

# JT152FA

# SUBMINIATURE HIGH POWER RELAY

C<sub>RU</sub> US  
File No:E319069



File No:R 50471669



File No:CQC20002254227



## Features

- 20A switching capability
- TV-8 load capacity available
- Plastic sealed and flux proofed types available
- 2kV dielectric strength (between coil and contacts)
- Product in accordance to IEC 60335-1 available
- 1 Form A and 1 Form C configurations
- UL insulation system:Class F available

## CONTACT DATA

Contact arrangement	1A	1C
Contact resistance <sup>1)</sup>	100mΩ max.(at 1A 6VDC)	
Contact material	AgSnO <sub>2</sub>	
Contact rating (Res.load)	20A 125VAC 17A 277VAC	NO:20A 125VAC 17A 277VAC NC:10A 277VAC
Max.switching voltage	277VAC	
Max.switching current	20A	
Max.switching power	4700VA	
Mechanical endurance	1 x 10 <sup>7</sup> ops	
Electrical endurance	1H type:1 x 10 <sup>5</sup> ops(17A 277VAC, Resistive load,at room temp.,1s on 9s off) 1Ztype(NO): 1 x 10 <sup>5</sup> ops(17A 277VAC, Resistive load,at room temp.,1s on 9s off) 1Ztype(NC): 5 x 10 <sup>4</sup> ops(10A 277VAC, Resistive load,at room temp.,1s on 9s off)	

Notes: 1)The data shown above are initial values.

## CHARACTERISTICS

Insulation resistance		100MΩ(at 500VDC)
Dielectric strength	Between coil&contacts	2000VAC 1min
	Between open contacts	750VAC 1min
Operate time(at nomi.volt.)		10ms max.
Release time(at nomi.volt.)		5ms max.
Shock resistance	Functional	98m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-40°C to 85°C
Termination		PCB
Unit weight		Approx. 9.5g
Construction		Plastic sealed Flux proofed

Notes: 1) For sealed type,the vent-hole cover should be excised  
2) The data shown above are initial values.

## COIL

Coil power	Approx. 360mW
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## COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC <sup>1)</sup>	Drop-out Voltage VDC <sup>1)</sup>	Max. Voltage VDC <sup>2)</sup>	Coil Resistance Ω
3	≤2.25	≥0.3	3.9	25 x (1±10%)
5	≤3.75	≥0.5	6.5	70 x (1±10%)
6	≤4.50	≥0.6	7.8	100 x (1±10%)
9	≤6.75	≥0.9	11.7	225 x (1±10%)
12	≤9.00	≥1.2	15.6	400 x (1±10%)
15	≤11.25	≥1.5	19.5	625 x (1±10%)
18	≤13.5	≥1.8	23.4	900 x (1±10%)
24	≤18.0	≥2.4	31.4	1600 x (1±10%)
36	≤27.0	≥3.6	54.0	3600 x (1±10%)
48	≤36.0	≥4.8	62.4	6400 x (1±10%)

Notes: 1)The data shown above are initial values.

2)\*Maximum Voltage refers to the maximum voltage which relay coil could endure in a short period of time.

## SAFETY APPROVAL RATINGS

UL	1 Form A	10A/12A/16A/17A 250VAC/277VAC 10A/12A/16A/17A 250VAC/277VAC 1HP 250VAC 20A 125VAC TV-8 125VAC
	1 Form C	NO: 10A/12A/16A/17A 250VAC/277VAC 10A/12A/16A/17A 250VAC/277VAC 1HP 250VAC 20A 125VAC TV-8 125VAC NC: 7A/10A 250VAC/277VAC
TUV	1 Form A	16A/17A 250VAC/277VAC
	1 Form C	NO:16A/17A 250VAC/277VAC NC:7A/10A 250VAC/277VAC
CQC	1 Form A	16A/17A 250VAC/277VAC
	1 Form C	NO:16A/17A 250VAC/277VAC NC:7A/10A 250VAC/277VAC

Notes: 1)All values unspecified are at room temperature.

2)Only typical loads are listed above.Other load specifications can be available upon request.



