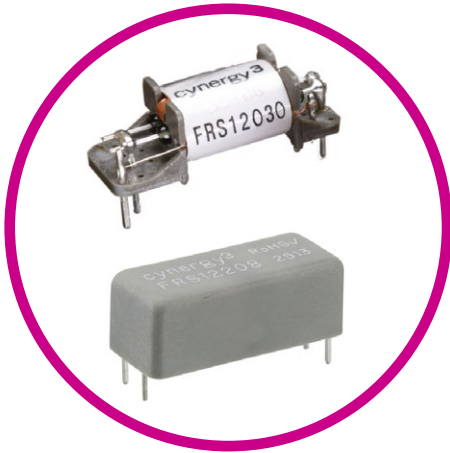




## | FRS12000

### MINIATURE SCREENED 5A, 2KV REED RELAY



High current capability is achieved through the use of two reed switches in parallel. Open frame and covered construction are available, depending on voltage isolation requirements.

The series uses materials with exceptional RF and temperature performance characteristics.

The coils are partially screened, offering extended RF performance over the HF band.

#### Features

- Screened Coil for Low RF Loss
- 5A Carry current (up to 30MHz)
- Ideal for HF Antenna Tuning Applications
- Full Customizing Facility



## SPECIFICATIONS

Contact	Unit	Condition	FRS12030	FRS12208
Contact Material			Rhodium	Rhodium
Switch Action			SPNO	SPNO
Carry Current Max	A	RMS@30MHz	5*	5*
Switching Current	A	DC max	0.5	0.5
Switching Power	W	max	10	10
Switching Voltage	V	max	20	20
Isolation	kV	DC max	0.5	2
Capacitance	pF	coil/screen gnd	0.3	0.3
Contact Connections		pin position	5 & 8	5 & 12
Lifetime	operations	dry switching	10 <sup>9</sup>	10 <sup>9</sup>
Contact Resistance	mΩ	max (typical)	80 (30)	80 (30)
Insulation Resistance	mΩ	max (typical)	10 <sup>10</sup> (10 <sup>13</sup> )	10 <sup>10</sup> (10 <sup>13</sup> )
ESR at 4.5A, 30MHz	mΩ	typical	90	90

Coil at 20°C	Unit	Condition	FRS12030	FRS12208
Operating Voltage	V	Nominal	24	24
Operating Voltage	V	Range	19-30	19-30
Must Operate Voltage	V		15	15
Must Release Voltage	V		2	4
Resistance	Ω	Nominal	1150	1000
RF Screening			Partial	Partial
RF Screening Connection		pin position	17	15
Coil Connections		pin position	3 & 11	4 & 13
<b>Relay</b>				
Construction			Open Frame	Covered
Operate Time	ms	max incl bounce	2	2
Release Time	ms	max incl bounce	1	0.5
Isolation Contact to all other Terminals	kV	DC max	0.5	2
Isolation Coil to Screen	kV	DC max	0.5	0.5
Capacitance Contact to all other Terminals	pF	contact open	2.5	3.0
<b>Environmental Conditions</b>				
Storage Temperature	°C	range	-55 to +125	
Operating Temperature	°C	Limited current*	-40 to +85	
Shock	g	11ms ½ sine peak	100	
Bump	g	6ms ½ sine peak	40	
Vibration	g	60-500Hz	20	
Weight	gm	typical	7	8

\*see graphical data overleaf

Please refer to this document for circuit design notes:

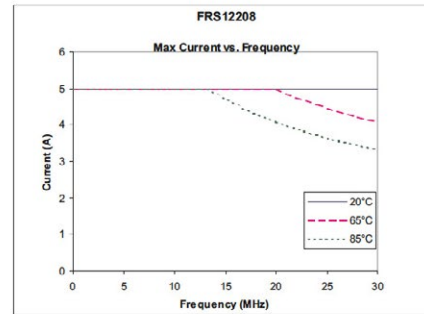
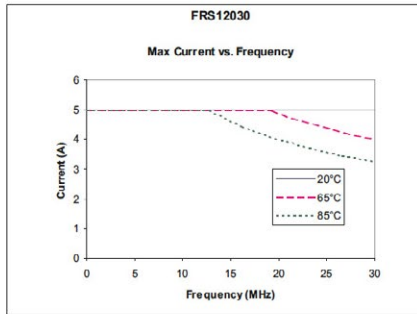
<https://www.cynergy3.com/blog/reed-relay-application-notes>



## DIMENSIONS

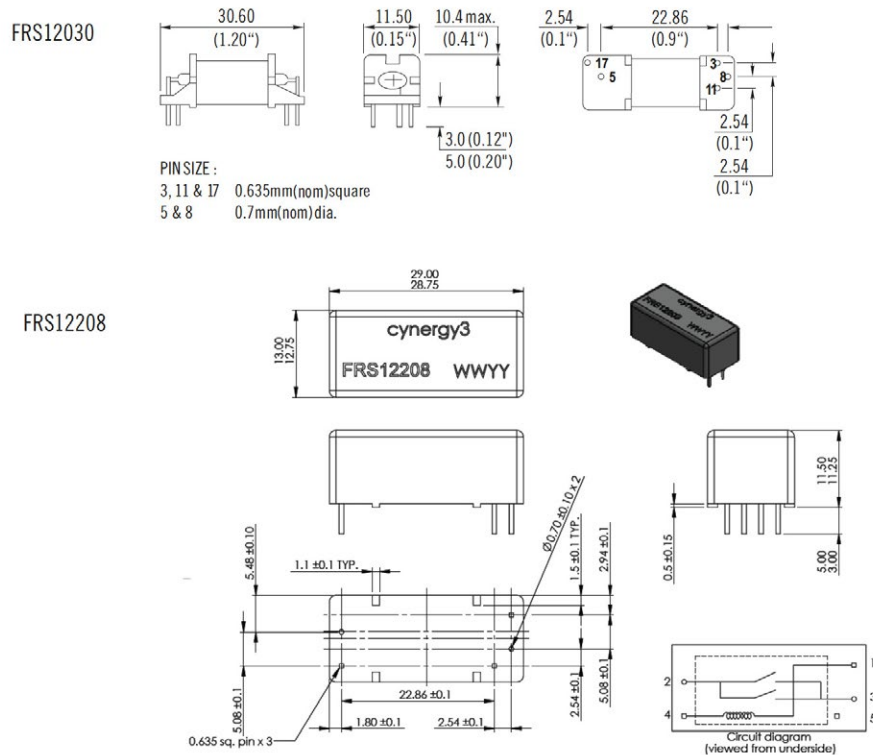
All dimensions are in millimeters.

Many other variants in the FRS12000 family are available with different coil and contact configurations, as well as a number of pin footprints for drop-in replacements.



Please refer to this document for circuit design notes:

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



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