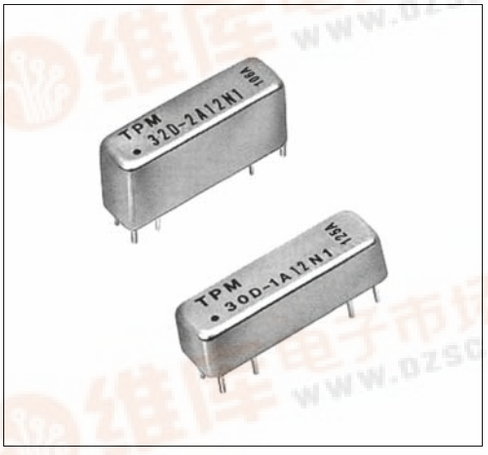
DB LECTRO
COMPOSANTS ELECTRONIQUES
ELECTRONIC COMPONENTS

Microminiature Reed Relays (2)

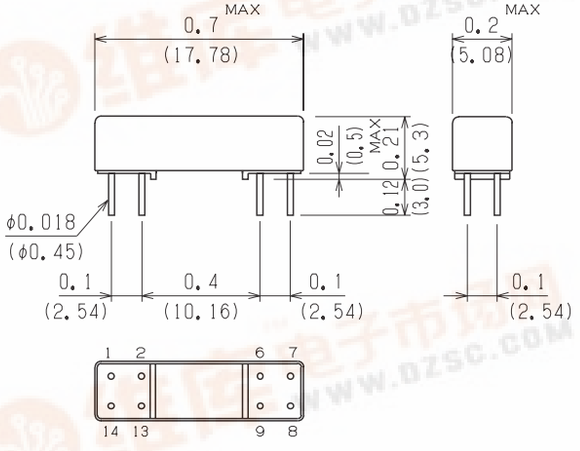


These are the ultimates in miniature reed relays for high-frequency properties and are one pitch step (2.54mm) smaller than the 20D series. The 30 series are available Electrostatic Shield and Coaxial Shield.

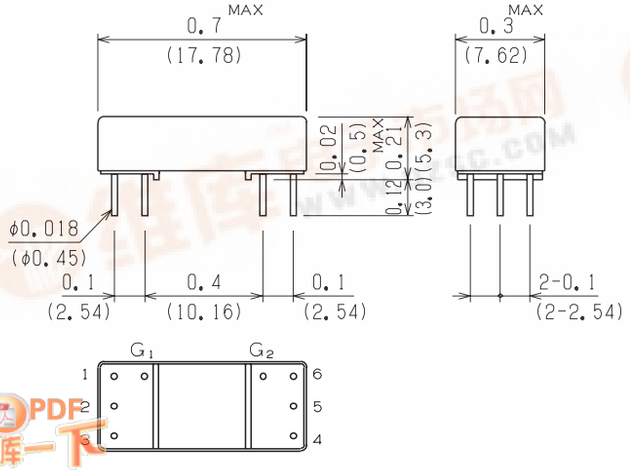
Mechanical Dimensions

All dimensions are measured
in inches (millimeters).

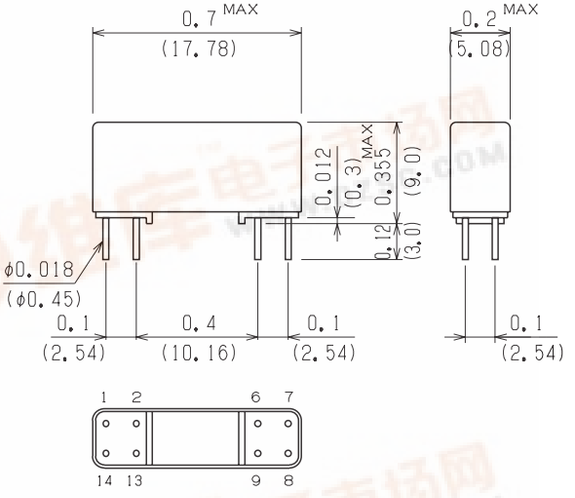
30D−1A□2(※)1



30D−2A□2N1



31D−2A□2(※)0
31D−1E□2(※)0
32D−2A□2N1
32D−2A□1N1



Model 32D-2A□2N1

Contact	Coil
pin7 and pin1 ON	pin8 and pin13 impress current
pin7 and pin14 ON	pin9 and pin13 impress current

Model 32D-2A□1N1

Contact	Coil
pin1 and pin7 ON	pin2 and pin13 impress current
pin8 and pin14 ON	pin9 and pin13 impress current

