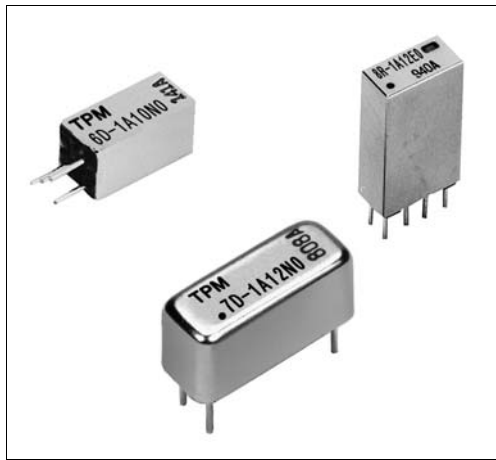


# Ultraminiature Reed Relays



6D and 6R are ultra-compact and lightweight reed relays which has narrow mounting space and easy to use. Besides, they are optimal for compacting equipments.

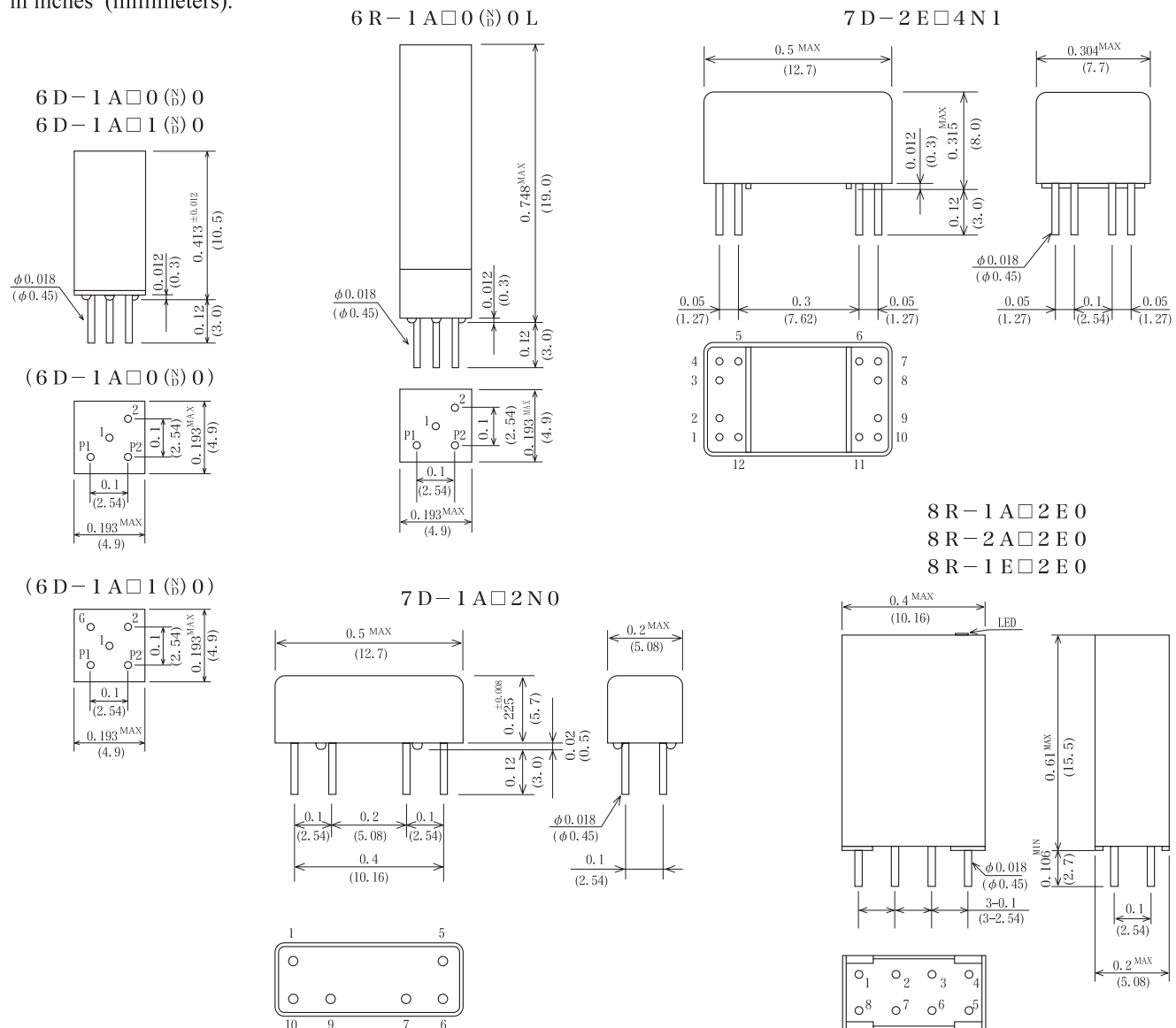
7D is the world's smallest miniature reed relays, which has high frequency characteristics with coaxial shield.

8R is excellent to debug/high density mounting with LED, which has narrow mounting space.

