

# Ultra-Micro 280 Automotive Relay

**G8VA** 

- SPST version only
- Miniaturized package (reduced footprint and height)
- L x W x H = 15.7 (max.) x 15.0 x 16.4 mm nominal
- Low temperature rise
- 280 terminal type
- Fully automated assembly



### Available Types —

Туре	Description
G8VA-1A4T-R-DC12	Ultra-Micro 280 SPST Plug-In with Resistor
G8VA-1A4T-DC12	Ultra-Micro 280 SPST Plug-In without Resistor

#### Contact Data -

Typical Switching Current	Inrush 80A, Steady-State 20A
Max Switching Voltage	16V
Min. Carry / Switching Current	1A
Contact Material	Silver Tin Oxide (Cadmium Free)

# Coil Ratings (at 20°C) -

Туре	Rated Voltage	Coil Resistance ±10%	Coil Resistance w/ 1.1KΩ suppression ±10%	Nominal Power Consumption*	Pull in Voltage	Dropout Voltage
G8VA-1A4T-R- DC12	12VDC	155 Ω	135 Ω	1.1 W	< 8.0 V	> 1.0 V

<sup>\*</sup> Power consumption includes suppression resistor. Power consumption will decrease without coil suppression.

# **Typical Applications** -

Electric Sunroof	Head Lamps
Blower Fan Motor	Fuel Pump
A/C Clutch Coil	Brake Lamps
ABS	Horn

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#### Characteristics ——

Max. Initial Contact Voltage Drop		15mV @ 1A
NO Activation Time		10 ms max. (4 ms typical) @ 14 V
NO Deactivation Time		10 ms max. (1.8 ms typical*) @ 14 V
Insulation resistance		20 MΩ min (at 500 VDC)
Dielectric strength		< 1.0 mA max. leakage at 900 VAC, 50-60 Hz for 1 sec between coil and contacts and between contacts.
Ambient Operating Temperature		-40°C to 125°C
Humidity		Up to 95%
Service life	Mechanical	1,000,000 operations min.
	Electrical	100,000 operations min (load dependent).
Weight		11g

<sup>\*</sup> Typical data includes coil suppression. Release times may decrease without coil suppression.

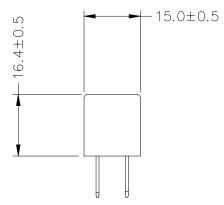
### Characteristic Reference Data ——

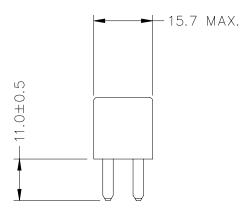
## **Durability Data**

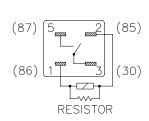
Relay	Load Type	Current	Cycles Tested	
_	Motor Load	25 A Inrush	300,000	
	IVIOLOI LOAU	20 A Steady State	3s on, 4s off	
	Inductive Load	50 A Inrush	250,000	
		20 A Steady State	2s on, 4s off	
G8VA	Compressor Load	47 A Inrush	390,000	
		10.5 A Steady State	2s on, 2s off	
	Resistive Load	20 A Steady State	100,000 2s on, 2s off	
	Lamp Load	100 A Inrush	300,000	
		20 A Steady State	3s on, 4s off	
	A/C Clutch Coil	4.5 A Steady State	750,000 2s on, 2s off	

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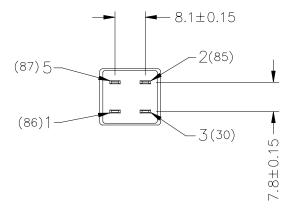
#### **Dimensions**







TERMINAL ARRANGEMENT
INTERNAL CONNECTIONS
(BOTTOM VIEW)



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G8VA-1A4T-R01-DC12