



## | FRD13000

### FULLY SCREENED 6A, 9KV REED RELAY



A complete RF screen around the coil assembly for a low loss transmission path, results in better carry current at elevated temperatures for this open frame series. An anti-corona sleeve is fitted around the reed switch for improved RF voltage isolation.

This type is widely used in HF Antenna Tuning Unit (A TU) applications.

Available as Form A (SPNO) or Form B (SPNC) contact configurations

#### Features

- New Fully Screened Coil for Low RF Loss
- Up to 9kVDC and 6A at 30MHz
- Ideal for HF Antenna Tuning Applications
- Customizing Facility



#### SPECIFICATIONS

Contact	Units	Condition	FRD13506	FRD13503	FRD13504
Action (Form A, B or Latching)			A	A	B
Switching Voltage	V	DC max	20	20	20
Switching Current	A	DC max	1	1	1
Carry Current	A	RMS at 30MHz max	6	6	6
Isolation	kV	DC max	9	9	9
Isolation	kV	RF peak (F=2MHz)	8	8	8
Capacitance	pF	coil/screen gnd	0.5	0.5	0.5
Lifetime	operations	dry switching	10 <sup>9</sup>	10 <sup>9</sup>	10 <sup>9</sup>
Contact Resistance	mOhms	maximum (typical)	50 (15)	50 (15)	50 (15)
Insulation Resistance	Ohms	minimum (typical)	10 <sup>10</sup> (10 <sup>13</sup> )	10 <sup>10</sup> (10 <sup>13</sup> )	10 <sup>10</sup> (10 <sup>13</sup> )
ESR at 4.5A, 30MHz	mOhms	typical	30	30	30
Coil at 20°C					
Nominal Working Voltage	VDC		12	24	24
Must Operate	VDC	max	9	15	16
Must Release	VDC	min	2	3	3
Nominal Resistance	Ohms	+/-10%	98	900	900
RF Screening			Full	Full	Full
RF Screening Connection		pin position	2 & 5	2 & 5	2 & 5
Coil Connections		pin position	1 & 6	1 & 6	1(+) & 6

Relay	Units	Condition	FRD13506	FRD13503	FRD13504
<b>Operate Time (Incl. Bounce)</b>	ms		3	3	1
<b>Release Time</b>	ms		1	1	3
<b>Isolation Contact to all other Terminals</b>	kV	DC max	9	9	9
<b>Isolation Coil to Screen</b>	kV	DC max	0.5	0.5	0.5
<b>Capacitance Contact to all other Terminals</b>	pF	contacts open	1.5	1.5	1.5
<b>Environmental Conditions</b>					
<b>Storage Temperature Range</b>	°C			-55 to +125	
<b>Operating Temperature Range</b>	°C	Limited current*		-40 to +85	
<b>Shock</b>	g	11ms 1/2 sine pk		100	
<b>Bump</b>	g	6ms 1/2 sine pk		40	
<b>Vibration</b>	g	10- 500Hz		10	
<b>Weight</b>	gm		20	20	23

\*see graphical data overleaf.

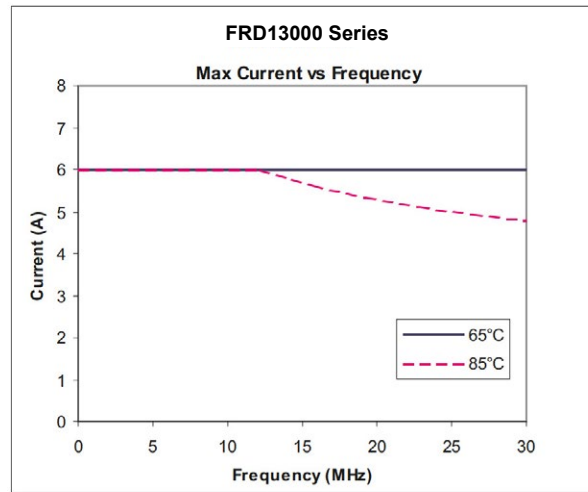
Please refer to this document for circuit design notes:

<https://www.cynergy3.com/blog/reed-relay-application-notes>



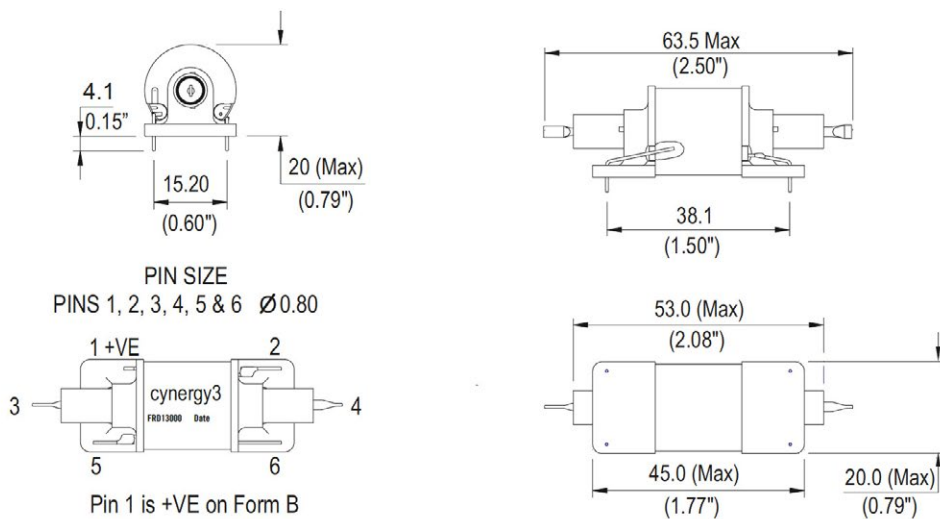
## DIMENSIONS

All dimensions are in millimeters.



Please refer to this document for circuit design notes:

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