

# HF25F (JQC-25F)

# SUBMINIATURE HIGH POWER RELAY



File No.:E134517



File No.:R50055985



File No.:CQC06001016263



## Features

- Small and for microwave oven
- 20A switching capability
- 1.5HP 250VAC approved by UL standard
- 5kV impulse withstand voltage (between coil and contacts)
- PCB & QC layouts
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (22.8 x 12.3 x 24.4) mm

## CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ (at 1A 6VDC)
Contact material	AgSnO <sub>2</sub>
Contact rating	1.5HP 250VAC 20A 250VAC
Max. switching voltage	30VDC / 250VAC
Max. switching current	20A
Max. switching power	5000VA / 480W
Mechanical endurance	2 x 10 <sup>6</sup> OPS
Electrical endurance	1 x 10 <sup>5</sup> OPS

## CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)	15ms max.	
Release time (at nomi. volt.)	5ms max.	
Humidity	35% to 85% RH	
Shock resistance	Functional	100m/s <sup>2</sup> (10g)
	Destructive	1000m/s <sup>2</sup> (100g)
Ambient temperature	-40°C to 85°C	
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Termination	PCB & QC	
Unit weight	Approx. 16.5g	
Construction	Wash tight, Flux proofed	

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

2) Please find coil temperature curve in the characteristic curves below.

## COIL

Coil power	500mW
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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	3.75	0.25	6.50	50 x (1±10%)
6	4.50	0.30	7.80	72 x (1±10%)
9	6.75	0.45	11.7	162 x (1±10%)
12	9.00	0.60	15.6	288 x (1±10%)
18	13.5	0.90	23.4	648 x (1±10%)
24	18.0	1.20	31.2	1152 x (1±10%)

Notes: When requiring pick-up voltage <75% of nominal voltage, special order allowed.

## SAFETY APPROVAL RATINGS

UL&CUR	20A 250VAC 16A 30VDC 1.5HP 250VAC
TÜV	20A 250VAC COSØ =1 16A 30VDC

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. 2.00

## ORDERING INFORMATION

		<b>HF25F /</b>		<b>012</b>		<b>-H</b>		<b>S</b>		<b>1</b>		<b>(XXX)</b>	
<b>Type</b> <sup>1)</sup>	HF25F JQC-25F (Old type)												
<b>Coil voltage</b>	5, 6, 9, 12, 18, 24VDC												
<b>Contact arrangement</b>	H: 1 Form A												
<b>Construction</b> <sup>2)</sup>	S : Wash tight						Nil : Flux proofed						
<b>Version</b>	1: 1 type		2: 2 type		3: 3 type		4: 4 type		Nil: Standard				
<b>Customer special code</b> <sup>3)</sup>	Only for special requirements, e.g. (555) stands for RoHS compliant												

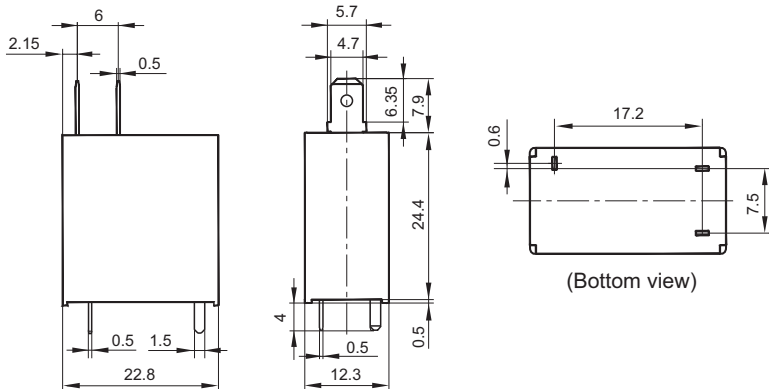
- Notes:** 1) We have now gradually updated our ordering information. We suggest new type should be selected. If necessary, old type can be kept for some period for the old customers.  
 2) Under the ambience with dangerous gas like H<sub>2</sub>S, SO<sub>2</sub> or NO<sub>2</sub>, wash tight type is recommended; please test the relay in real applications. If the ambience allows, flux proofed is preferentially recommended.  
 3) HF25F is an environmental friendly product. Please mark a special code (555) when ordering.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

