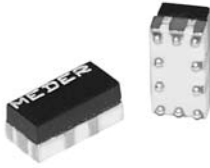


## 7 GHz High Frequency Reed Relay for 50 $\Omega$ Impedance



## FEATURES

- Ceramic / thermoset molded package
- Patent pending
- Smallest in the industry
- No lead frame surface mount design eliminates skewing of leads and coplanarity issues
- Minimum path length for RF
- Up to 7 GHz switching frequencies
- Ability to switch fast pulses with rise times of 40 picoseconds or less
- Available with BGA
- Internal magnetic shield standard
- Very low profile
- Gold plated leads for high conductivity RF path
- Low thermal offset typical 1  $\mu$ V
- TCE matching of all internal components
- Insulation resistance typical 1014 ohms
- 3 Volt option available

## DESCRIPTION

The MEDER CRF Reed Relay Series is a low-profile device made with a ceramic case that exactly matches the thermal coefficient of expansion of the Reed Switch glass and the reed lead to eliminate any potential packaging stress. Capable of switching up to 7 GHz with <40 ps rise times for digital operations, this leadless 50 Ohm reed relay is the smallest in the industry and switches into the billions of operations.

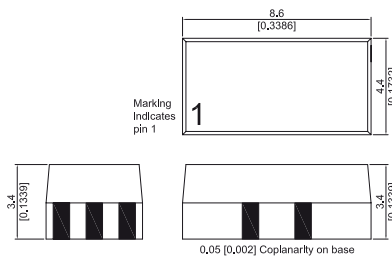
This Relay has 1  $\mu\text{V}$  typical thermal offset voltage. Measuring only 8.6 mm x 4.4 mm x 3.4 mm, the leadless design eliminates skewing of leads and coplanarity issues.

## APPLICATIONS

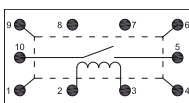
- Test and measurement
- Medical Equipment
- Telecommunications
- High frequency applications

## DIMENSIONS (Non-BGA)

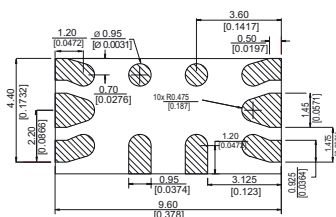
\*All dimensions in mm (inch)



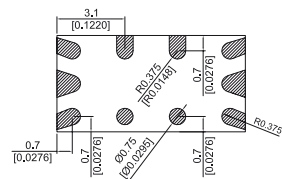
### PIN OUT



## PCB LAYOUT



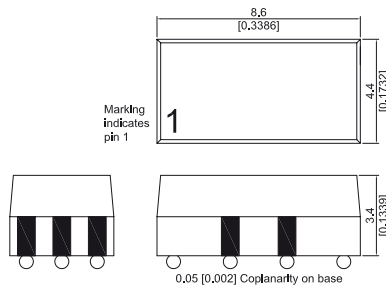
## PAD LAYOUT



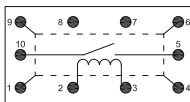
# 7 GHz High Frequency Reed Relay for 50 Ω Impedance

## DIMENSIONS (with BGA)

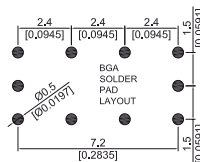
\*All dimensions in mm (inch)



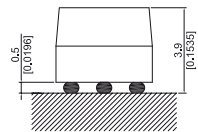
## PIN OUT (Top View)



## PAD / PCB LAYOUT (Bottom View)



## POST REFLOW



Höhe: max.

## ORDER INFORMATION

### Part Number Example

CRF05 - 1AS

05 is the nominal voltage

1A is the contact form

S is the solder ball option

| Series                                                 | Nominal Voltage | Contact Form | Option |
|--------------------------------------------------------|-----------------|--------------|--------|
| CRF                                                    | 05-             | 1A           | X      |
| Options                                                |                 |              | S*     |
| * Solder Ball Option (non-BGA part number is CRF05-1A) |                 |              |        |

## COIL DATA

| Contact Form                                                                              | Switch Model | Coil Voltage |      | Coil Resistance |      |      | Pull-In Voltage | Drop-Out Voltage | Nominal coil Power |
|-------------------------------------------------------------------------------------------|--------------|--------------|------|-----------------|------|------|-----------------|------------------|--------------------|
| All Data at 20 °C *                                                                       |              | VDC          |      | Ω               |      |      | VDC             | VDC              | mW                 |
|                                                                                           |              | Nom.         | Max. | Min.            | Typ. | Max. | Max.            | Min.             | Typ.               |
| 1A                                                                                        | 80           | 5            | 7.5  | 135             | 150  | 165  | 3.75            | 0.75             | 167                |
| 1A                                                                                        | 80           | 3            | 5    | 63              | 70   | 77   | 2.25            | 0.45             | 129                |
| * the pull-in / drop-out voltages and coil resistance will change at the rate 0,4% per °C |              |              |      |                 |      |      |                 |                  |                    |