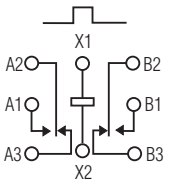
Double Pole, Electrically Held, 1 Amp and Less (Continued)

MGA, MGAD, MGADD

MGA

Standard .100 Grid High Performance Relay

Qualified to MIL-R-39016/17



Terminal View

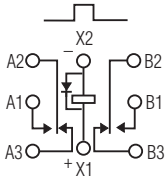
Product Facts

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

MGAD

Standard .100 Grid Diode Suppressed High Performance Relay

Qualified to MIL-R-39016/18



Terminal View

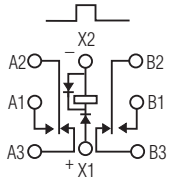
Product Facts

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

MGADD

Standard .100 Grid Diode Suppressed/Protected High Performance Relay

Qualified to MIL-R-39016/19



Terminal View

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

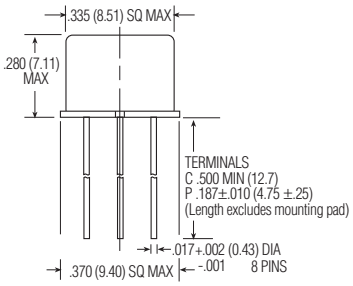
Pick-up Voltage — Approximately 50% of nominal coil voltage

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

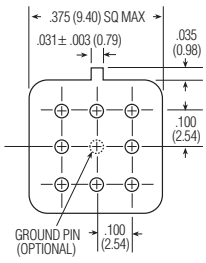
Contact Ratings

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

Catalog 5-1773450-5
Revised 3-13

www.te.com

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

USA: +1 800 522 6752
Asia Pacific: +86 0 400 820 6015
UK: +44 800 267 666

For additional support numbers please visit www.te.com

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

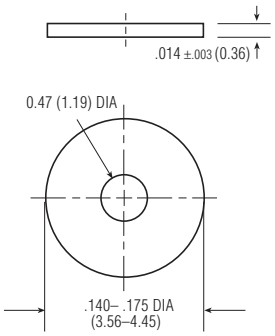
Vibration Resistance —
30 G's, 10 to 3,000 Hz

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



MGA/MGAD/MGADD Mounting Pad

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.

Catalog 5-1773450-5
Revised 3-13

www.te.com

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