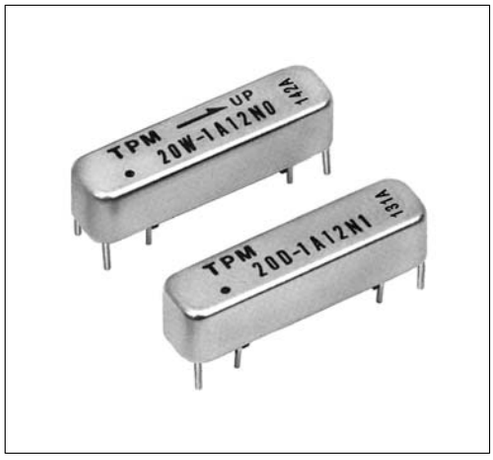
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ELECTRONIC COMPONENTS

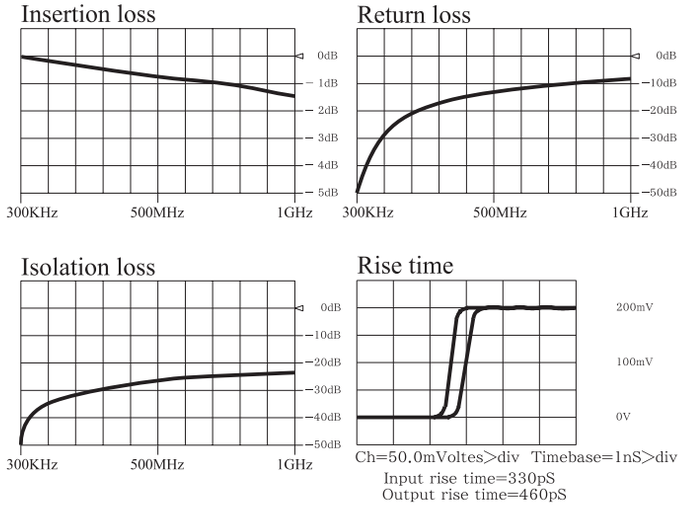
Miniature Reed Relays (1)



This series is the standardized product in the Sanyu PCB relays product line. This product line comes in 1 Form A 2 Form A , 1 Form C and mercury contact arrangements. These relays have characteristics to high RF performance, low capacitance, high insulation resistance and small package easy to design inch pitches.

- High RF performance
- Impedance matching
- High insulation resistance up to 10^{11}
- Electric Magnetic Shield

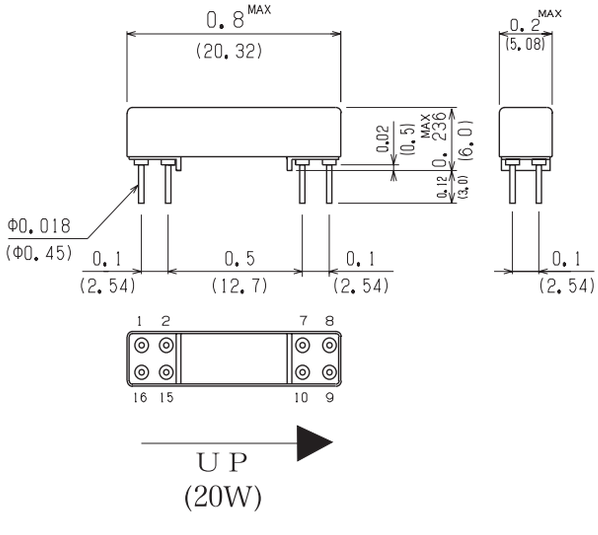
20D-1A12N1



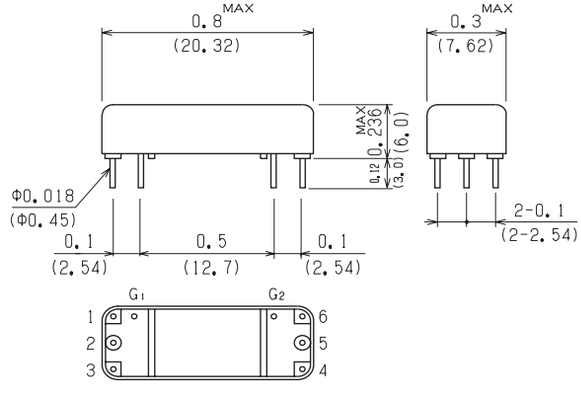
Mechanical Dimensions

All dimensions are measured
in inches (millimeters).