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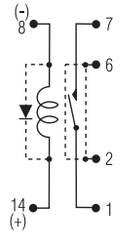
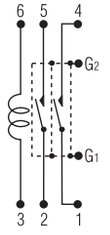
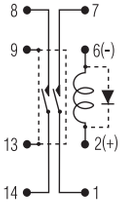
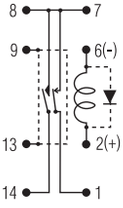
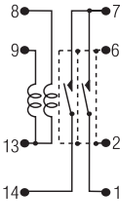
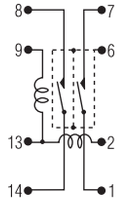
3□D Series

Parameters	Test Condition	Units	50Ω Coaxial Model Number 30D-1A□2□1	50Ω Coaxial Model Number 30D-2A□2N1	50Ω Coaxial Model Number 31D-2A□2□0	50Ω Coaxial Model Number 31D-1E□2□0	Model Number 32D-2A□2N1	Model Number 32D-2A□1N1
			1 Form A	2 Form A	2 Form A	1 Form C	2 Form A	2 Form A
Coil Specs								
Nominal coil voltage		VDC	5 12 24	5 12 24	5 12 24	5 12 24	5	12
Coil resistance	±10% at20°C	Ω	160 600 1200	150 600 1800	150 600 1800	70 400 1500	160	600
Operating voltage	15°C～35°C	VDC Max	3.6 9.6 19.2	3.6 9.6 19.2	3.6 9.6 19.2	3.6 9.6 19.2	3.6	9.6
Operating voltage range	15°C～35°C	VDC	— — —	— — —	— — —	3.6/5.5 9.6/13.2 19.2/26.4	—	—
Release voltage	15°C～35°C	VDC Min	0.7 1.2 2.4	0.7 1.2 2.4	0.7 1.2 2.4	0.7 1.2 2.0	0.7	1.2
Contact Ratings								
Switching voltage	Max. DC/Peak AC resistance	Volts	100					
Switching current	Max. DC/Peak AC resistance	Amps	0.5					
Carry current	Max. DC/Peak AC resistance	Amps	1.0					
Contact rating	Max. DC/Peak AC resistance	Watts	10					
Life expectancy	1V. 10mA	$\times 10^6$Cyc	1000					
Contact resistance	Maximum initial	mΩ	150					
Contact resistance stability	Maximum initial	mΩ	5.0					
Relay Specifications								
Insulation resistance	Between all isolated pins at 100V 20°C 40%RH	Ω	10^{11}	10^{11}	10^{10}	10^{10}	10^{11}	10^{11}
Capacitance		pF-Max						
Across open contacts	Shield guarding		0.2	0.2	0.2	0.6	0.2	0.2
Contact to Shield	Contacts open, :Make-shield		1.4	1.2	1.2	1.7	1.5	1.5
	:Break-shield					3.6	2.7 (7-6)	
	Shield floating							
Open contact to coil	Shield guarding : Make-Coil		0.5	0.5	0.5	1.0	0.6	0.6
	:Break-Coil					2.2	1.1 (7-13)	
Dielectric strength	Between contacts	VDC	200	200	200	200	200	200
	Contacts to shield		200	200	200	200	500	500
Operating time (Including. bounce)	At nominal coil voltage, 100Hz Square wave	msec	0.35	0.35	0.35	1.0	0.35	0.35
Release time	Diode suppression	msec	0.25	0.25	0.25	1.0	0.25	0.25
Environmental Ratings		Schematics Top view						
Mesurement reference conditons								
Temp. : 15°C～35°C Humidity : 25%～85%RH								
Atmospheric pressure : 860～1060hPa								
Storage temp. : −40°C～+80°C								
Operating temp : −20°C～+60°C								
The operating and Release Voltage and the coil resistance are specified at 20°C. These values change approximately 0.4%/°C change in the ambient temperature.								
Vibration : 20Gs to 2000Hz								
Shock : 50Gs								

Notes :

(1) Values are specified with a resistive load being applied. A contact protective circuit is required for C and L Type loads.

(2) The values of the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.

(3) Model 30D-1A□2D1 : Diode is connected to pin 14 (+) and pin 8 (−).
Model 31D : Diode is connected to pin 2 (+) and pin 6 (−).
Correct coil pority must be followed.

ORDERING CODE

3 0 D − □ A □ 2 □ 1
(1) (3) (5)

3 1 D − □ □ □ 2 □ 0
(1) (2) (3) (5)

3 2 D − 2 A □ □ N 1
(3) (4)

Example 30D-1A12N1 Represents Series 30D with 1Form A, Dry Reed (Rhodium), Coil Voltage 5V and Coaxial Shield.

(1) Number of capsule
1-1capsule
2-2capsules

(2) Contact Form
A-Form A
E-Multi-pole
(Break-before-Make action Form C)

(3) Coil Voltage
1-5VDC
2-12VDC
3-24VDC (32D N/A)

(4) Shield
1-Electrostatic Shield
2-Coaxial Shield

(5) Diode Options
N-No Diode
D-With Diode