

AZ848

MICROMINIATURE SURFACE MOUNT POLARIZED RELAY

FEATURES

- High dielectric and surge voltage: 1.5 kV surge (per FCC Part 68) 750 VRMS open contacts
- Low power consumption: 56 mW set
- Non-latching and latching versions
- Single coil and dual coil versions
- Stable contact resistance for low level signal switching
- Epoxy sealed for automatic wave soldering and cleaning
- UL file E43203, CSA 73363
- All plastics meet UL94 V-0, 30 min. oxygen index



CONTACTS

Arrangement	DPDT (2 Form C) Bifurcated crossbar contacts
Ratings	Non-inductive load: Max. switched power: 60 W or 62.5 VA Max. switched current: 2 A Max. switched voltage: 220 VDC or 250 VAC
Rated Load UL/CSA	0.5 A at 125 VAC res. 2.0 A at 30 VDC res. 0.3 A at 110 VDC res.
Material	Silver palladium; gold clad
Resistance	< 50 milliohms initially at 6 V, 0.1 A

COIL

Power At Pickup Voltage (typical)	AZ848: 79 mW to 169 mW AZ848P1: 57 mW to 85 mW AZ848P2: 110 mW to 170 mW
Max. Continuous Dissipation	826 mW at 20°C (68°F) ambient 652 mW at 40°C (104°F) ambient
Temperature Rise	At nominal coil voltage 18°C (32°F) (3 - 12 VDC coils) 25°C (45°F) (18, 24 VDC coils) 34°C (61°F) (48 VDC coils)
Temperature	Max. 115°C (239°F)

NOTES

1. All values at 20°C (68°F).
2. Relay has fixed coil polarity.
3. Relay may pull in with less than "Must Operate" value.
4. Relay adjustment may be affected if undue pressure is exerted on relay case.
5. For complete isolation between the relay's magnetic fields, it is recommended that a .197" (5.0 mm) space be provided between adjacent relays.
6. Specifications subject to change without notice.

GENERAL DATA

Life Expectancy Mechanical Electrical	Minimum operations 1 x 10 ⁸ operations at 3 Hz 2 x 10 ⁵ operations at 0.5 A, 125 VAC, resistive 5 x 10 ⁵ operations at 1.0 A, 30 VDC, resistive
Operate Time (typical)	2 ms at nominal coil voltage
Release Time (typical)	1 ms at nominal coil voltage (with no coil suppression)
Bounce (typical)	1 ms (at nominal coil voltage)
Capacitance	< 0.5 pF open and adjacent contacts < 1.0 pF contact to coil
Dielectric Strength (at sea level)	See table
Insulation Resistance	10 ⁹ ohms min. at 500 VDC
Dropout	Greater than 10% of nominal coil voltage
Ambient Temperature Operating Storage	At nominal coil voltage -40°C (-40°F) to 85°C (185°F) -40°C (-40°F) to 85°C (185°F)
Vibration	Operational, 3.3 mm DA, 10 - 55 Hz Non-Destructive, 5.5 mm DA, 10 - 55 Hz
Shock	Operational, 50g min., 11 ms Non-Destructive, 100 g min., 6 ms
Enclosure	LCP
Terminals	Tinned copper alloy, P.C.
Max. Solder Temp.	See charts
Max. Solder Time	See charts
Max. Solvent Temp.	80°C (176°F)
Max. Immersion Time	30 seconds
Weight	1.5 grams

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RELAY ORDERING DATA

SINGLE SIDE STABLE (Standard, Non-Latching)				
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Must Operate VDC	
1.5	3.7	16.1	1.13	AZ848-1.5
3	7.3	64.3	2.25	AZ848-3
4.5	10.9	145	3.38	AZ848-4.5
5	12.1	178	3.75	AZ848-5
6	14.6	257	4.5	AZ848-6
9	21.9	579	6.75	AZ848-9
12	29.1	1,028	9.0	AZ848-12
18	36.6	1,620	13.5	AZ848-18
24	48.7	2,880	18.0	AZ848-24
48	79.6	7,680	36.0	AZ848-48

