mVdc	Low Level	1,000,000
0.1 A @ 28 Vdc	Intermediate Current	50,000



ENCLOSURE



HEADER

.100 GRID SURFACE MOUNT HIGH-PERFORMANCE



OPERATING CHARACTERISTICS

TIMING

Operate Time:
4.0 ms max.

Release Time:
SMGS: 2.0 ms max.
SMGSD/SMGSDD: 7.5 ms max.
(suppression diode, protection/suppression diodes)

CONTACT BOUNCE

1.5 ms max.

DIELECTRIC WITHSTANDING VOLTAGE

Between Open Contacts:
500 Vrms 60 Hz

Between Adjacent Contacts:
500 Vrms 60 Hz

Between Contacts & Coil:
500 Vrms 60 Hz

INSULATION RESISTANCE

10,000 megohms min. @ 500 Vdc
1,000 megohms @ 500 Vdc
(coil to case @ +125°C)

ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE RANGE

-65°C to +125°C

WEIGHT

0.09 oz. (2.55 gms)

VIBRATION RESISTANCE

30 G's, 10 to 3,000 Hz

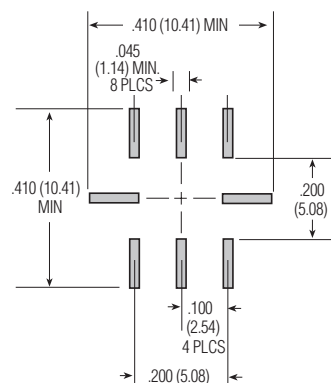
SHOCK RESISTANCE

75 G's, 6 ± 1 ms max.

SEMICONDUCTOR CHARACTERISTICS

DIODE

100 Vdc peak inverse voltage (PIV)
1.0 Vdc max. transient voltage



RECOMMENDED SOLDER PAD LAYOUT

COIL DATA

NOM. COIL VOLTAGE (Vdc)	COIL RESISTANCE IN OHMS ±10% @ 25°C (Note)	COIL CIRCUIT CURRENT mA (MAX.) (Note)	COIL CIRCUIT CURRENT mA (MIN.) (Note)	PICKUP VOLTAGE Vdc (MAX.) @ 25°C	PICKUP VOLTAGE Vdc (MAX.) @ 125°C	DROP-OUT VOLTAGE Vdc (MIN.) @ 25°C	DROP-OUT VOLTAGE Vdc (MIN.) @ -65°C	NOM. COIL POWER (mW) @ 25°C	MAX. COIL VOLTAGE	COIL DESIG.
SMGS/SMGSD										
5.0	100	n/a	n/a	2.6	3.5	0.23	0.12	250	7.5	5
6.0	200	n/a	n/a	3.4	4.5	0.28	0.18	180	10.0	6
9.0	400	n/a	n/a	4.85	6.8	0.55	0.35	203	15.0	9
12.0	800	n/a	n/a	7.0	9.0	0.64	0.41	180	20.0	12
18.0	1,600	n/a	n/a	9.8	13.5	0.92	0.59	203	30.0	18
26.5	3,200	n/a	n/a	14.0	18.0	1.4	0.89	219	40.0	26
36.0	6,500	n/a	n/a	20.0	27.0	1.8	1.25	199	57.0	36
48.0	11,000	n/a	n/a	25.8	36.0	2.4	1.60	209	75.0	48
SMGSDD										
5.0	64	78.1	56.8	2.9	3.7	0.8	0.7	391	7.5	5
6.0	125	48.9	36.3	4.0	4.8	0.9	0.8	288	10.0	6
9.0	400	23.6	18.1	6.1	8.0	1.1	0.9	203	15.0	9
12.0	800	16.0	12.5	7.8	11.0	1.3	1.0	180	20.0	12
18.0	1,600	12.2	9.6	11.3	14.5	1.5	1.1	203	30.0	18
26.5	3,200	9.0	7.2	15.2	19.0	1.7	1.3	219	40.0	26
36.0	6,500	6.1	4.9	21.7	27.2	2.3	1.7	199	57.0	36
48.0	11,000	4.8	3.9	27.8	34.8	2.8	2.0	209	75.0	48

Note: Coil resistance not directly measurable. Coil current should be within limits shown when tested at nominal voltage at 25°C for 5 seconds max.

SPECIFYING A PART NUMBER EXAMPLE:

TYPE
SMGS
COILS
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