

# HF102F (JQX-102F)

## MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:R9933807



File No.:CQC02001001955



### Features

- 4.5kV dielectric strength (between coil and contacts)
- Heavy load up to 5000VA
- Ideal for motor switching
- Withstand inrush current of 80A
- PCB & QC layouts available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (30.5 x 16.0 x 23.5) mm

### CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ (at 1A 6VDC)
Contact material	AgSnO <sub>2</sub> , AgCdO
Contact rating	Resistive: 20A Motor, Inrush: 80A 0.3s (cosφ=0.7) Break: 20A (cosφ=0.9)
Max. switching voltage	250VAC
Max. switching current	Resistive: 25A Motor: 80A
Max. switching power	6250VA
Mechanical endurance	2 x 10 <sup>6</sup> OPS
Electrical endurance	1 x 10 <sup>5</sup> OPS (See approval reports for more details)

### CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4500VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)		20ms max.
Release time (at nomi. volt.)		10ms max.
Temperature rise (at nomi. volt.)		60K max.
Shock resistance	Functional	200m/s <sup>2</sup> (20g)
	Destructive	1000m/s <sup>2</sup> (100g)
Vibration resistance		10Hz to 55Hz 1.5mm DA
Ambient temperature		-25°C to 70°C
Humidity		85% RH, 40°C
Termination		HF102F: PCB & QC HF102F-P: PCB
Unit weight		Approx. 23g
Construction		Flux proofed

Notes: The data shown above are initial values.

### COIL

Coil power	900mW
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### COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
5	3.5	0.5	6.0	27.8 x (1±10%)
12	8.4	1.2	14.4	160 x (1±10%)
24	16.8	2.4	28.8	640 x (1±10%)
48	33.6	4.8	57.6	2560 x (1±10%)

### SAFETY APPROVAL RATINGS

UL&CUR	25A 250VAC
	20A 250VAC
	1HP 120VAC
	2HP 240VAC
TÜV	25A 250VAC
	20A 250VAC

Notes: Only some typical ratings are listed above. If more details are required, please contact us.



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2007 Rev. 2.10

## ORDERING INFORMATION

HF102F /		T	-012	(XXX)
Type <sup>1)</sup>	HF102F-P: PCB HF102F: PCB & QC JQX-102F/JQX-102F-P (Old type)			
Contact material	T: AgSnO <sub>2</sub> Nil: AgCdO			
Coil voltage	5, 12, 24, 48VDC			
Customer special code <sup>2)</sup>	e.g. (551) stands for RoHS compliant (Cadmium containing contacts) (Only for special requirements) (555) stands for RoHS compliant (Cadmium-free contacts)			

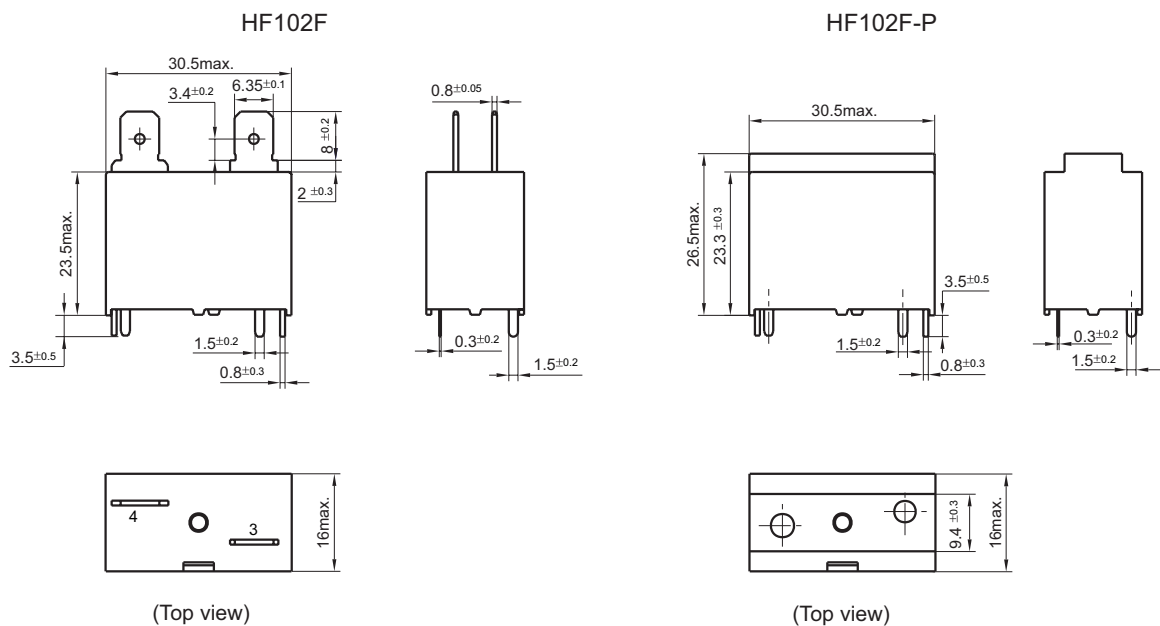
Notes: 1) We have now gradually updated our ordering information. We suggest new type should be selected. If necessary, old type can be kept for some period for the old customers.

2) HF102F is an environmental friendly product. Please mark a special code (555) or (551) when ordering. (551) stands RoHS compliant with Cadmium contact; (555) stands for RoHS compliant with Cadmium-free contact.

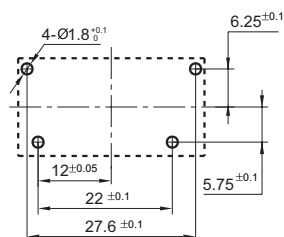
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

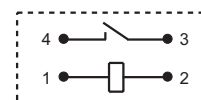
### Outline Dimensions



### PCB Layout (Bottom view)



### Wiring Diagram

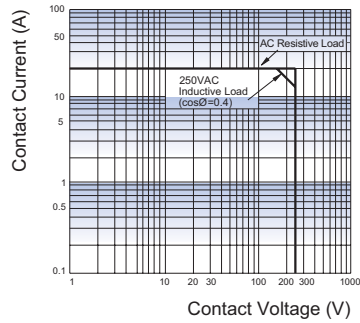


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤ 1mm, tolerance should be ±0.2mm; outline dimension > 1mm and ≤ 5mm, tolerance should be ±0.3mm; outline dimension > 5mm, tolerance should be ±0.4mm.

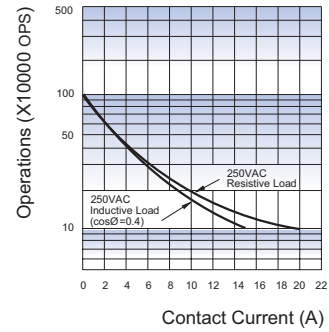
2) The tolerance without indicating for PCB layout is always ±0.1mm.

## CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



### Disclaimer

This datasheet is for the customers' reference. All the specifications are 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 Hongfa for the technical service. However, it is the user's responsibility to determine which product should be used only.

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