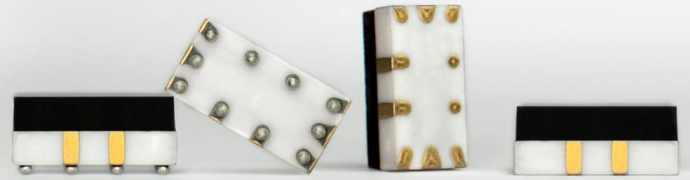


CRF Series Reed Relays



- Features: Ultra miniature SMD relay for High Frequency up to 7GHz, High Insulation Resistance
- Ceramic/Thermoset Molded Package, Supplied in Tape & Reel, UL listed, BGA option
- For S-Parameters and RF Data, please contact your nearest sales office
- Applications: High Frequency Signals, Test and Measurement Systems, Telecommunications, Multiplexers

Part Description: **CRF00-1AX (250)**



Nominal Voltage	Contact Quantity	Contact Form	Options	Packaging Tape & Reel
03, 05	1	A	empty = Non-BGA S = Soldering Balls BGA	empty (standard) = 1000 pcs 250 (optional) = 250 pcs

See page 3 for Glossary

Contact Data (at 20°C)	Switch Model	Unit
	80 (A-Dry)	
Contact Material	Rhodium	
Rated Power (max.) Any DC combination of V&A not to exceed max rated power	10	W
Switching Voltage (max.) DC or peak AC	170	V
Switching Current (max.) DC or peak AC	0.5	A
Carry Current (max.) DC or peak AC	1.0	A
Contact Resistance (max.) @ 0.5V & 10mA, Measured with 40% Pull-In Overdrive	200	mOhm
Breakdown Voltage (min.) According to IEC 60255-27	210	VDC
Operating Time (max.) Including Bounce, Measured with 40% Pull-In Overdrive	0.6	ms
Release Time (max.) Measured without Coil Suppression	0.05	ms
Insulation Resistance (min. / typ.) Rh<45%, 100V Test Voltage	10 ¹⁰ / 10 ¹¹	Ohm
Capacitance (typ. / max.) @ 10kHz across Open Switch	0.3 / 0.5	pF

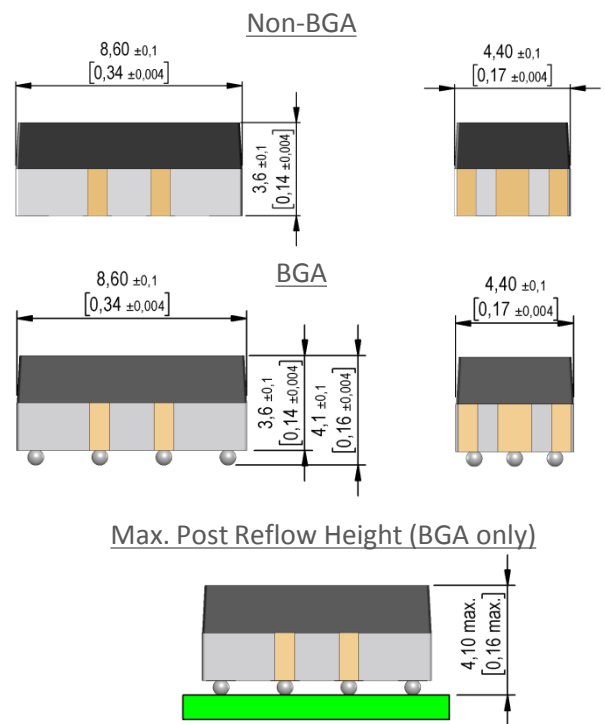
Coil Data (at 20°C)		Coil Voltage (VDC)		Coil Resistance (Ohm)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Coil Power (mW)
Contact Form	Switch Model	Nominal	Maximal	Typical (± 10 %)	Maximal	Minimal	Nominal
1A	80	03	05	70	2.25	0.45	129
		05	7.5	150	3.75	0.75	167

The Pull-In, Drop-Out Voltage and Coil Resistance will change at rate of 0.4% per °C

