

# AZ947

## 20 AMP SUBMINIATURE PCB POWER RELAY FOR AUTOMOTIVE USE



### FEATURES

- Low cost
- 20 Amp contact rating
- Low profile, small footprint
- High operating temperature (85°C)
- SPST (1 Form A), SPDT (1 Form C)

### CONTACTS

|                    |   |
|--------------------|---|
| <b>Arrangement</b> | SPST (1 Form A)<br>SPDT (1 Form C)  |
| <b>Ratings</b>     | Resistive load:<br>Max. switched power: 280 W, 1250 VA<br>Max. switched voltage: 50 VDC, 125 VAC<br>20 A at 14 VDC Res. (make)<br>15 A at 14 VDC Res. (break) . |
| <b>Material</b>    | Silver tin oxide  |
| <b>Resistance</b>  | < 50 milliohms initially<br>(6 V, 1 A voltage drop method)  |

### COIL

|                                    |                                     |
|------------------------------------|-------------------------------------|
| <b>Power</b>                       |                                     |
| <b>At Pickup Voltage (typical)</b> | 222 mW                              |
| <b>Max. Continuous Dissipation</b> | 1.09 W at 20°C (68°F) ambient       |
| <b>Temperature Rise</b>            | 44°C (79°F) at nominal coil voltage |
| <b>Max Temperature</b>             | 105°C (221°F)                       |

### NOTES

1. All values at 20°C (68°F).
2. Relay may pull in with less than "Must Operate" value.
3. Specifications subject to change without notice.

### GENERAL DATA

|  |  |
|--|--|
| <b>Life Expectancy</b><br><b>Mechanical</b><br><b>Electrical</b> | Minimum operations<br>1 x 10 <sup>7</sup><br>1 x 10 <sup>5</sup> at 20 A 14 VDC Res.       |
| <b>Operate Time (max.)</b>                                       | 10 ms max. at nominal coil voltage   |
| <b>Release Time (max.)</b>                                       | 5 ms max. at nominal coil voltage<br>(with no coil suppression)                            |
| <b>Dielectric Strength (at sea level for 1 min.)</b>             | 500 VAC coil to contact<br>500 VAC between open contacts                                   |
| <b>Insulation Resistance</b>                                     | 100 megohms min. at 20°C, 500 VDC<br>50% RH  |
| <b>Dropout</b>   | Greater than 5% of nominal coil voltage  |
| <b>Ambient Temperature</b><br><b>Operating</b><br><b>Storage</b> | At nominal coil voltage<br>-40°C (-40°F) to 85°C (185°F)<br>-40°C (-40°F) to 105°C (221°F) |
| <b>Vibration</b>   | 0.062" (1.5 mm) DA at 10-55 Hz   |
| <b>Shock</b>   | 10 g   |
| <b>Enclosure</b>   | P.B.T. polyester   |
| <b>Terminals</b>   | Tinned copper alloy, P.C.  |
| <b>Max. Solder Temp.</b>   | 270°C (518°F)  |
| <b>Max. Solder Time</b>  | 5 seconds  |
| <b>Max. Solvent Temp.</b>  | 80°C (176°F)   |
| <b>Max. Immersion Time</b>                                       | 30 Seconds   |
| <b>Weight</b>  | 6 grams  |

