

# ULTRA MINIATURE RELAY SIGNAL RELAY

## FTR-C2 Series

RoHS Compliance

### ■ FEATURES

- Dimensions of large contact gap relay
  - Height: 11.8 mm maximum (THT)  
12 mm maximum (SMT)
  - Length: 20.2 mm maximum
  - Width: 10 mm maximum
- Conforms to IEC60950 / EN60950 / UL1950/ CSA C22.2 No.950 spacing & high breakdown voltage
- Recognized by UL/CSA and Bsi
  - UL: File E63615 Vol. 2 Sec.4
  - CSA: Master contract 169663 Certificate 1088921
    - Clearance: 2.0 mm (between open contacts, coil and contacts, contact sets)
    - Creepage: 2.0 mm (between open contacts, coil and contacts, contact sets)
- HIGH RELIABILITY
  - Bifurcated contacts
- Low power consumption 300 mV
- RoHS Compliant since production



### ■ ORDERING INFORMATION

[Example]     FTR-C2   C   A   012   G  
                   (a)    (b) (c)   (d)   (e)

(a)	Series Name	FTR-C2
(b)	Terminal Appearance	C: Through hole type G: Surface mount type
(c)	Operation Function	A: Standard Type
(d)	Coil Number	Nominal Voltage
(e)	Contact Material	G: Silver alloy

Remarks: Actual marking on relay would not carry code FTR and be as below:

Ordering code                      Actual marking  
 FTR-C2CA03G                      →                      C2CA03G

# FTR-C2 Series

## ■ COIL DATA CHART

Standard type

Model	Nominal Voltage	Coil Resistance (±10%)	Must Operate Voltage	Must Release Voltage	Nominal Operating Power (±10%)
FTR-C2 (C) (A) 003-G	3 VDC	30.0 $\Omega$	2.25 VDC	0.3 VDC	300 mW
FTR-C2 (C) (A) 005-G	5 VDC	83.3 $\Omega$	3.75 VDC	0.5 VDC	300 mW
FTR-C2 (C) (A) 012-G	12VDC	480.0 $\Omega$	9.00 VDC	1.2 VDC	300 mW

Note: All values in the table are measured at 20°C.

# FTR-C2 Series

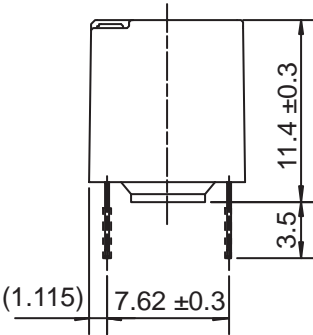
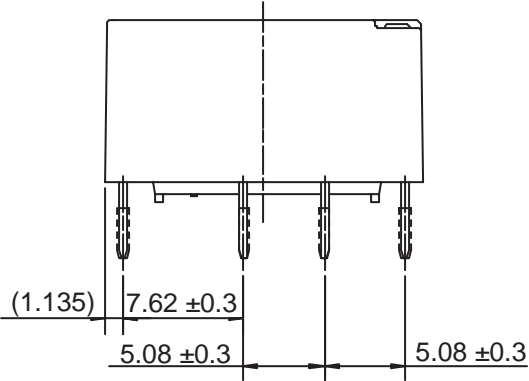
## ■ SPECIFICATIONS

Item		FTR-C2CA ( )G FTR-C2GA-( )G	
Contact	Arrangement	2 Form C	
	Material	Silver alloy	
	Resistance (initial)	Max. 150m ohm (at 1A 6VDC)	
	Max. Switching Power	62.5AV / 30W	
	Max. Switching Voltage	250VAC, 220 VDC	
	Max. Switching Current	1 A	
Coil	Operating Temperature	-40° C to + 85° C (no frost)	
	Max. Allowable Voltage	150% nominal voltage (at 20° C)	
Time Value	Operate Time	Max. 15ms (at nominal voltage, without bounce)	
	Release Time (without diode)	Max. 15ms (at nominal voltage, without bounce)	
Insulation	Resistance (at 500 VDC)		Min. 1,000M ohm
	Dielectric Strength	Between open contacts	1,500VAC, 1 minute
		Between adjacent contacts	1,500VAC, 1 minute
		Between coil and contacts	2,000VAC, 1 minute
	Surge Strength	Between open contacts	2,500V (at10/700micros)
		Between adjacent contacts	2,500V (at10/700micros)
Between coil and contacts		2,500V (at10/700micros)	
Life	Mechanical	10x10 <sup>6</sup> operations min. (at 10Hz)	
	Electrical (resistive load)	100x10 <sup>3</sup> operations min. at 1A, 30VDC, 0.5Hz 100x10 <sup>3</sup> operations min. at 0.1A, 48VDC, 0.5Hz 100x10 <sup>3</sup> operations min. at 0.3A, 125VDC, 0.5Hz	
Vibration Resistance	Misoperation	10 to 55 Hz at double amplitude of 3.3 mm	
	Endurance	10 to 55 Hz at double amplitude of 5 mm	
Shock Resistance	Misoperation	Min. 300 m/s <sup>2</sup>	
	Endurance	Min. 1,000 m/s <sup>2</sup>	
UL / CSA	Contact Rating	0.3A 125 VAC 1A 30VDC 0.3 110VDC	
IEC060950 UL1950 C22.2 No.950 EN60950	Insulation Class		Supplementary Insulation
	Working Voltage		250 V
	Pollution Degree		2 (outside)      1 (inside)
	Clearance		2.0 mm (outside)      2.0 mm (inside)
	Creepage Distance		2.5 mm (outside)      2.0 mm (inside)