- Smallest square feet 4.9mm×4.9mm
- Available contact rating 5W and 10W
- Electrostatic Shield and Diode options
- Electric Magnetic Shield

## Mechanical Dimensions

All dimensions are measured in inches (millimeters).





6□, 7D, 8R Series			Model Number	Model Number	Model Number	Model Number	Model Number	Model Number	Model Number					
			6D-1A□□□0	6R-1A□□0□0L	7D-1A□□2N0	7D-2E□□4N1	8R-1A□□2E0	8R-2A□□2E0	8R-1E□□2E0					
Parameters	Test Condition	Units	1 Form A	1 Form A	1 Form A	2 Form C	1 Form A	2 Form A	1 Form C					
<b>Coil Specs</b>														
Nominal coil voltage		VDC	5 12	5 12	5 12	5 12	5 12	5 12	5 12					
Coil resistance	±10% at 20°C	Ω	150 600	180 720	160 600	70 450	180 680	180 680	180 680					
Operating voltage	15°C~35°C	VDC Max	3.6 8.8	3.6 8.8	3.2 8.5	3.6 9.6	3.6 9.6	3.6 9.6	3.6 9.6					
Operating voltage range	15°C~35°C	VDC	— —	— —	— —	3.6/5.5 9.6/13.2	—	—	3.6/5.5 9.6/13.2					
Release voltage	15°C~35°C	VDC Min	0.7 1.2	0.7 1.2	0.7 1.2	0.7 1.2	0.7 1.2	0.7 1.2	0.7 1.2					
<b>Contact Ratings</b>														
Switching voltage	Max. DC/Peak AC resistance	Volts	50	200	50	200	50	200	50					
Switching current	Max. DC/Peak AC resistance	Amps	0.2	0.5	0.2	0.5	0.2	0.5	0.2					
Carry current	Max. DC/Peak AC resistance	Amps	0.5	1.0	0.5	1.0	0.5	1.0	0.5					
Contact rating	Max. DC/Peak AC resistance	Watts	5	10	5	10	5	10	5					
Life expectancy	1V. 10mA	×10 <sup>6</sup> Cyc	300	1500	300	1500	300	1500	300					
Contact resistance	Maximum initial	mΩ	150	150	150	150	150	150	150					
Contact resistance stability	Maximum initial	mΩ	5.0	5.0	5.0	5.0	5.0	5.0	5.0					
<b>Relay Specifications</b>														
Insulation resistance	Between all isolated pins at 100V 20°C 40%RH	Ω	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>11</sup>	10 <sup>10</sup>	10 <sup>10</sup>	10 <sup>10</sup>					
Capacitance	Across open contacts	pF-Max	0.7	0.7	0.25	1.3	0.5	0.5	0.5					
	Contact to Shield													
Open contact to coil	Shield floating Shield guarding : Make-Coil : Break-Coil						1.6	1.6	1.6					
Dielectric strength	Between contacts	VDC	150	200	150	150	200	200	200					
	Contacts to shield, coil													
Operating time (Including. bounce)	At nominal coil voltage, 100Hz Square wave	msec	0.3	0.5	0.3	0.5	0.5	0.5	1.0					
Release time	Diode suppression	msec	0.3	0.5	0.1	0.5	0.5	0.5	1.0					
Environmental Ratings	Schematics		6D-1A□□(N)0 6R-1A□□(N)0L 											
Mesurement reference conditons			Bottom view		Top view		Top view		Top view		Top view		Top view	
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 :**

- Values are specified with a resistive load being applied. A contact protective circuit is required for C and L Type loads.
- The values of the operating time and release time however, are when the rated coil voltage is applied and a clamp diode is attached.
- Model 6D, 6R : Diode is connected to pin P1 (+) and pin P2 (-).  
7D-2E series are polarity sensitive. Coil pin #1 must be positive (+). See the schematic.  
Model 8R : Diode is connected to pin 2 (+) and pin 3 (-).  
Correct coil polarity must be followed.

**ORDERING CODE**

6 □ - 1 A □ □ □ 0 □  
(1) (4) (5) (6) (7)

7 D - 1 A □ 2 N 0  
(4)

7 D - 2 E □ 4 N 1  
(4)

8 R - □ □ □ 2 E 0  
(2) (3) (4)

Example 6D-1A10D0 Represents Series 6D with 1 Form A, Dry Reed (Rhodium), Coil Voltage 5V and with Diode.

- |  |   |  |
|--|---|--|
| (1) Reed Switch Type<br>D-Dry Reed(Rhodium)<br>R-Dry Reed(Ruthenium) | (3) Contact Form<br>A-Form A<br>E-Multi-pole.<br>(Break-before-Make action on Form C) | (5) Shield<br>0-No Shield<br>1-Electrostatic Shield (6R N/A) |
| (2) Number of capsule<br>1-1capsule<br>2-2capsules                   | (4) Coil Voltage<br>1-5VDC<br>2-12VDC   | (6) Diode Option<br>N-No Diode<br>D-With Diode               |
|  |   | (7) L-6R series only   |