

# HF37F

# MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:40025378



File No.:CQC13002102287



### Features

- 30A switching capability
- 70A withstands inrush current
- TV-15 (at 120VAC) available
- 1 Form A configuration
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (35.2 x 32.2 x 24.0) mm

### CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ max.(at 1A 6VDC)
Contact material	AgSnO <sub>2</sub> , AgCdO
Contact rating (Res. load)	30A 250VAC
Max. switching voltage	277VAC
Max. switching current	30A
Max. switching power	7500VA
Mechanical endurance	5 x 10 <sup>6</sup> OPS
Electrical endurance	1HT, 1H type: 6 x 10 <sup>3</sup> OPS (30A 250VAC, Resistive load, at 40°C, 1s on 9s off) 1H type: 5 x 10 <sup>4</sup> OPS (23A cosφ=1 250VAC, Resistive load, at 70°C, 1.5s on 1.5s off)

### CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1200VAC 1min
Operate time (at nomi. volt.)	20ms max.	
Release time (at nomi. volt.)	5ms max.	
Shock resistance	Functional	196m/s <sup>2</sup>
	Destructive	980m/s <sup>2</sup>
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Ambient temperature	-40°C to 70°C	
Humidity	5% to 85% RH	
Termination	QC	
Unit weight	Approx. 55g	
Construction	Dust protected	

- Notes:** 1) The data shown above are initial values.  
2) Please find coil temperature curve in the characteristic curves below.  
3) UL insulation system: Class A

### COIL

Coil power	Approx. 1.2W
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### COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC *	Coil Resistance Ω
5	3.50	0.50	6.0	20.8 x (1±10%)
6	4.20	0.60	7.2	30 x (1±10%)
9	6.30	0.90	10.8	67.5 x (1±10%)
12	8.40	1.20	14.4	120 x (1±10%)
24	16.8	2.40	28.8	480 x (1±10%)
48	33.6	4.80	57.6	1920 x (1±10%)
60	42.0	6.00	72.0	3000 x (1±10%)

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

### SAFETY APPROVAL RATINGS

UL/CUL	AgSnO <sub>2</sub>	30A 250VAC 2HP 125VAC/250VAC TV-15 120VAC
	AgCdO	30A 250VAC 2HP 125VAC/250VAC TV-15 120VAC
VDE	AgCdO	23A 250VAC at 70°C

- Notes:** 1) All values unspecified are at room temperature.  
2) Only typical loads are listed above. Other load specifications can be available upon request.



HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

2015 Rev. 1.00

## ORDERING INFORMATION

Type	HF37F / 012 -1H T (XXX)		
Coil voltage	5, 6, 9, 12, 24, 48, 60VDC		
Contact arrangement	1H: 1 Form A		
Contact material	T: AgSnO <sub>2</sub> Nil: AgCdO		
Special code <sup>2)</sup>	XXX: Customer special requirement	Nil: Standard	