RELAY ORDERING DATA

SINGLE COIL (Latching)				
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance $\pm 10\%$	Set (+)/Reset (-) VDC	
1.5	4.3	22.5	1.13	AZ848P1-1.5
3	8.6	90	2.25	AZ848P1-3
4.5	12.9	203	3.38	AZ848P1-4.5
5	14.4	250	3.75	AZ848P1-5
6	17.2	360	4.5	AZ848P1-6
9	25.8	810	6.75	AZ848P1-9
12	34.5	1,440	9.0	AZ848P1-12
18	42.2	2,160	13.5	AZ848P1-18
24	56.3	3,840	18.0	AZ848P1-24

RELAY ORDERING DATA

DUAL COIL (Latching)				
COIL SPECIFICATIONS				ORDER NUMBER
Nominal Coil VDC	Max. Continuous VDC	Coil Resistance (each coil) $\pm 10\%$	Set/Reset VDC	
1.5	3.0	11.25	1.13	AZ848P2-1.5
3	6.1	45	2.25	AZ848P2-3
4.5	9.1	101	3.38	AZ848P2-4.5
5	10.2	125	3.75	AZ848P2-5
6	12.2	180	4.5	AZ848P2-6
9	25.8	405	6.75	AZ848P2-9
12	24.4	720	9.0	AZ848P2-12
18	29.9	1,080	13.5	AZ848P2-18
24	39.8	1,920	18.0	AZ848P2-24

INITIAL DIELECTRIC AND SURGE STRENGTH (minimum)

	VRMS, 1 min.	SURGE		
		Peak (V)	Rise Time	Decay Time
Between Open Contacts	750	1500	10 μ s	160 μ s
Between Contact Sets	750	1500	10 μ s	160 μ s
Between Coil and Contacts	1000	1500	10 μ s	160 μ s

Decay time measured from beginning of surge.

