



# HALF SIZE CRYSTAL CAN RADIO FREQUENCY RELAY 75 WATT

Series  
RFK

## Product Description

This series of coaxial terminated hermetically sealed relays have been designed to provide reliable switching functions in the most demanding radio frequency applications. The use of 2K relays in the basic construction, has been coupled with a unique and improved termination network to insure faultless performance under severe environmental conditions.

The design concepts employed in each of this series have been time tested through thousands of hours testing and millions of field operations to provide the highest degree of reliability.

The following construction features ensure the highest reliability in extreme environments:

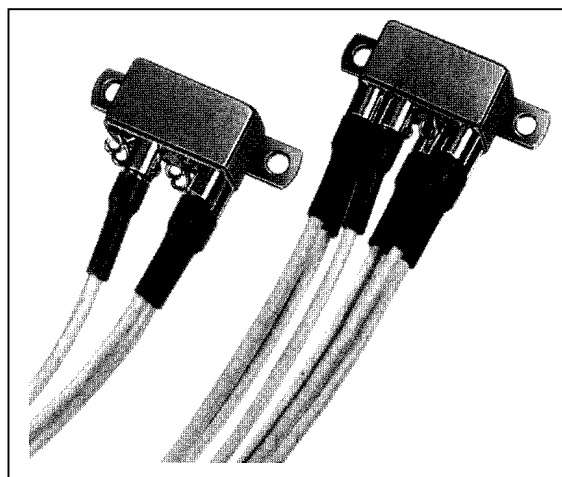
- All welded relay construction
- Cleaning and sealing techniques ensures maximum internal cleanliness
- Low level to 2 amperes auxiliary switching
- 1 or 2 form C, RF contacts, special metal alloy with gold plating
- Frame, armature designs and force / mass ratio provides exceptional shock and vibration immunity
- Coax interconnections
- 200 watt RF carry capability
- 75 watt RF switching capability
- Terminated with 6 inches length RG178 cable (or equivalent).

## Series Types

- **RFK** 1 form C, SPDT
- **2RFK** 2 form C, DPDT

## Environmental and Physical Specifications

Temperature (Ambient)	- 65°C to + 125°C
Shock	100 g, 6 ms.
Vibration (sinusoidal)	20 g, 10 to 2000 Hz
Acceleration	30 g
Sealing	All welded, Hermetic



## Electrical Characteristics (over the Temperature range. Unless otherwise noted)

<b>Coil Data</b>	See Typical Characteristics chart		
<b>Contact Rating</b>	<b>Type Load</b>	<b>Contact Load</b>	<b>Cycles min.</b>
	Resistive	2 A / 28 Vdc (aux) 75 Watts RF Switching, 200 Watts carry (cold switching)	100.000 100.000
<b>Contact Resistance</b>	0,05 • max. initial aux. Contact		
<b>Operate Time</b>	4,0 ms. max. at 25°C		
<b>Release Time</b>	2,0 ms. max. at 25°C		
<b>Dielectric Strength</b>	500 Vrms, 60 Hz, all mutually insulated points, at sea level		
<b>Insulation Resistance</b>	1.000 M• min. all points at 500 Vdc		
<b>Sensitivity</b>	250 mW at pick-up, at 25 °C		

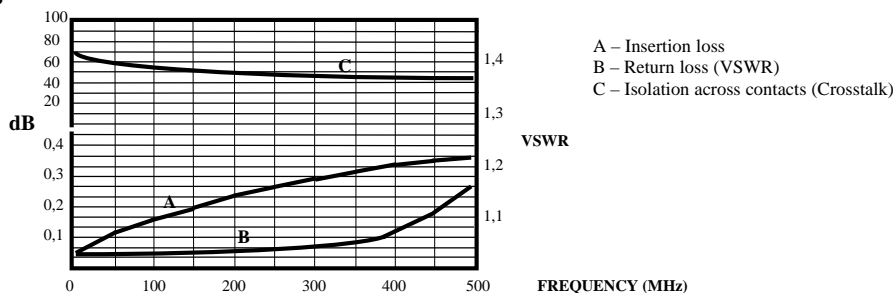
<b>Frequency range</b>	0 to 500 MHz (derated characteristics to 1000 MHz)	
	Typical at 100 MHz	Typical at 500 MHz
<b>Voltage Standing Wave Ratio (VSWR)</b>	< 1,1 : 1	< 1,2 : 1
<b>Insertion Loss</b>	0,16 dB	0,5 dB
<b>Crosstalk</b>	50 dB	40 dB
<b>Power Switching</b>	75 Watts	50 Watts
<b>Power Handling</b>	200 Watts max.	
<b>Characteristic Impedance</b>	50 or 75 • (other impedances available on special order)	