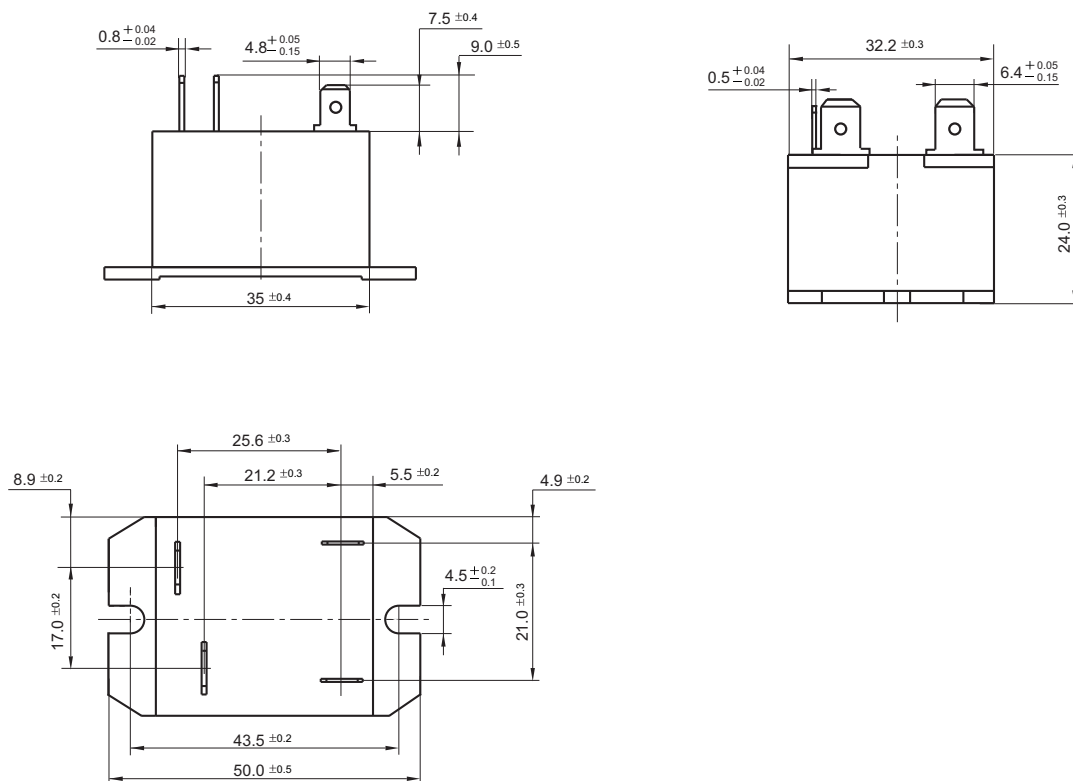
Notes: 1) The terminal for HF37F is QC type. Please don't weld directly on terminal.

2) The customer special requirement express as special code after evaluating by Hongfa.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

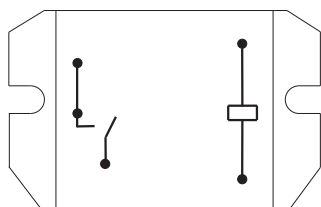
### Outline Dimensions



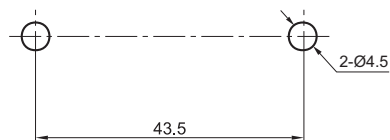
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Wiring Diagram (Top view)



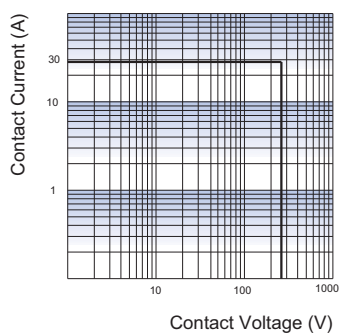
Mounting holes



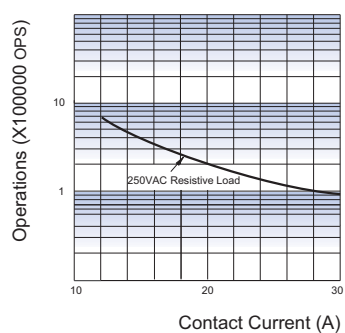
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension  $\leq 1\text{mm}$ , tolerance should be  $\pm 0.2\text{mm}$ ; outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , tolerance should be  $\pm 0.3\text{mm}$ ; outline dimension  $> 5\text{mm}$ , tolerance should be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

## CHARACTERISTIC CURVES

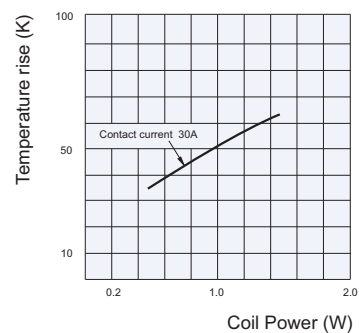
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



**Notes:**

- 1) Curve: 1HT type (or 1H type)
- 2) Test conditions: at  $70^{\circ}\text{C}$ , 1s on 9s off.

**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 Hongfa for the technical service. However, it is the user's responsibility to determine which product should be used only.