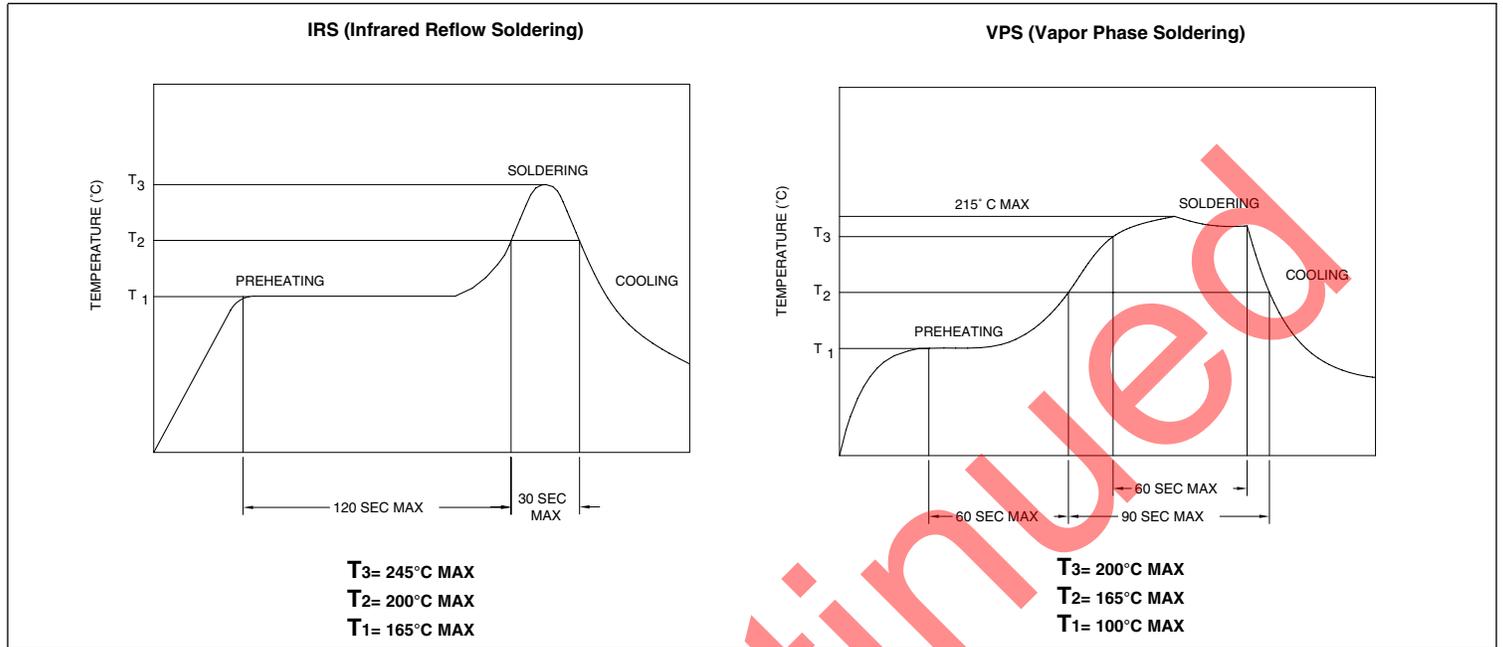
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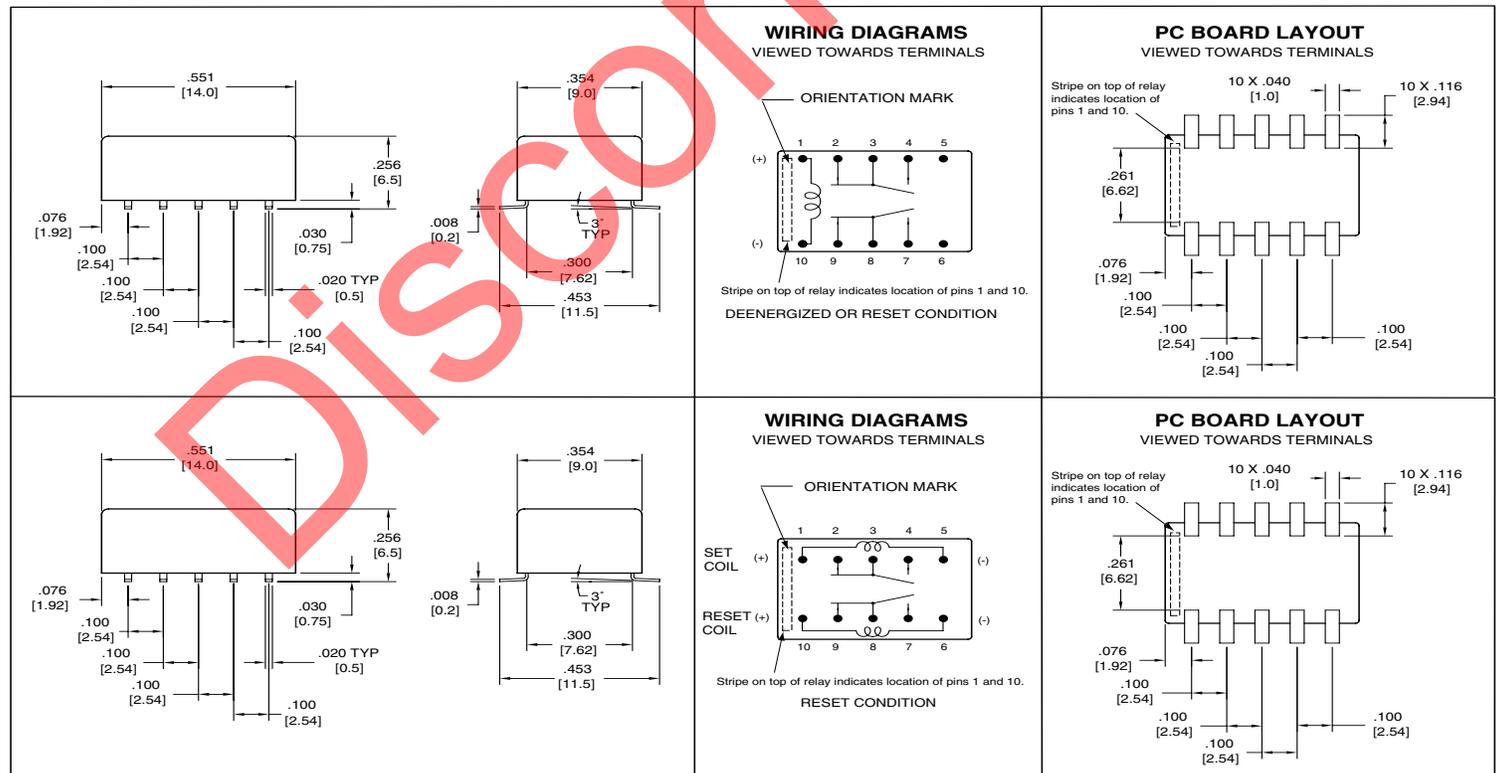
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SOLDERING DATA