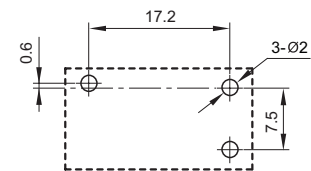
Unit: mm

Standard:

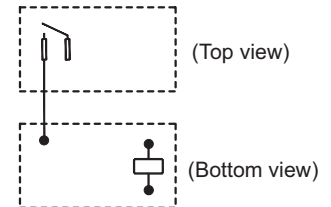
Outline Dimensions



PCB Layout (Bottom view)

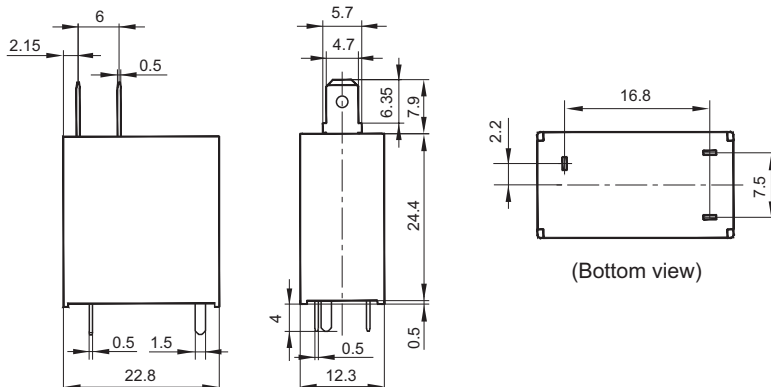


Wiring Diagram

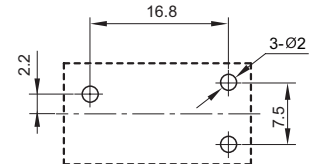


1 type:

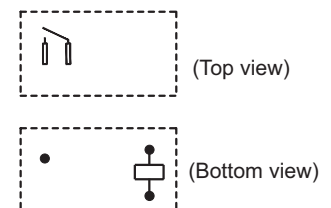
Outline Dimensions



PCB Layout (Bottom view)

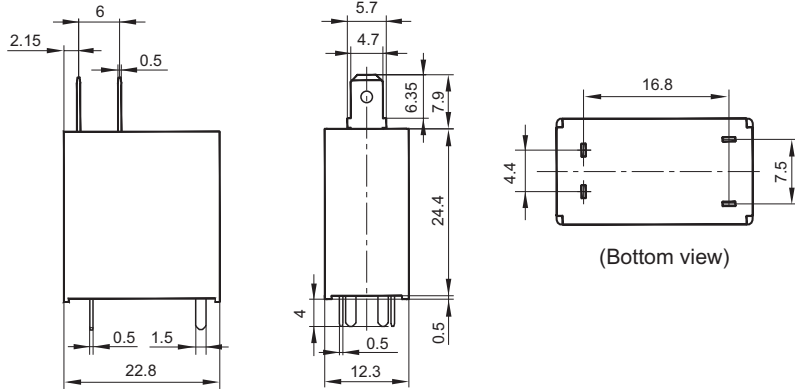


Wiring Diagram

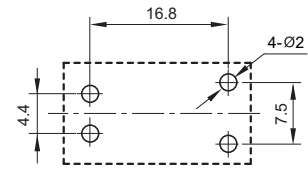


2 type:

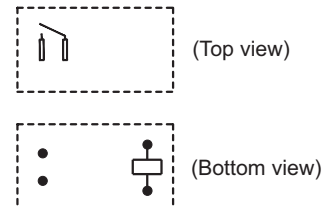
Outline Dimensions



PCB Layout (Bottom view)