**ZETTLER electronics GmbH**

Junkersstrasse 3, D-82178 Puchheim, Germany

Tel. +49 89 800 97 0  
Fax +49 89 800 97 200

office@ZETTLERelectronics.com  
www.ZETTLERelectronics.com

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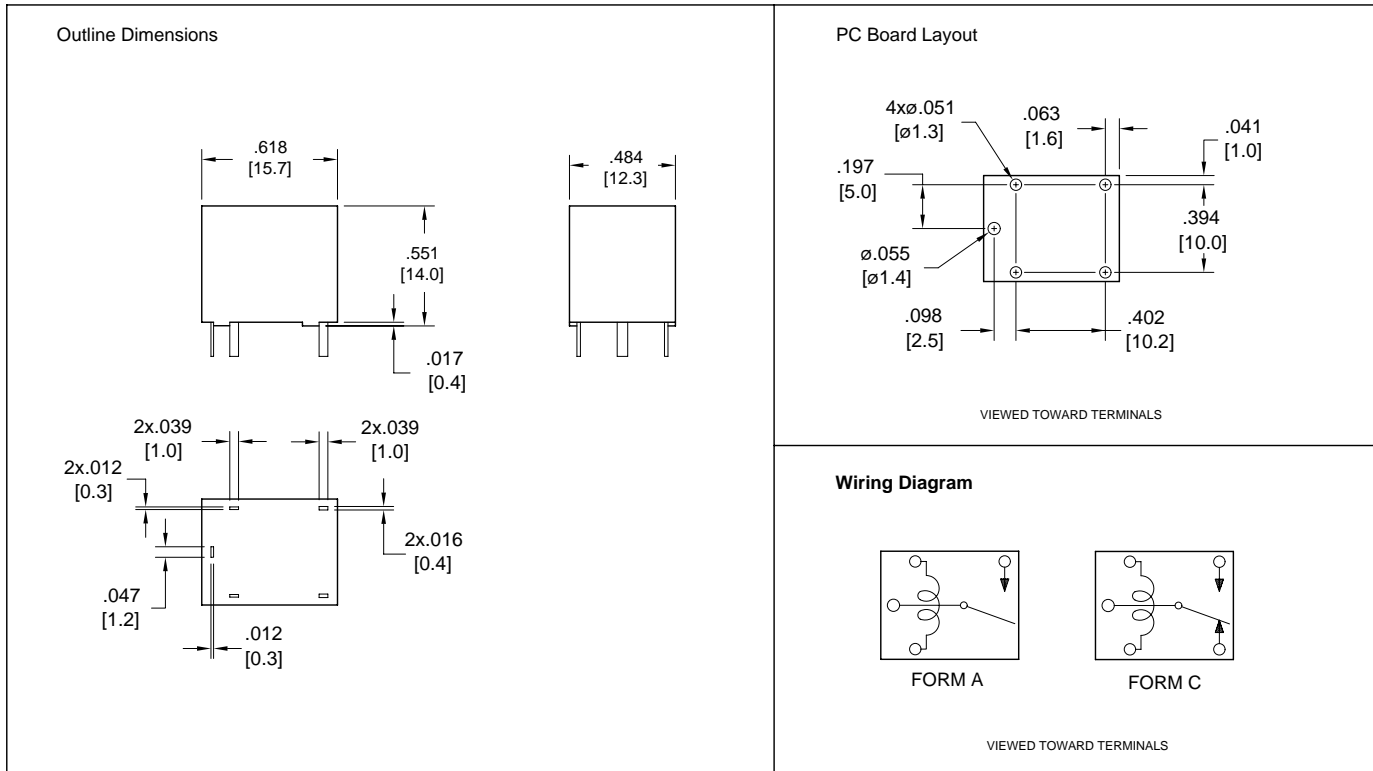
# AZ947

## RELAY ORDERING DATA

| COIL SPECIFICATIONS |                  |                     |                            | ORDER NUMBER* |              |
|---------------------|------------------|---------------------|----------------------------|---------------|--------------|
| Nominal Coil VDC    | Must Operate VDC | Max. Continuous VDC | Coil Resistance $\pm 10\%$ | SPST          | SPDT         |
| 6                   | 3.6              | 8.1                 | 60                         | AZ947-1A-6D   | AZ947-1C-6D  |
| 9                   | 5.4              | 12.2                | 135                        | AZ947-1A-9D   | AZ947-1C-9D  |
| 12                  | 7.3              | 16.2                | 240                        | AZ947-1A-12D  | AZ947-1C-12D |
| 24                  | 14.4             | 32.5                | 960                        | AZ947-1A-24D  | AZ947-1C-24D |

\* Add suffix "E" for epoxy sealed version.

## MECHANICAL DATA



Dimensions in inches with metric equivalents in parentheses. Tolerance:  $\pm .010$ "

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