

# AZ852

## MICROMINIATURE POLARIZED RELAY

### FEATURES

- Conforms to IEC60950/UL1950/EN60950 spacing and high breakdown voltage  
Clearance: 1.0 mm (between coil and contacts)  
Creepage: 1.6 mm (between coil and contacts)  
Basic Insulation: 150 V Working Voltage, Pollution Degree 2
- Monostable and bistable (latching) coil versions available
- 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
- Low power consumption: 79 mW pickup
- Stable contact resistance for low level signal switching
- Epoxy sealed for automatic wave soldering and cleaning
- UL file E43203; CSA file 212940
- All plastics meet UL94 V-0, 30 min. oxygen index



### CONTACTS

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Ratings	Resistive load: Max. switched power: 30 W or 62.5 VA Max. switched current: 1.0 A Max. switched voltage: 220 VDC or 250 VAC
Rated Load UL/CSA	0.5 A at 125 VAC 1.0 A at 30 VDC 0.3 A at 110 VDC
Material	Silver alloy; gold clad
Resistance	< 75 milliohms initially at 6 V, 1 A

### COIL (Polarized)

Power At Pickup Voltage (typical)	79 mW (3–12 VDC) 130 mW (24 VDC)
Max. Continuous Dissipation	1.0 W at 20°C (68°F) 0.78 W at 40°C (104°F)
Temperature Rise	At nominal coil voltage 18°C (32°F) (3–12 VDC) 25°C (45°F) (24 VDC)
Temperature	Max. 115°C (239°F)

### NOTES

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

### GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 <sup>8</sup> at 3Hz 1 x 10 <sup>5</sup> at 0.5 A, 125 VAC, Res. 2 x 10 <sup>5</sup> at 1.0 A, 30 VDC, Res.
Operate Time (typical)	3 ms at nominal coil voltage
Release Time (typical)	3 ms at nominal coil voltage (with no coil suppression)
Bounce (typical)	At 10 mA contact current 1 ms at operate or release
Capacitance	< 1 pF at 10 KHz—open contacts < 1 pF at 10 KHz—adjacent contact sets
Dielectric Strength (at sea level)	See table
Dropout	Greater than 10% of nominal coil voltage
Insulation Resistance	10 <sup>9</sup> ohms min. at 25°C, 500 VDC, 50% RH
Ambient Temperature Operating Storage	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 115°C (239°F)
Vibration	Operational, 20 g, 10–55 Hz Non-destructive, 30 g, 10–55 Hz
Shock	Operational, 50 g min., 11 ms Non-destructive, 100 g min., 11 ms
Max. Solder Temp. Temp./Time	350°C (662°F) for 3 seconds 260°C (500°F) for 10 seconds
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	0.8 grams
Enclosure	P.B.T. polyester
Terminals	Tinned copper alloy, P.C.



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## RELAY ORDERING DATA

NON-LATCHING VERSION				ORDER NUMBER		
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	THT	SMT*	SMTss*
1.5	2.25	16.1	1.13	AZ852-1.5	AZ852S-1.5	AZ852S1-1.5
3	4.5	64.3	2.25	AZ852-3	AZ852S-3	AZ852S1-3
4.5	6.75	145	3.38	AZ852-4.5	AZ852S-4.5	AZ852S1-4.5
6	9	257	4.5	AZ852-6	AZ852S-6	AZ852S1-6
9	13.5	579	6.75	AZ852-9	AZ852S-9	AZ852S1-9
12	18	1028	9.00	AZ852-12	AZ852S-12	AZ852S1-12
24	36	2504	18.00	AZ852-24	AZ852S-24	AZ852S1-24

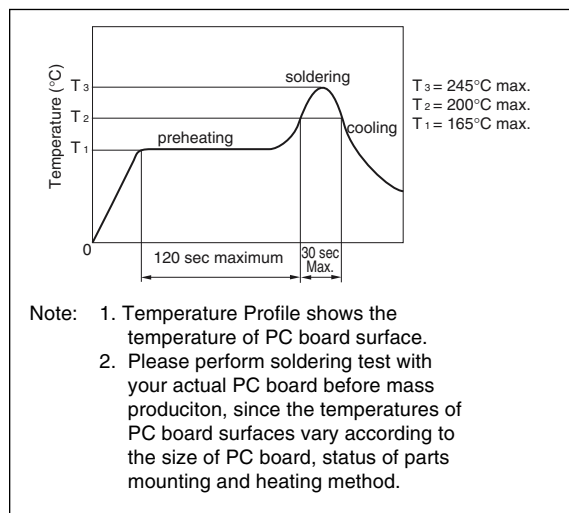
LATCHING VERSION				ORDER NUMBER		
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	THT	SMT*	SMTss*
1.5	2.25	22.5	1.13	AZ852P-1.5	AZ852PS-1.5	AZ852PS1-1.5
3	4.5	90	2.25	AZ852P-3	AZ852PS-3	AZ852PS1-3
4.5	6.75	203	3.38	AZ852P-4.5	AZ852PS-4.5	AZ852PS1-4.5
6	9	360	4.50	AZ852P-6	AZ852PS-6	AZ852PS1-6
9	13.5	810	6.75	AZ852P-9	AZ852PS-9	AZ852PS1-9
12	18	1440	9.00	AZ852P-12	AZ852PS-12	AZ852PS1-12
24	36	4800	18.00	AZ852P-24	AZ852PS-24	AZ852PS1-24

\*Tape and reel available (1K pcs/reel minimum)