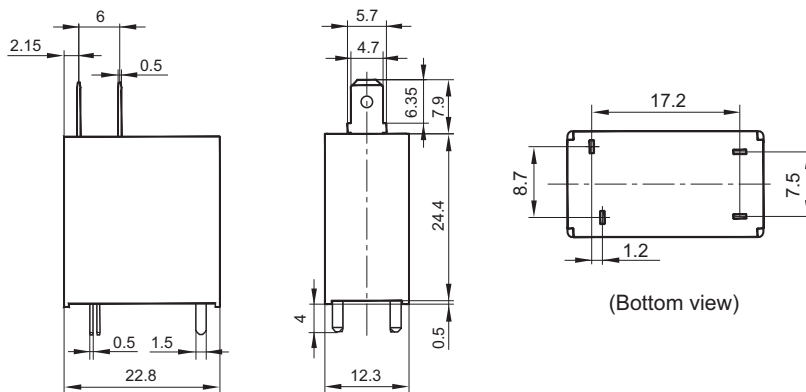


Wiring Diagram

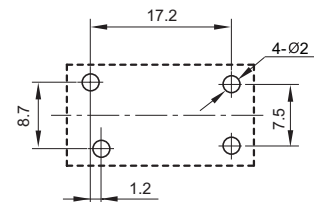


3 type:

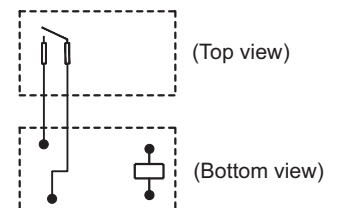
Outline Dimensions



PCB Layout (Bottom view)



Wiring Diagram

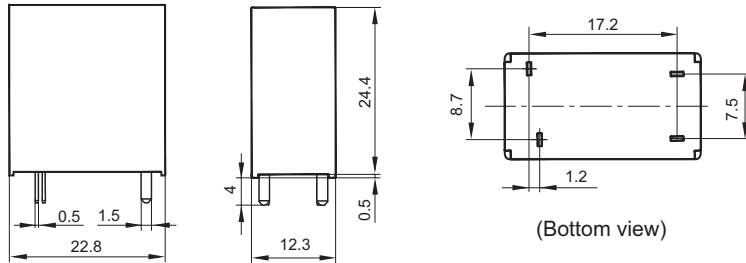


## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

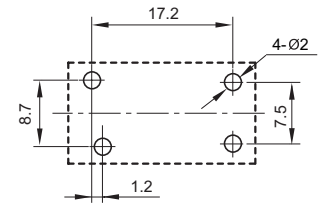
Unit: mm

4 type:

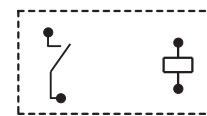
Outline Dimensions



PCB Layout (Bottom view)



Wiring Diagram

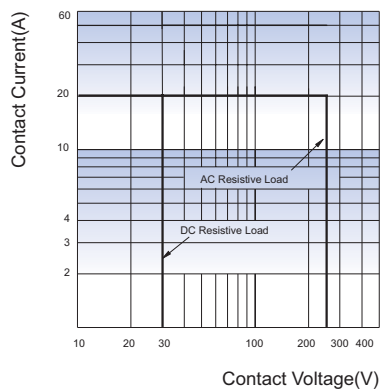


(Bottom view)

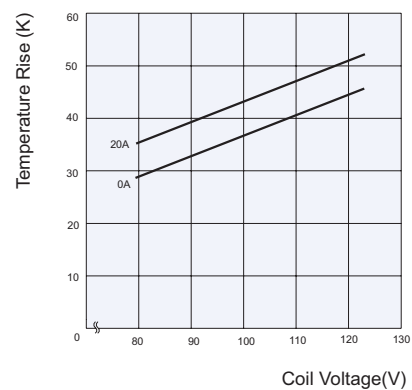
- Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be  $\pm 0.4\text{mm}$ .  
 2) The tolerance without indicating for PCB layout is always  $\pm 0.1\text{mm}$ .

## CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



COIL TEMPERATURE RISE



### 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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