Figure 1 – Radio Frequency Curves

Note:

Typical characteristics are based on factory knowledge. Test to ensure compliance, are not performed.

Values shown are in a 50 • impedance coaxial system.





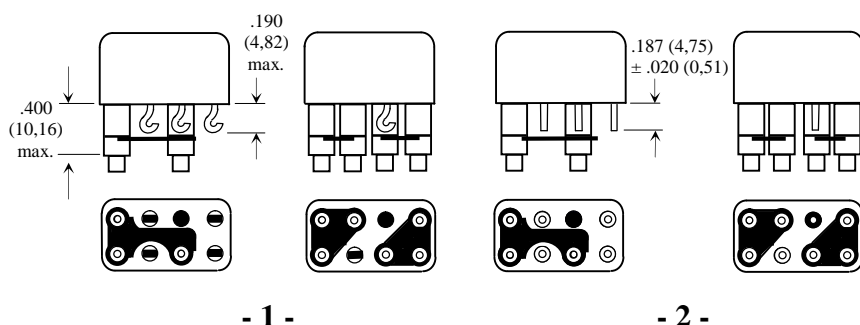
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### Typical Characteristics

Voltage Code	Coil Voltage		Coil Resistance ± 10% at 25°C	Pick-up Vdc Max. at 25°C	Drop-out Vdc Min. at 25°C
	Nominal	Max.			
106	6,0	7,2	40	3,3	0,3
112	12,0	14,4	150	6,5	0,7
126	26,5	32,0	675	13,5	1,5

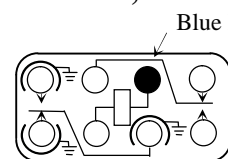
### Terminal Styles



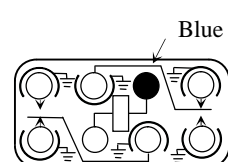
Note:  
 - Dimensions are shown in inches (millimetres)  
 - Terminal spacing is .200 (5,08), all headers. Aux. Terminal diameter is .030 (0,76) all headers

### Schematic Diagrams

#### 1 Pole RF, 1 Pole aux.

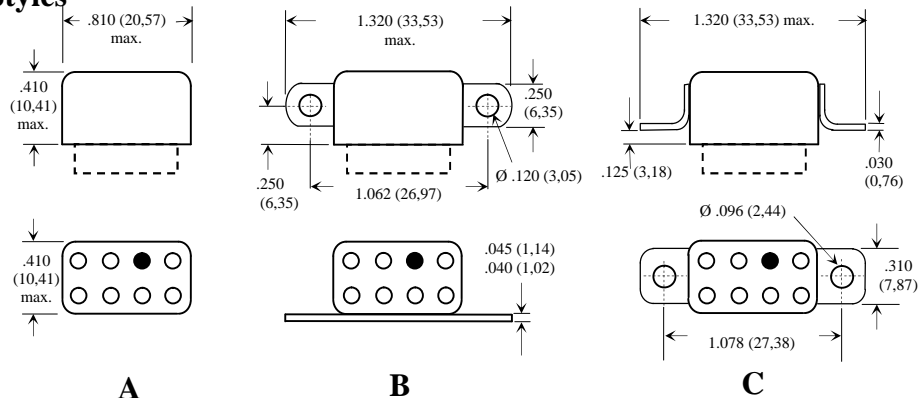


#### 2RF Poles



Note:  
 - Schematics are viewed from terminals

### Mounting Styles



Note:  
 - Dimensions are shown in inches (millimetres)

#### Note:

Contact factory for other cable types and lengths

#### How to Order (Part Numbering System)

**1 Pole RFK - 2 A - 126**

**2 Poles 2RFK - 2 A - 126**

