

V23079 series

2 Amp, High Dielectric
2 Pole Polarized
FCC Part 68
PC Board Relay

File E48393

File LR45064

CECC 16 100/16 200/16 500

Features

- Surface and through hole mounting types.
- Breakdown voltage between contacts and coil: 1,800V.
- Surge withstand between contacts and coil: 2,500V (Bellcore).
- High capacity contact: 2A @ 30VDC.
- 2 Form C contact arrangement.
- Board space saving, vertical mount (14.6 x 7.2mm surface area).
- Immersion cleanable, plastic sealed case.
- Single and dual coil latching versions available.

Contact Data

Arrangement: 2 Form C (DPDT).

Material: B201:Stationary Contacts: Gold overlay on silver palladium.

Movable Contacts: Palladium silver.

B301:Stationary and Movable Contacts:

Gold overlay on silver nickel.

Rating:

Max. Switching Voltage: 250VAC, 220VDC.

Max. Switching Current: 2A.

Max Carrying Current: 2A.

Max Switching Power: 60W, DC, resistive.
 62.5VA, AC, resistive.

Min. Permissible Load: 500 μ V.

Expected Mechanical Life: Approx. 100 million ops.

Expected Electrical Life: 500,000 ops. @ 1A, 30VDC,
 10 million ops. @ 100mA, 6VDC.

Initial Contact Resistance: 50 milliohms @ 10mA, 20mV.

Coil Data @ 20°C

Voltage: 3-48V.

Nominal Power:

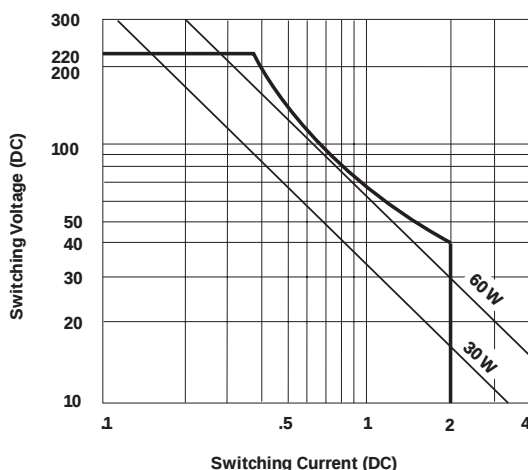
Non-Latching: 140mW.

Single Coil Latching: 70mW.

Dual Coil Latching: 140mW.

Nominal Voltage (VDC)	Operating Range @ 20°C		Coil Resistance @ 20°C
	Must Operate Voltage (VDC)	Max. Voltage (VDC)	
Non-Latching, 140mW Nominal Power			
3	2.25	6.5	64 ± 6
4.5	3.375	9.8	145 ± 15
5	3.75	10.9	178 ± 18
6	4.50	13.0	257 ± 26
9	6.75	19.6	578 ± 58
12	9.0	26.1	1,029 ± 103
24	18.0	52.3	4,114 ± 411
48	36.0	101.0	15,362 ± 1,536
Single Coil Latching, 70mW Nominal Power			
3	2.25	9.2	128 ± 13
4.5	3.375	13.8	289 ± 29
5	3.75	15.3	357 ± 36
6	4.5	18.5	514 ± 51
9	6.75	27.7	1,157 ± 116
12	9.0	37.0	2,057 ± 206
24	18.0	74.0	8,228 ± 823
Dual Coil Latching, 140mW Nominal Power			
3	2.25	6.5	64 ± 6
4.5	3.375	9.8	145 ± 15
5	3.75	10.9	178 ± 18
6	4.5	13.0	257 ± 26
9	6.75	19.6	578 ± 58
12	9.0	26.1	1,029 ± 103
24	18.0	52.3	4,114 ± 411

Figure 1 - Limiting Curve for Contact Loads



Initial Dielectric Strength

Between Open Contacts: 1,000V rms for 1 min.

Between Adjacent Contact Terminals: 1,800V rms for 1 min.

Between Contact and Coil: 1,800V rms for 1 min.

Surge Voltage:

Between Contact and Coil (10 x 160 μ s): 1,500V (FCC Part 68).

Between Contact and Coil (2 x 10 μ s): 2,500V (Bellcore).

Initial Insulation Resistance

Between Mutually Insulated Conductors: 10⁹ ohms @ 500VDC.

Operate Data @ 20°C

Must Operate Voltage: 75% of nominal or less.

Must Release Voltage: 10% of nominal or more.

Operate Time (Excluding Bounce): 3ms, typical.

Release Time (Excluding Bounce): 3ms, typical.

Bounce Time: 2ms, typical.