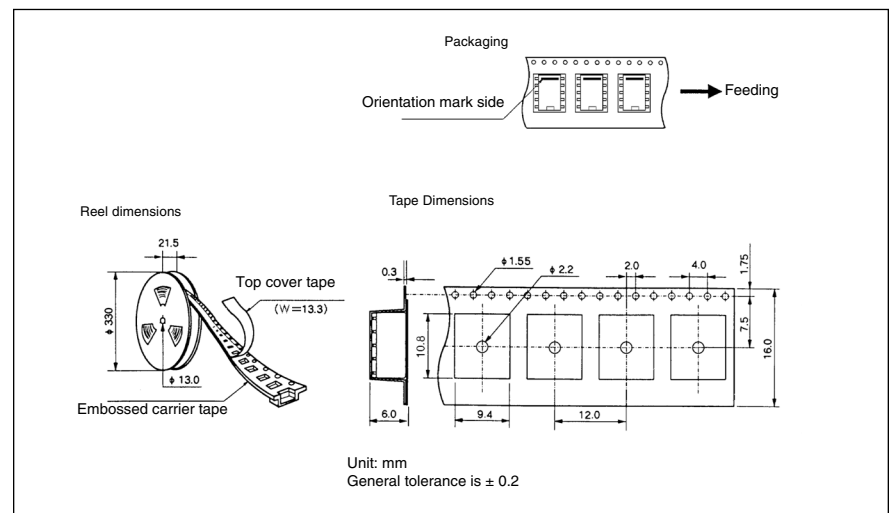
INITIAL DIELECTRIC STRENGTH (minimum)	SURGE			
	VRMS, 1 min.	Peak (V)	Rise Time ( $\mu$ S)	Decay Time* (9 $\mu$ S) (1/2 peak)
Between open contacts	1,000	1,500	10	160
Between contact sets	1,000	1,500	2	160
Between coil and contacts	1,500	2,500	2	10

\* Decay time measured from beginning of surge.

## Temperature Profile



## Packaging Specifications



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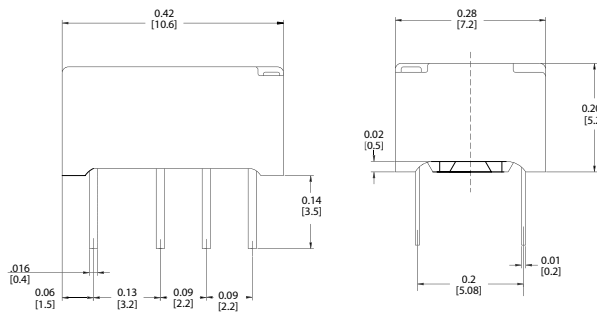
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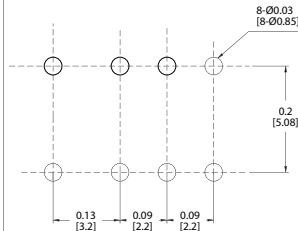
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## Mechanical Data

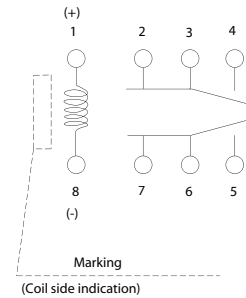
### THT



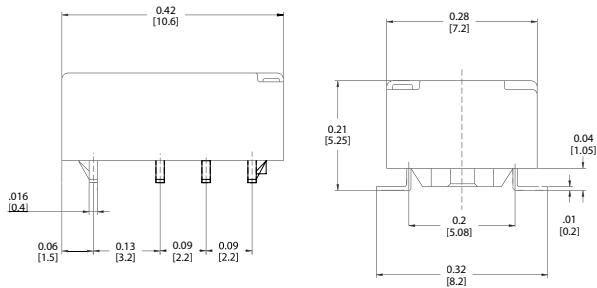
### PC Board Layout (Viewed toward terminals)



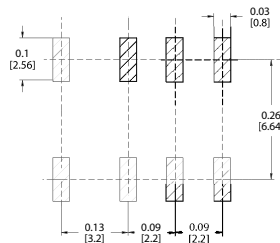
### Wiring Diagram



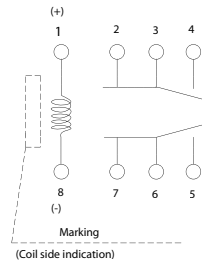
### SMT



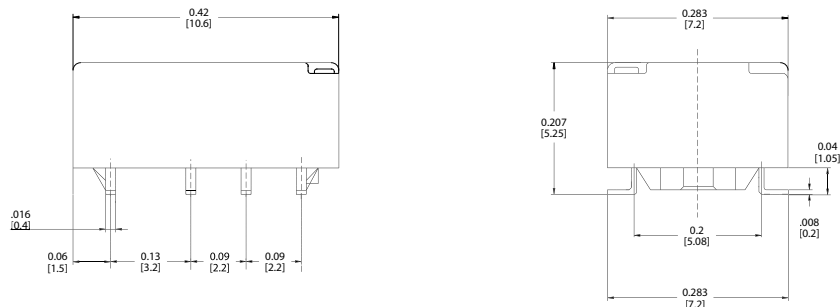
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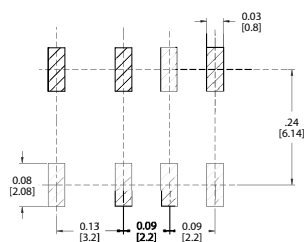
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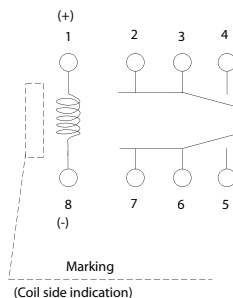
### SMTss



### PC Board Layout (Viewed toward terminals)



### Wiring Diagram



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