Relay Data (at 20°C)		Unit
Contact Bulk Resistance (typ./max.) Through all plated material on substrate	260 / 440	mOhm
Dielectric Strength Coil/Contact (min.) According to IEC 60255-27	1.5	kVDC
Insulation Resistance Coil/Contact (typ./min.) Rh<45%, 200V Test Voltage	10 ¹² / 10 ¹³	Ohm
Capacitance Coil/Contact (typ./max.) @ 10 kHz with Closed Switch	0.9 / 1.1	pF
Shock Resistance (max.) 1/2 sine wave duration 11ms	50	g
Vibration Resistance (max.) 10 – 2,000 Hz	20	g
Operating Temperature (max.) Surrounding of the relay's housing	-40 to 125	°C
Storage Temperature (max.) Surrounding of the relay's housing	-55 to 125	°C
Soldering Temperature (max.) 5 seconds max.	255	°C
Washability Aqueous rinsing suitable. Proper drying necessary.	Fully Sealed	

CRF Reed Relay Dimensions (in mm [inch])

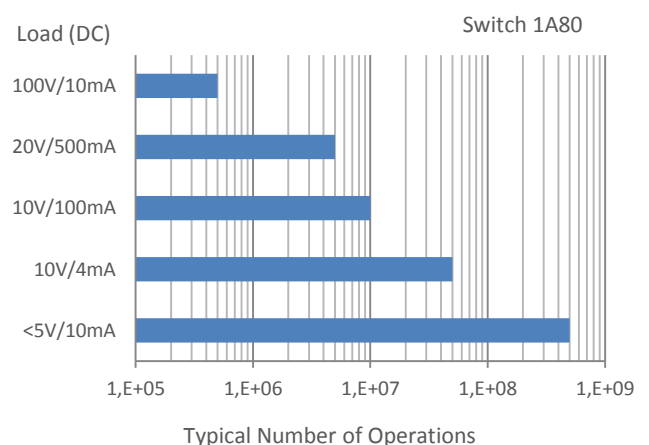
Tolerances acc. to ISO 2768-m

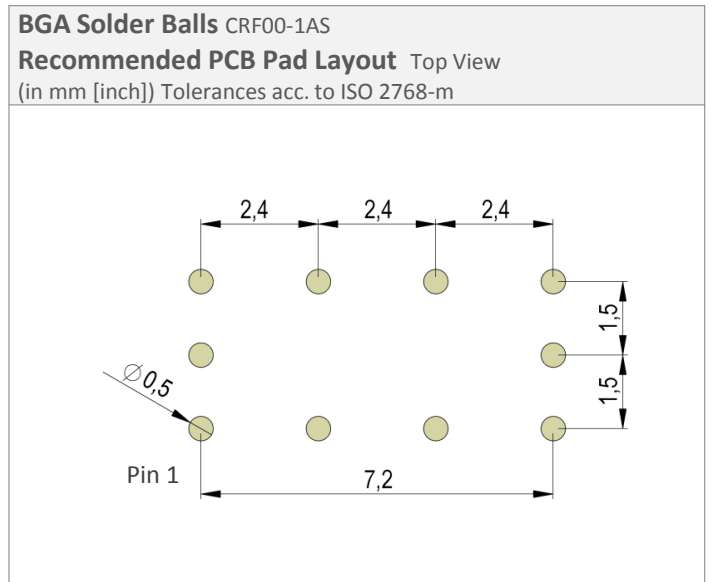
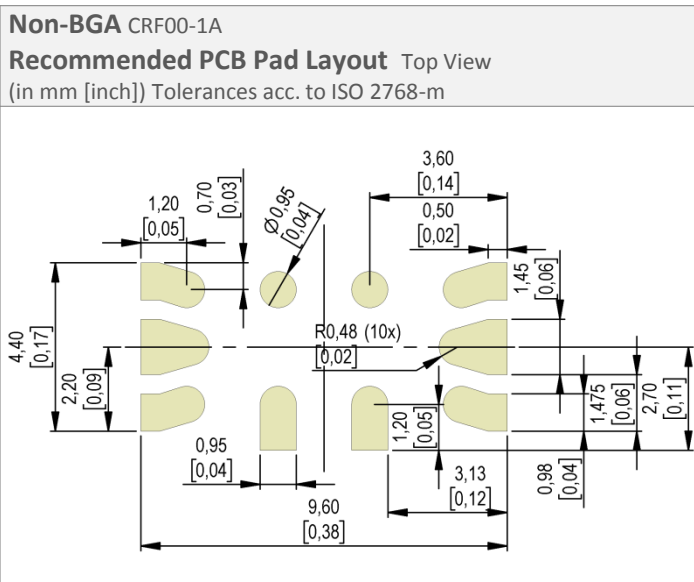
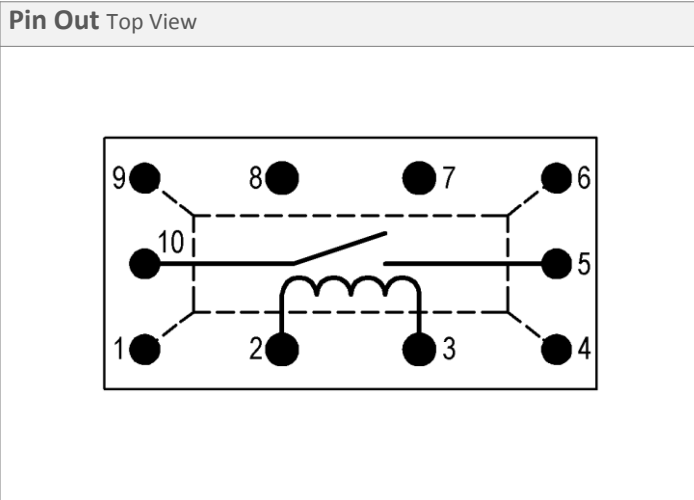