Environmental Data

Temperature Range: -40 to +85°C

Vibration, Operational: 35g, 10-1,000 Hz.

Shock, Functional: 50g, 11ms 1/2 sinusoidal impulse.

Destructive: 150g, 11ms 1/2 sinusoidal impulse.

Mechanical Data

Termination: Through hole or surface mount printed circuit terminals.

Enclosure: Immersion cleanable sealed plastic case.

Weight: 2.5g approximately.

Ordering Information

Typical Part Number ►

V23079**A10****01****B201****1. Basic Series:**

V23079 = Miniature, printed circuit board relay.

2. Termination:

	Non-Latching	Dual Coil Latching	Single Coil Latching
Through-Hole	A10	B12	C11
SMD Extended Terminal ⁽²⁾	D10	E12	F11
SMD Short Terminal ⁽²⁾	G10	H12	J11

3. Coil Voltage:08 = 3VDC 11 = 4.5VDC 01 = 5VDC 02 = 6VDC 06 = 9VDC 03 = 12VDC 05 = 24VDC 07 = 48VDC⁽¹⁾**4. Contact Type:**

B201 = Bifurcated, 2 Form C (DPDT), Silver Paladium

B301⁽²⁾ = Bifurcated, 2 Form C (DPDT), Silver Nickel.

(1) Available only as non-latching.

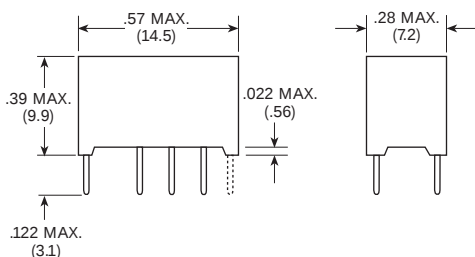
(2) Surface Mount relays must be ordered with contact type B301.

Stock Items - The following items are normally maintained in stock for immediate delivery.

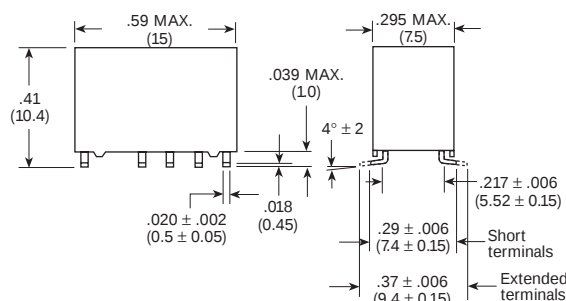
V23079A1011B201 V23079A1005B201 V23079B1205B201 V23079D1005B301
 V23079A1001B201 V23079B1201B201 V23079D1001B301
 V23079A1003B201 V23079B1203B201 V23079D1003B301

Outline Dimensions

Through-Hole

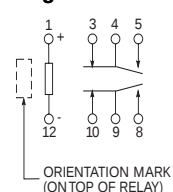


SMD

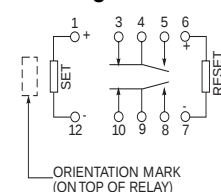


Wiring Diagrams (Bottom Views)

Single Coil Latching* and Single Coil Non-latching**

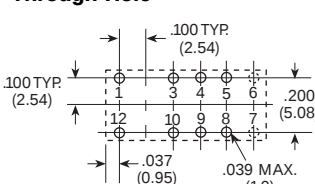


Dual Coil Latching***

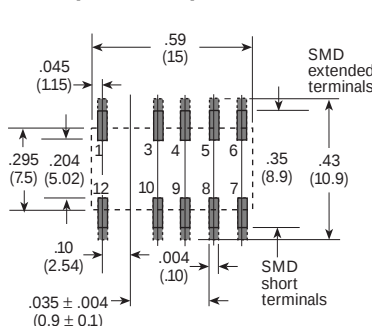
**Note:** All diagrams shown in de-energized or reset position.***Note:** For non-latching versions, coil polarity must be observed.****Note:** For single coil latching versions, polarity shown results in "set" condition. Reverse polarity results in "reset" condition.*****Note:** The contact position illustrated shows the reset condition. If a positive potential is applied to terminal 1 or 7, the relay adopts the set position.

PC Board Layout (Bottom View)

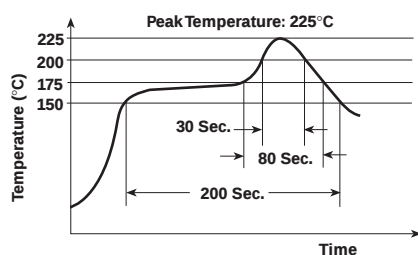
Through-Hole



SMD (Solder Pad)



SMD Soldering Profile



SMD Packaging