# FTR-C2 Series

## ■ DIMENSIONS AND SCHEMATICS

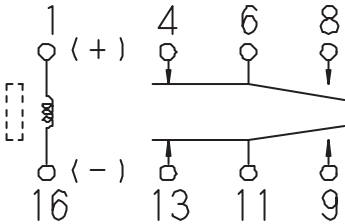
Through hole type



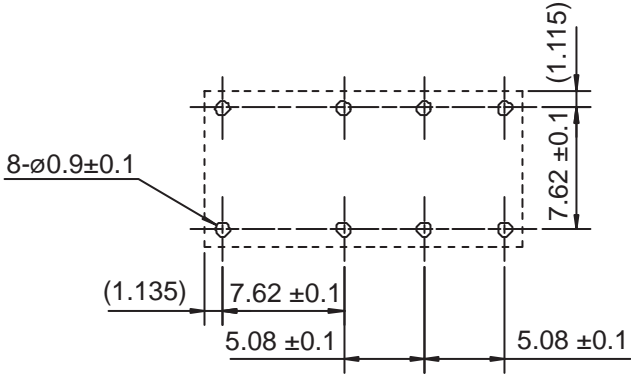
Unit: mm

## ■ TERMINAL DESIGNATIONS

(Bottom view de-energized position)



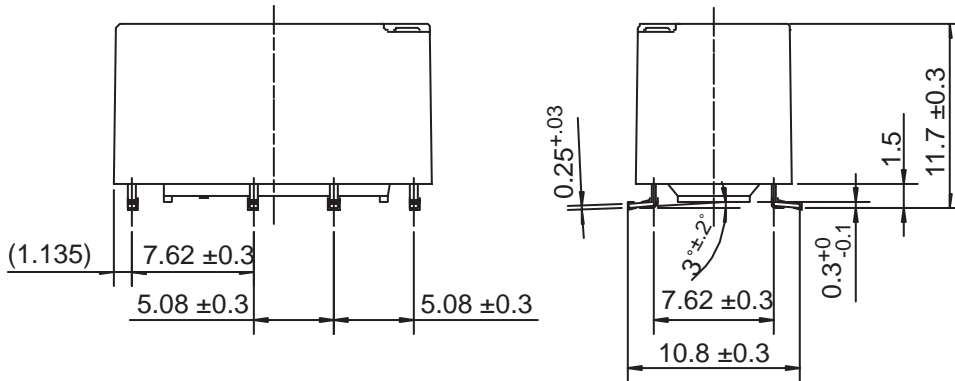
## ■ RECOMMENDED MOUNTING PAD



Unit: mm

## ■ DIMENSIONS AND SCHEMATICS

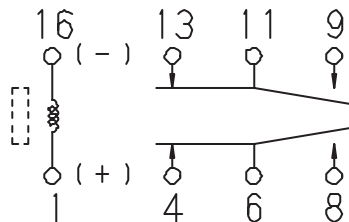
Surface mount type



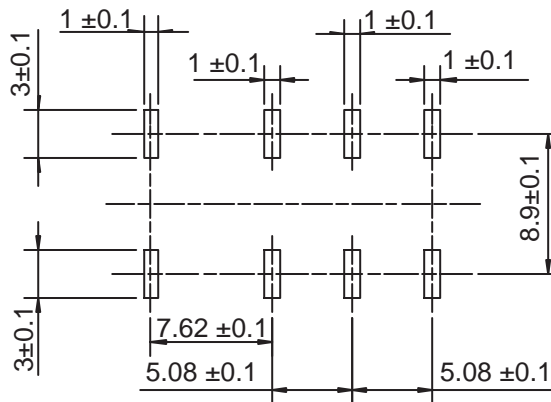
Unit: mm

## ■ TERMINAL DESIGNATIONS

(Top view de-energized position)

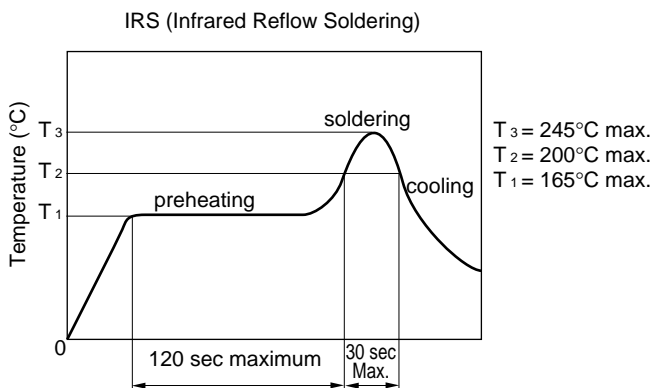


## ■ RECOMMENDED MOUNTING PAD



Unit: mm

## ■ RECOMMENDED SOLDERING CONDITIONS (TEMPERATURE PROFILE)



- Note:
1. Temperature profiles show the temperature of PC board surface.
  2. Please perform soldering test with your actual PC board before mass production, since the temperatures of PC board surfaces vary according to the size of PC board, status of parts mounting and heating method.

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