High Frequency and High Power Reed Relays

DESCRIPTION

High voltage RF Reed Relays use a patented coil encapsulation, external electrostatic shields, and magnetic shields. For this series we use a special copper-plated Form A switch with a breakdown voltage up to 10 kVDC. The contacts are suitable for carrying current up to 3 Amps (5 Amps available) at 30MHz.

APPLICATIONS

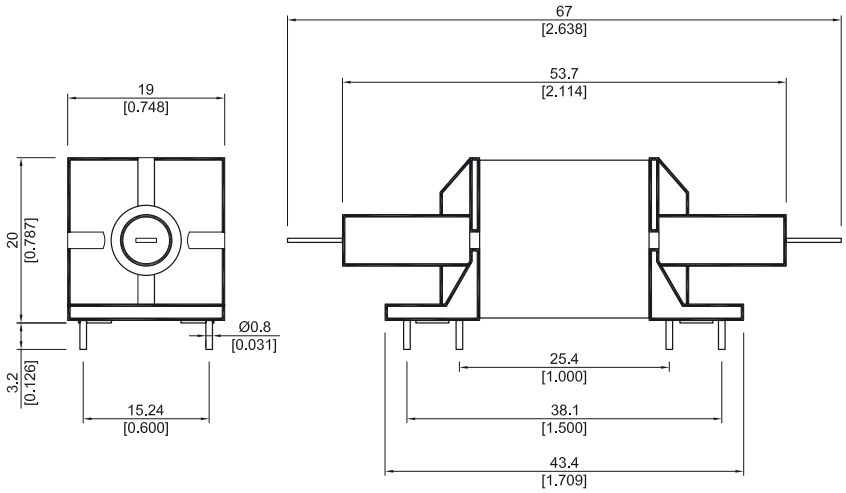
- Radio frequency technology
- Antenna tuning units
- Transmit / receive requirements

FEATURES

- Normally open contacts (Normally closed contacts are available)
- 5 Amps available

DIMENSIONS

All dimensions in mm [inch]



ORDER INFORMATION

Series	Nominal Voltage	Contact Form	Switch Model	Pin Out
HF	XX -	XX	54 -	**X**
Options	05, 12, 24	A, B		5, 6, 7, 8, 9

Part Number Example

HF05 - 1A54 - 6

05 is the nominal voltage
1A is the contact form
54 is the switch model
6 is the breakdown voltage (6 kVDC)

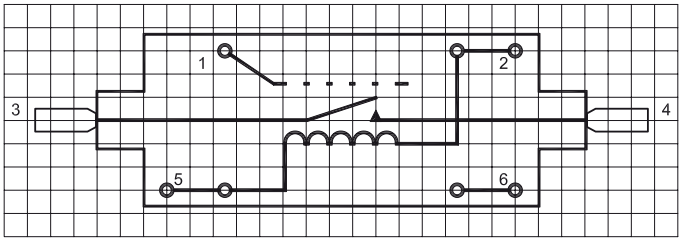
COIL DATA

Contact Form	Switch Model	Coil Voltage		Coil Resistance			Pull-in Voltage	Drop-out Volage	Nominal Coil Power
All Data at 20 °C		VDC		Ω			VDC	VDC	mW
		Nom.	Max.	Min.	Typ.	Max.	Max.	Min.	Typ.
1A	54	5	7.5	36	40	44	3.5	0.75	625
		12	16	225	250	275	8.4	1.8	575
		24	30	900	1000	1100	16.8	3.6	575
1B **		5	7.5	27	30	33	3.5	0.75	835
		12	16	153	170	187	8.4	1.8	850
		24	30	612	680	748	16.8	3.6	850

* The pull-in / drop-out voltage and coil resistance will change at rate of 0.4% per °C.
** Re-closure of Form B may occur if the max. coil voltage is exceeded. Coil polarity on Form B must be observed. Pin five is positive.

PIN OUT

View from top of component
2.54mm [0.10"] pitch grid



Pin # 5 must be positive for Form B version

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RELAY DATA

All Data at 20° C	Switch Model → Contact Form →	Switch 54 Form A / B			
Contact Ratings	**Conditions**	**Min.**	**Typ.**	**Max.**	**Unit**
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			25	W
Switching Voltage	1 MHz to 30 MHz			500	V
Switching Current	1 MHz to 30 MHz			1.5	A
Carry Current	1 MHz to 30 MHz			5.0	A
Static Contact Resistance	w/ 0.5 V & 10mA			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200	
Insulation Resistance across Contacts	Across contacts Contact to coil Coil to shield	10^{10} 10^{10} 10^{10}			Ω
Breakdown Voltage across Contact	Across contacts Contact to coil Coil to shield	* 10 0.5			kVDC
Operation Time incl. Bounce	Measured w/ 100 % overdrive			3.0	ms
Release Time	Measured w/ no coil suppression			1.0	ms
Capacitance	Across contacts Contact to coil Coil to shield		2.5 10 20		pF
Life Expectancies					
Switching 5 V - 10 mA	DC only & <10 pF stray cap.		50		10^6 Cycles
For other load requirements please see our life test section on P. 120.					
Environmental Data					
Shock Resistance	1/2 sinus wave duration 11 ms			50	g
Vibration Resistance	From 10 - 2000 Hz			20	g
Ambient Temperature	10°C/ minute max. allowable	-40		85	°C
Stock Temperature	10°C/ minute max. allowable	-40v		105	°C
Soldering Temperature	5 sec.			260	°C