## MICROMINIATURE POLARIZED RELAY

## FEATURES

- SMT and DIP mounting available
- Microminiature size: up to $50 \%$ less board area than previous generation telecom relays
- High dielectric and surge voltage: 2.5 KV surge (per Bellcore TA-NWT-001089) 1.5 KV surge (per FCC Part 68) 1,000 Vrms, open contacts
- Monostable and bistable (latching) versions available
- Low power consumption: 79 mW pickup
- Stable contact resistance for low level signal switching
- Epoxy sealed for automatic wave soldering and cleaning
- UL, CUR file E43203
- All plastics meet UL94 V-0, 30 min . oxygen index


## CONTACTS

| Arrangement | DPDT (2 Form C) <br> Bifurcated crossbar contacts |
| :--- | :--- |
| Ratings | Resistive load: <br> Max. switched power: 60 W or 62.5 VA <br> Max. switched current: 2.0 A <br> Max. switched voltage: 220 VDC or 250 VAC |
| Rated Load <br> UL/CUR | 0.5 A at 125 VAC general use <br> 2.0 A at 30 VDC |
| Material | Silver nickel, gold plated |
| Resistance | $<50$ milliohms initially at $6 \mathrm{~V}, 1 \mathrm{~A}$ |

## COIL (Polarized)

| Power <br> At Pickup Voltage <br> (typical) | $79 \mathrm{~mW}(3-24 \mathrm{VDC})$ |
| :--- | :--- |
|  | $152 \mathrm{~mW}(48 \mathrm{VDC})$ |
| Max. Continuous |  |
| Dissipation |  |
| Temperature Rise | 0.32 W at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$ |
| At $30^{\circ} \mathrm{C}\left(54^{\circ} \mathrm{F}\right)$ nominal coil voltage |  |
| Temperature | Max. $115^{\circ} \mathrm{C}\left(239^{\circ} \mathrm{F}\right)$ |

GENERAL DATA

| Life Expectancy Mechanical Electrical | Minimum operations <br> $1 \times 10^{8}$ at 3 Hz <br> $1 \times 10^{5}$ at $0.5 \mathrm{~A}, 125 \mathrm{VAC}$, Res. <br> $1 \times 10^{5}$ at $2.0 \mathrm{~A}, 30$ VDC, Res. |
| :---: | :---: |
| Operate Time (max) | 4 ms at nominal coil voltage |
| Release Time (max) | 4 ms at nominal coil voltage (with no coil suppression) |
| Dielectric Strength (at sea level) | See table |
| Dropout | Greater than $10 \%$ of nominal coil voltage |
| Insulation Resistance | $10^{9}$ ohms min. at $25^{\circ} \mathrm{C}, 500 \mathrm{VDC}$, $50 \%$ RH |
| Ambient Temperature Operating Storage | At nominal coil voltage $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $85^{\circ} \mathrm{C}\left(185^{\circ} \mathrm{F}\right)$ $-40^{\circ} \mathrm{C}\left(-40^{\circ} \mathrm{F}\right)$ to $115^{\circ} \mathrm{C}\left(239^{\circ} \mathrm{F}\right)$ |
| Vibration | Operational, 3.3 mm DA, $10-55 \mathrm{~Hz}$ Non-destructive, 5.5 mm DA, $10-55 \mathrm{~Hz}$ |
| Shock | Operational, 75 g min., 11 ms Non-destructive, 100 g min., 11 ms |
| Max. Solder Temp. | $260^{\circ} \mathrm{C}\left(500^{\circ} \mathrm{F}\right)$ for 5 seconds |
| Max. Solvent Temp. | $80^{\circ} \mathrm{C}\left(176^{\circ} \mathrm{F}\right)$ |
| Max. Immersion Time | 30 seconds |
| Weight | 2 grams |
| Enclosure | P.B.T. polyester |
| Terminals | Tinned copper alloy, P.C. |