20D-1A□2 (N, D) 1
20D-1C□2 (N, D) 0
20W-1A□2 (N, D) 0
21Z-1A□2 (N, D) 0

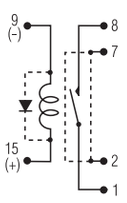
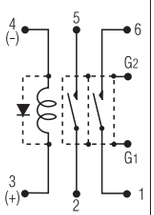
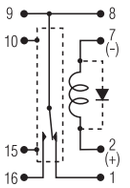
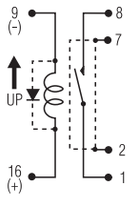
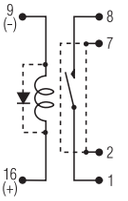


20D-2A□2 (N, D) 1



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20□ Series

Parameters	Test Condition	Units	Model Number 20D-1A□2□1 — 1 Form A			Model Number 20D-2A□2□1 — 2 Form A			Model Number 20D-1C□2□0 — 1 Form C			Model Number 20W-1A□2□0 — 1 Form A			Model Number 20Z-1A□2□0 — 1 Form A	
Coil Specifications																
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	1800	150	600	2000	120	600	1800	70	330	1200	50	300
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
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	2.4	0.7	1.2
Contact Ratings																
Switching voltage	Peak AC resistance	Volts	100			100			30			500			500	
Switching current	Max. DC/Peak AC resistance	Amps	0.5			0.5			0.2			1.0			0.5	
Carry current	Max. DC/Peak AC resistance	Amps	1.0			1.0			0.5			2.0			2.0	
Contact rating	Max. DC/Peak AC resistance	Watts	10			10			3			50			50	
Life expectancy	1V. 10mA	$\times 10^6$cycles	1000			1000			50			1000			300	
Contact resistance	Maximum initial	mΩ	150			150			150			100			100	
Contact resistance stability	Maximum initial	mΩ	5.0			5.0			5.0			5.0			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^{10}	
Capacitance		pF-Max														
Across open contacts	Shield guarding		0.2			0.1			0.7			0.1			0.1	
Contact to Shield	Contacts open, :Make-shield		1.2			1.3			1.7			2.0			2.0	
	:Break-shield								3.2							
	Shield floating															
Open contact to coil	Shield guarding : Make-Coil		0.6			0.5			0.6			0.6			0.6	
	:Break-Coil								1.3							
Dielectric strength	Between contacts	VDC	200			200			200			1000			1000	
	Contacts to shield		500			500			500			1000			1000	
Operating time	At nominal coil voltage,	msec	0.35			0.5			1.5			2.5			1.2	
(Including. bounce)	100Hz Square wave											(No Boumce)			(No Boumce)	
Release time	Diode suppression	msec	0.25			0.5			2.0			2.5			1.2	
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
:−30°C～+80°C (20W, 20Z)
Operating temp : −20°C～+60°C
:−10°C～+60°C (20W, 20Z)
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 for the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.

(3) Model 20D-1A□2D1 : Diode is connected to pin 15 (+) and pin 9 (−).
Model 20D-2A□2D1 : Diode is connected to pin 3 (+) and pin 4 (−).
Model 20D-1C□2D0 : Diode is connected to pin 2 (+) and pin 7 (−).
Model 20W-1A□2D0, 20Z-1A□2D0:Diode is connected to pin 16 (+) and pin 9 (−).
Correct coil polarity must be followed.

(4) The 20W Series model have Hg wet contacts, are position sensitive, and must be mounted with in 30°of the vertical plane. See the schematic.

ORDERING CODE

2 0 □ − □ □ □ 2 □ □
(1) (2) (3) (4) (5) (6)

Example 20D-1A12N1 Represents Series 20D with 1Form A, Dry Reed (Rhodium), Coil Voltage 5V and Coaxial Shield.

(1)Reed Switch Type
D-Dry Reed
W-Hg Wet
Z-Hg Wet All Position

(3) Contact Form
A-Form A
C-Form C

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

(2) Number of capsule
1-1 capusle
2-2 capusles

(4) Coil Voltage
1-5VDC
2-12VDC
3-24VDC (20Z N/A)

(6) Insulation Resistance
0-10^{10}
1-10^{11}

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