MECHANICAL DATA

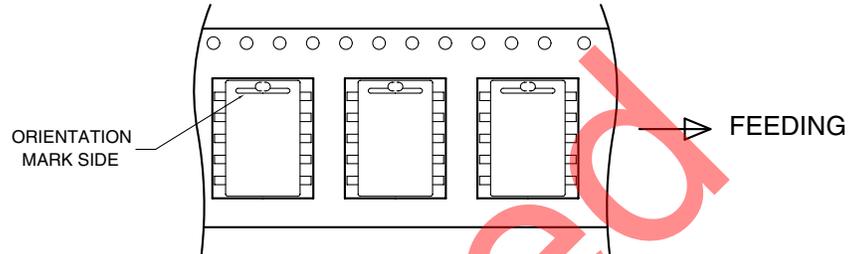


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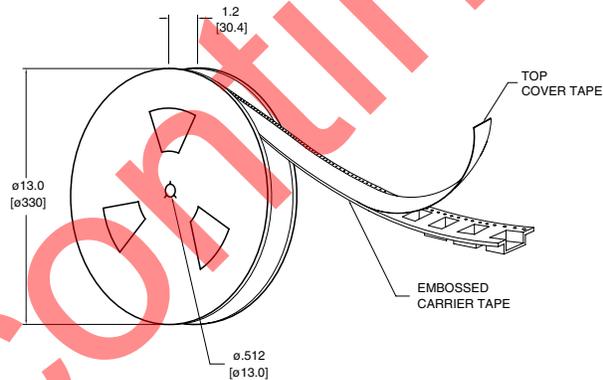
PACKING

(1) Packing Method (only tape packing is available)

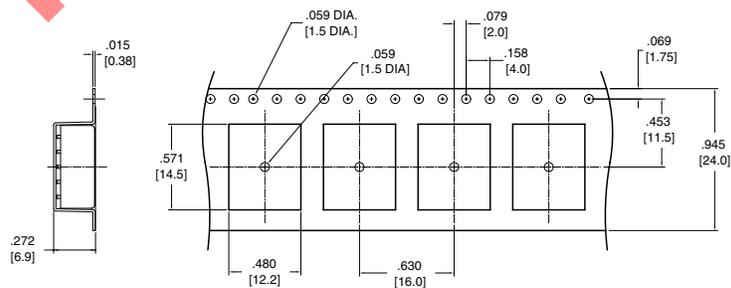
- Taping Standards: JIS C 0806 and RC - 1009B (EIAJ)
- Tape type: TB2416 or TE2416
- Reel type: R24D
- Quantity on 1 reel: 500 relays
- Packing orientation code: B



REEL DIMENSIONS



TAPE DIMENSIONS



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This specification provides an overview of the most significant part features. Any individual applications and operating conditions are not taken into consideration. It is recommended to test the product under application conditions. Responsibility for the application remains with the customer. Proper operation and service life cannot be guaranteed if the part is operated outside the specified limits.