## NOTES

[^0]
## RELAY ORDERING DATA

| STANDARD VERSION |  |  |  |  |  |  | ORDER NUMBER |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Coil <br> VDC | Must Operate <br> VDC | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ | THT <br> (Through Hole) | SMT* |  |  |  |

SINGLE COIL LATCHING VERSION

| Nominal Coil <br> VDC | Set/Reset <br> Voltage | Max. Continuous <br> VDC | Coil Resistance <br> $\pm 10 \%$ | THT <br> (Through Hole) | SMT* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1.5 | 1.13 | 2.7 | 22.5 | AZ8462P1-1.5 | AZ8462P1S-1.5 |
| 3 | 2.25 | 5.4 | 90 | AZ8462P1-3 | AZ8462P1S-3 |
| 4.5 | 3.38 | 8.1 | 203 | AZ8462P1-4.5 | AZ8462P1S-4.5 |
| 5 | 3.75 | 9.0 | 250 | AZ8462P1-5 | AZ8462P1S-5 |
| 6 | 4.50 | 10.8 | 360 | AZ8462P1-6 | AZ8462P1S-6 |
| 9 | 6.75 | 16.2 | 810 | AZ8462P1-9 | AZ8462P1S-9 |
| 12 | 9.00 | 21.6 | 1440 | AZ8462P1-12 | AZ8462P1S-12 |
| 24 | 18.00 | 43.2 | 5760 | AZ8462P1-24 | AZ8462P1S-24 |

DUAL COIL LATCHING VERSION

| Nominal Coil <br> VDC | Set/Reset <br> Voltage | Max. Continuous <br> VDC | Coil Resistance <br> $\mathbf{1 0 \%}$ | THT <br> (Through Hole) | SMT* |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1.5 | 1.13 | 2.2 | 11.2 | AZ8462P2-1.5 | AZ8462P2S-1.5 |
| 3 | 2.25 | 4.5 | 45 | AZ8462P2-3 | AZ8462P2S-3 |
| 4.5 | 3.38 | 6.7 | 101 | AZ8462P2-4.5 | AZ8462P2S-4.5 |
| 5 | 3.75 | 7.5 | 125 | AZ8462P2-5 | AZ8462P2S-5 |
| 6 | 4.50 | 9.0 | 180 | AZ8462P2-6 | AZ8462P2S-6 |
| 9 | 6.75 | 13.5 | 405 | AZ8462P2-9 | AZ8462P2S-9 |
| 12 | 9.00 | 18.0 | 720 | AZ8462P2-12 | AZ8462P2S-12 |
| 24 | 18.00 | 36.0 | 2280 | AZ8462P2-24 | AZ8462P2S-24 |

*For Tape and Reel add suffix "TR." For SMT short leg add "1" after S.

## INITIAL DIELECTRIC STRENGTH (minimum)

## SURGE

|  | VRMS, $\mathbf{1} \mathbf{~ m i n}$. | Peak (V) | Rise Time $(\boldsymbol{\mu S})$ | Decay Time $\left.^{\boldsymbol{*}} \mathbf{9} \boldsymbol{\mu} \mathbf{~ S}\right)(\mathbf{1 / 2} \mathbf{~ p e a k})$ |
| :--- | :---: | :---: | :---: | :---: |
| Between open contacts | 1,000 | 1,500 | 10 | 160 |
| Between contact sets | 1,000 | - | - | - |
| Between coil and contacts | 1,500 | 2,500 | 2 | 10 |

* Decay time measured from beginning of surge.


Dimensions in inch with millimeters in brackets below. Tolerance: $\pm .010$ "


[^0]:    1. All values at $20^{\circ} \mathrm{C}\left(68^{\circ} \mathrm{F}\right)$.
    2. Relay may pull in with less than "Must Operate" value.
    3. Relay has fixed coil polarity.
    4. Specifications subject to change without notice.
