

HF46F

SUBMINIATURE INTERMEDIATE POWER RELAY



File No.: E133481



Features

- 7A switching capability
- 10kV impulse withstand voltage (between coil and contacts)
- Highly efficient magnetic circuit for high sensitivity: 200mW
- Extremely small footprint utilizing PCB area
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (20.5 x 7.2 x 15.3) mm

CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ (at 1A 24VDC)
Contact material	AgNi, AgSnO ₂
Contact rating (Res. load)	5A 277VAC/30VDC
Max. switching voltage	277VAC / 30VDC
Max. switching current	7A
Max. switching power	1939VA / 210W
Mechanical endurance	1 x 10 ⁷ OPS
Electrical endurance	2 x 10 ⁵ OPS (at 3A 277VAC/30VDC) 1 x 10 ⁵ OPS (at 5A 277VAC/30VDC) 1 x 10 ⁴ OPS (at 7A 277VAC/30VDC)

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	750VAC 1min
Surge voltage (between coil & contacts)		10kV (1.2X50μs)
Operate time (at nomi. volt.)		10ms max.
Release time (at nomi. volt.)		10ms max.
Shock resistance	Functional	100m/s ² (10g)
	Destructive	1000m/s ² (100g)
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		98%, +40°C
Ambient temperature		-40°C to 85°C
Termination		PCB
Unit weight		Approx. 3g
Construction		Flux proofed, Wash tight

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

COIL

Coil power	200mW
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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
3	2.25	0.18	3.90	45 x (1±10%)
5	3.75	0.25	6.50	125 x (1±10%)
6	4.50	0.30	7.80	180 x (1±10%)
9	6.75	0.45	11.7	405 x (1±10%)
12	9.00	0.60	15.6	720 x (1±10%)
18	13.5	0.90	23.4	1620 x (1±10%)
24	18.0	1.20	31.2	2880 x (1±10%)

SAFETY APPROVAL RATINGS

UL&CUR	AgNi	5A 125VAC/250VAC at 85°C
		5A 277VAC/30VDC at 85°C
		3A 125VAC/250VAC at 85°C
		3A 277VAC/30VDC at 85°C
	AgSnO ₂	5A 125VAC/250VAC at 85°C
		5A 277VAC/30VDC at 85°C
		3A 125VAC/250VAC at 85°C
		3A 277VAC/30VDC at 85°C
	B300	
	R300	

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



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001、IECQ QC080000 CERTIFIED

2007 Rev. 1.00

ORDERING INFORMATION

	HF46F / 12 -H S 1 T G (XXX)					
Type						
Coil voltage	3, 5, 6, 9, 12, 18, 24VDC					
Contact arrangement	H: 1 Form A					
Construction	S: Wash tight		Nil: Flux proofed			
Termination	1: type 1		2: type 2			
Contact material ¹⁾	T: AgSnO ₂		Nil: AgNi			
Contact plating	G: Gold plated		Nil: No gold plated			
Customer special code						

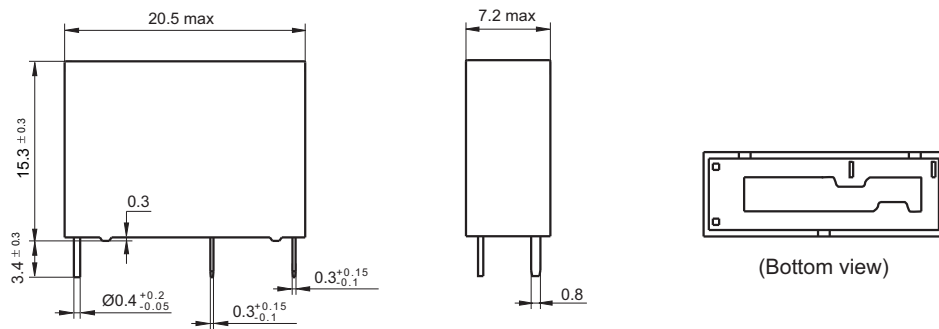
Notes: 1) For the application of lamp (except LED), capacitive load, motor load or which can bring high inrush current when relay contacts connect instantly, AgSnO₂ contact material is recommended on priority.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

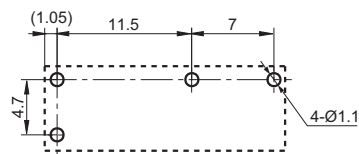
Unit: mm

Outline Dimensions

HF46F/□□-H□1□□ (□□□)



PCB Layout (Bottom view)



Wiring Diagram (Bottom view)

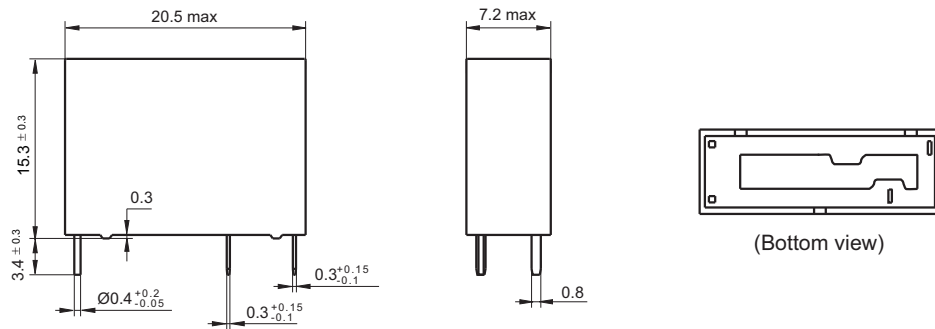


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

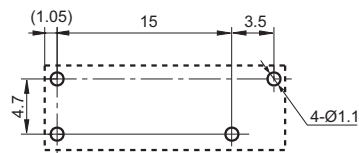
Unit: mm

Outline Dimensions

HF46F/□□-H□2□□ (□□□)



PCB Layout (Bottom view)



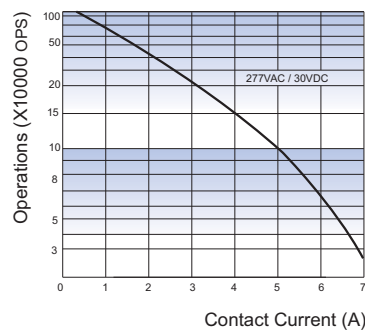
Wiring Diagram (Bottom view)



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

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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