JINTIAN RELAY

ISO9001、ISO14001、OHSAS18001 CERTIFIED

## ORDERING INFORMATION

**JT152FA / 012 -1H S T F (XXX)**

### Type

**Coil voltage** 3, 5, 6, 9, 12, 15, 18, 24, 36, 48VDC

**Contact arrangement** H: 1 Form A Z: 1 Form C

**Construction**<sup>1)2)</sup> S: Plastic sealed Nil: Flux proofed

**Contact material** T: AgSnO<sub>2</sub>

**Insulation standard** F: Class F

**Special code**<sup>3)</sup> XXX: Customer special requirement Nil: Standrad

- Notes:** 1) We recommend flux proofed types for a clean environment(free from contaminations like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.). We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, dust, etc.).  
2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.  
3) The customer special requirement express as special code after evaluating by JINTIAN.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

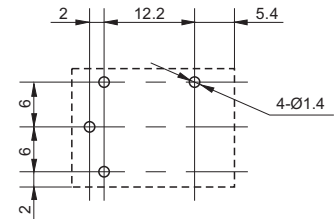
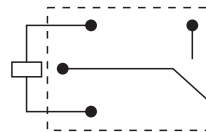
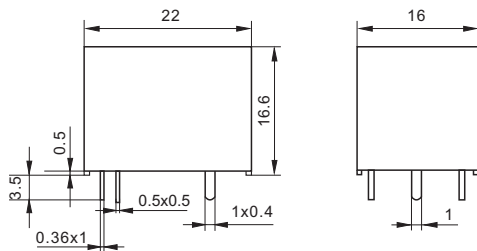
Unit: mm

Outline Dimensions

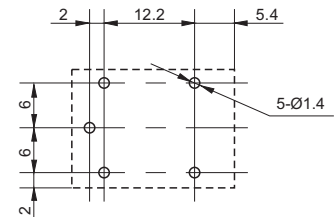
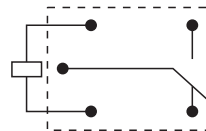
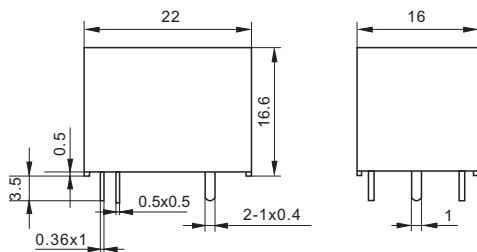
Wiring Diagram  
(Bottom view)

PCB Layout  
(Bottom view)

1 Form A



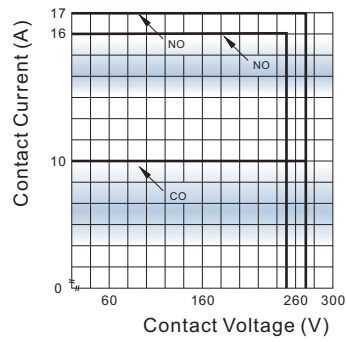
1 Form C



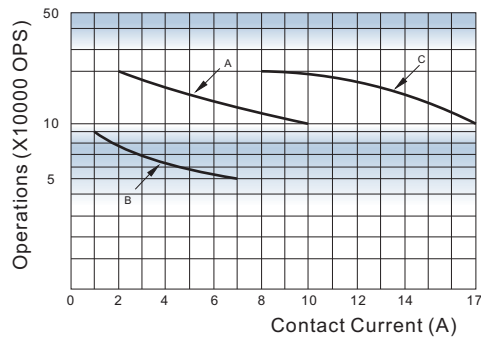
- Remark:** 1) The pin dimension of the product outline drawing is the size before tinning (it will become larger after tinning), and the mounting hole size is the recommended design size of the PCB board hole. The specific PCB board hole design size can be mapped and adjusted according to the actual product.  
2) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ .  
3) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

# CHARACTERISTIC CURVES

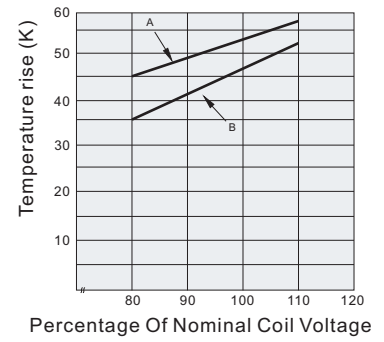
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



**Test conditions:**

- A: NO, 10A 277VAC, Resistive load,  
Flux proofed, 85°C, 1s on 9s off
- B: CO, 7A 277VAC, Resistive load,  
Flux proofed, 85°C, 5s on 5s off
- C: NO, 17A 277VAC, Resistive load,  
Flux proofed, room temp., 1s on 9s off

**Test conditions:**

- A: 85°C, 17A
- B: 85°C, 10A

**Disclaimer**

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact JINTIAN for the technical service. However, it is the user's responsibility to determine which product should be used only.