Handling & Assembly Instructions

- Switching inductive and/or capacitive loads create voltage and/or current peaks, which may damage the relay. Protective circuits need to be used - see our website.
- External magnetic fields and magnetic effects, due to adjacent relays in high density matrices that may influence the relays' electrical characteristics, must be taken into consideration.
- Mechanical shock impacts, e.g. dropping the relays, may cause immediate or post-installation failure.
- Suppressing coil diode can have a negative influence on total number of switching cycles
- Reflow soldering: See the page 4. Recommendations given by the soldering paste manufacturer need to be considered as well as the temperature limits of other components/processes.

Life Test Data (with resistive load, for general information only)





Glossary Contact Form

Form A	NO = Normally Open Contact SPST = Single Pole Single Throw
Form B	NC = Normally Closed Contacts SPST = Single Pole Single Throw
Form C	Changeover SPDT = Single Pole Double Throw
Form E	Latching unchanged until an opposite impulse is present

CRF Relays are available only in "Form A" configuration

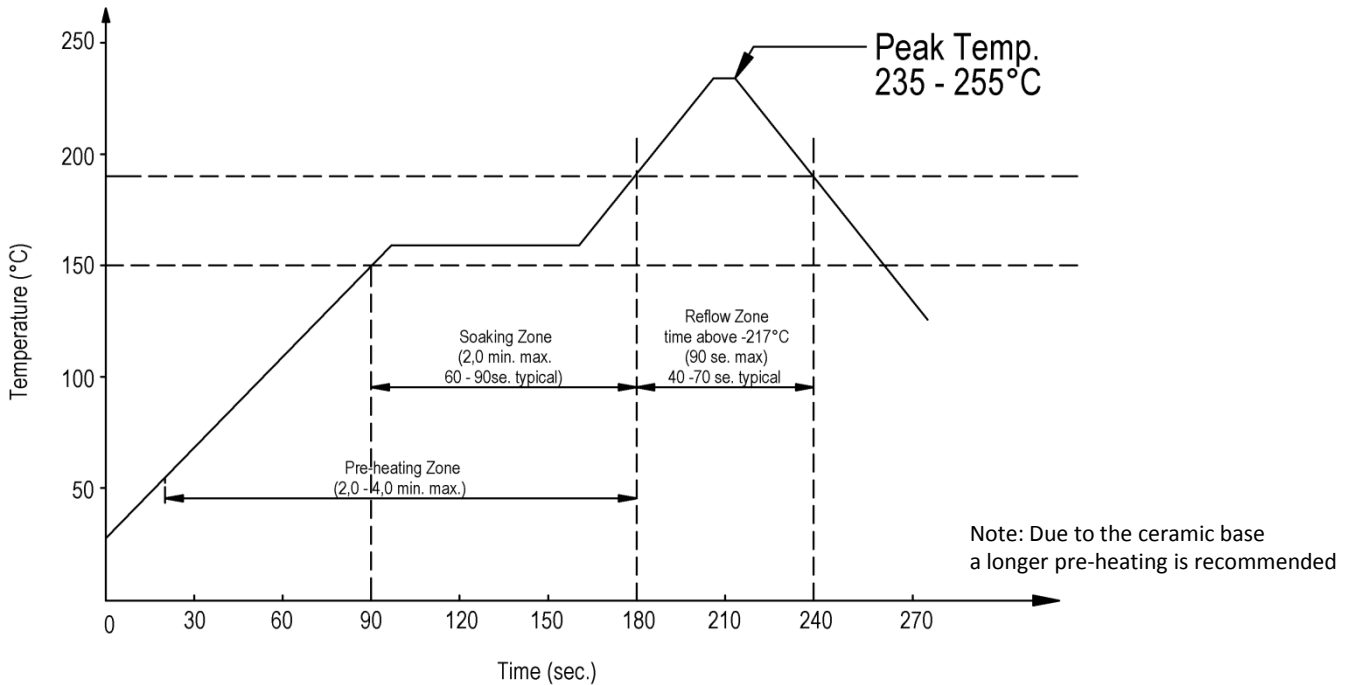
Glossary Option

CRF Basic	with Coaxial & Magnetic Shield, without Diode
L	Standard
D	with Diode
M	with Magnetic Shield, without Diode
Q	with Diode and Magnetic Shield
HR	High Resistance Coil

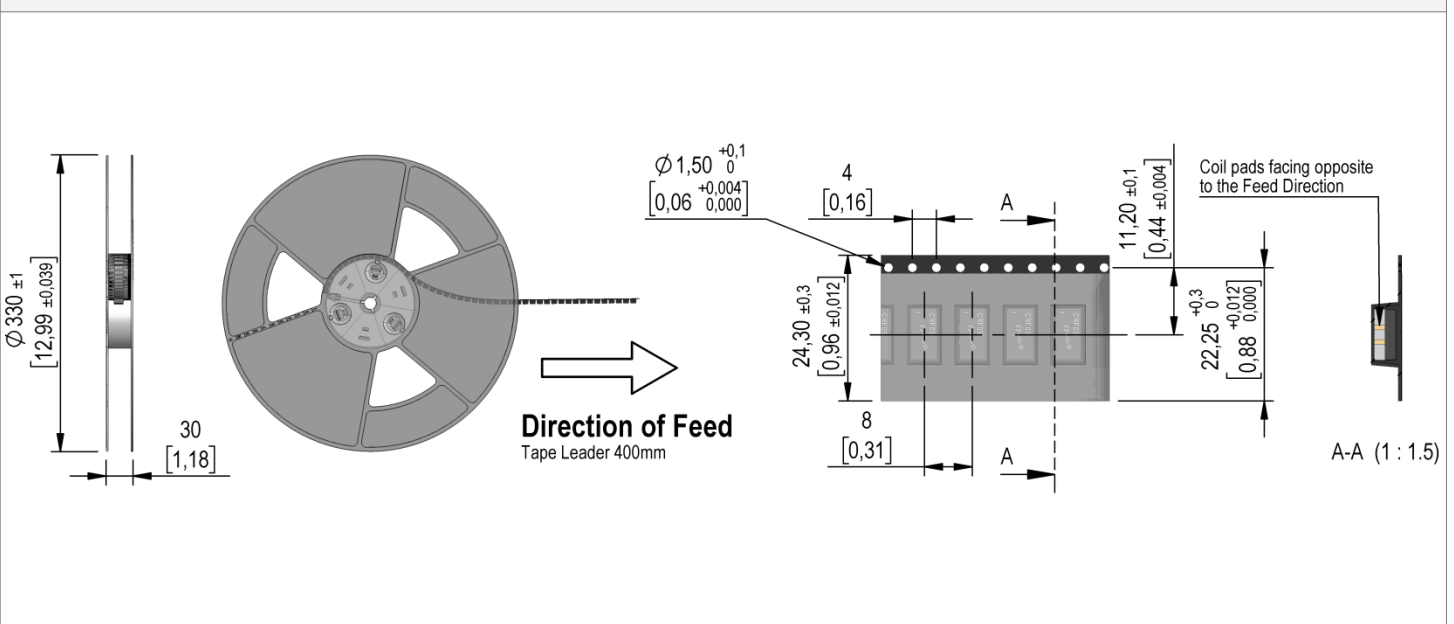
CRF Relays are available only with "Basic" Option

Recommended Reflow Lead-free Profile (acc. to JEDEC J-STD 020D.1)

For usage with tin Sn96.5/Ag3/Cu0.5



CRF Relay Packaging Orientation (Tape&Reel per 1000 pcs. or 250 pcs.)



Please note: All technical specifications on this series datasheet refer to the standard product range. Modifications in the sense of technical progress are reserved. For general information only. For more specific information, please consult the product datasheet, available upon request.

This series datasheet could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These changes will be incorporated in future revisions.

For deviating values, latest specifications and product details, please contact your nearest sales office.