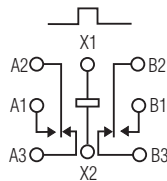


Double Pole, Electrically Held, 1 Amp and Less (Continued)

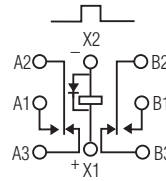
MGA, MGAD, MGADD

MGA
Standard .100 Grid
High Performance Relay
Qualified to
MIL-R-39016/17



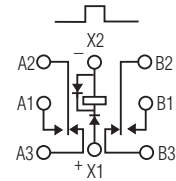
Terminal View

MGAD
Standard .100 Grid
Diode Suppressed
High Performance Relay
Qualified to
MIL-R-39016/18



Terminal View

MGADD
Standard .100 Grid Diode
Suppressed/Protected
High Performance Relay
Qualified to
MIL-R-39016/19



Terminal View

Product Facts

- Hermetically sealed
- High shock & vibration ratings
- Mounting pads
- Excellent RF switching

Product Facts

- Suppression diode
- Hermetically sealed
- High shock & vibration ratings
- Mounting pads
- Excellent RF switching

Product Facts

- Suppression & protection diodes
- Hermetically sealed
- High shock & vibration ratings
- Mounting pads
- 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 — 660 mW max. @ 25°C

Duty Cycle — Continuous

Pick-up Voltage — Approximately 50% of nominal coil voltage

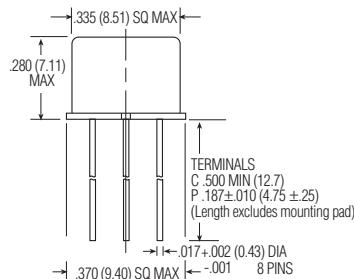
Pick-up Sensitivity — 130 mW max. @ 25°C

Contact Ratings

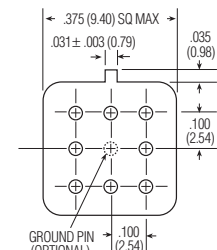
| Contact Load | Type | Operations Min. |
|----------------------------------|-------------------------------|-----------------|
| 1.0 A @ 28 Vdc | Resistive | 100,000 |
| 250 mA @ 115 Vac, 60 Hz & 400 Hz | Resistive (case not grounded) | 100,000 |
| 100 mA @ 115 Vac, 60 Hz & 400 Hz | Resistive | 100,000 |
| 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 |



MGA



MGA/MGAD/MGADD Enclosure



MGA/MGAD/MGADD Header

Double Pole, Electrically Held, 1 Amp and Less (Continued)

MGA, MGAD, MGADD
(Continued)

Operating Characteristics

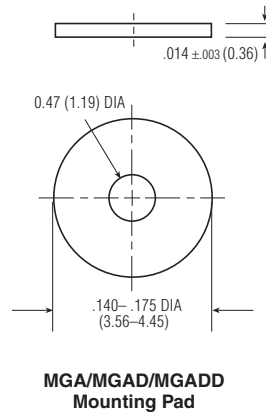
Timing —
Operate Time — 2.0 ms max.
Release Time —
MGA — 1.5 ms max.
MGAD/MGADD — 4.0 ms max.
(suppression diode, protection/
suppression diodes)
Contact Bounce — 1.5 ms max.
Dielectric Withstanding Voltage —
Between Open Contacts —
500 Vrms 60 Hz
Between Adjacent Contacts —
500 Vrms 60 Hz
Between Contacts & 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)
0.129 oz. (3.45 gms) w/ mounting pad
attached
Vibration Resistance —
30 G's, 10 to 3,000 Hz
Shock Resistance —
75 G's, 6 ±1 ms max.
QPL Approval —
MIL-R-39016/17 (JMGA)
MIL-R-39016/18 (JMGAD)
MIL-R-39016/19 (JMGADD)

Semiconductor Characteristics

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



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. |
|-------------------------|--|---------------------------------------|---------------------------------------|----------------------------------|-----------------------------------|------------------------------------|-------------------------------------|-----------------------------|-------------------|-------------|
| MGA/MGAD | | | | | | | | | | |
| 5.0 | 50 | n/a | n/a | 2.7 | 3.5 | 0.22 | 0.14 | 500 | 5.8 | 5 |
| 6.0 | 98 | n/a | n/a | 3.5 | 4.5 | 0.28 | 0.18 | 367 | 8.0 | 6 |
| 9.0 | 220 | n/a | n/a | 5.3 | 6.8 | 0.54 | 0.35 | 368 | 12.0 | 9 |
| 12.0 | 390 | n/a | n/a | 7.0 | 9.0 | 0.63 | 0.41 | 369 | 16.0 | 12 |
| 18.0 | 880 | n/a | n/a | 10.5 | 13.5 | 0.91 | 0.59 | 368 | 24.0 | 18 |
| 26.5 | 1,560 | n/a | n/a | 14.2 | 18.0 | 1.37 | 0.89 | 450 | 32.0 | 26 |
| MGADD | | | | | | | | | | |
| 5.0 | 39 | 128.2 | 93.2 | 3.2 | 4.0 | 0.6 | 0.6 | 641 | 5.8 | 5 |
| 6.0 | 78 | 78.3 | 58.3 | 4.0 | 5.0 | 0.7 | 0.7 | 462 | 8.0 | 6 |
| 9.0 | 220 | 42.9 | 33.0 | 6.3 | 7.8 | 0.9 | 0.8 | 368 | 12.0 | 9 |
| 12.0 | 390 | 32.8 | 25.6 | 8.0 | 10.0 | 1.1 | 0.9 | 369 | 16.0 | 12 |
| 18.0 | 880 | 22.1 | 17.5 | 11.5 | 14.5 | 1.4 | 1.1 | 368 | 24.0 | 18 |
| 26.5 | 1,560 | 18.5 | 14.8 | 15.2 | 19.0 | 1.8 | 1.4 | 450 | 32.0 | 26 |

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.

Ordering Instructions

Catalog-selected Relays: The catalog number is derived by choosing the proper CODE for each of the relay characteristics in the order in which the codes are listed.

| | | | | | | |
|--|-------------|------------------|---------------|--------------------|--------------|----------------------|
| Specifying a Part Number Example: | Type | Terminals | Diodes | Ground Pins | Coils | Mounting Pads |
| | MGA | C | D | G | -26 | W |

* The part number example shown on this page is for catalog items. For a list of specific QPL part numbers, please see the index in Section 15.

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