

HF78F

MINIATURE HIGH POWER RELAY



File No.: E133481



File No.: R50375929



File No.: CQC17002171481



Features

- Small and for microwave oven
- 20A switching capability
- 4.0kV dielectric strength (between coil and contacts)
- Low height: 28.5 mm

RoHS compliant

CONTACT DATA

Contact arrangement	1A
Contact resistance ¹⁾	50mΩ max.(at 1A 6VDC)
Contact material	AgSnO ₂
Contact rating	16A 250VAC/24VDC 16A 30VDC
Max. switching voltage	277VAC / 32VDC
Max. switching current	20A
Max. switching power	4432VA / 512W
Mechanical endurance	1 x 10 ⁷ OPS

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

CHARACTERISTICS

Insulation resistance		1200MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1500VAC 1min
Operate time (at rated. volt.)		15ms max.
Release time (at rated. volt.)		5ms max.
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-40°C to 85°C
Termination		PCB & QC
Unit weight		Approx. 16g
Construction		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	540mW
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COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max. ¹⁾	Drop-out Voltage VDC min. ¹⁾	Max. Voltage VDC ²⁾	Coil Resistance Ω
3	2.40	0.3	3.9	17.2 x (1±10%)
5	4.00	0.5	6.5	47.7x (1±10%)
6	4.80	0.6	7.8	68.8x (1±10%)
12	9.60	1.2	15.6	270 x (1±10%)
24	19.2	2.4	31.2	1100 x (1±10%)
36	28.8	3.6	46.8	2475x (1±15%)

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/CUL	16A 250VAC/30VDC 20A 125VAC
TÜV	16A 250VAC/30VDC 20A 125VAC

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, IATF16949, ISO14001, ISO45001, IECQ QC 080000, ISO/IEC 27001 CERTIFIED

2020 Rev. 1.01

ORDERING INFORMATION

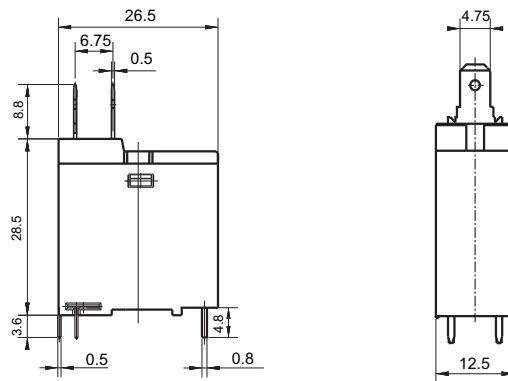
	HF78F / 12 -H 3 T F (XXX)					
Type						
Coil voltage	3, 5, 6, 12, 24, 36VDC					
Contact arrangement	1H: 1 Form A					
Termination	S: Plastic sealed Nil: Dust protected					
Contact material	T: AgSnO ₂					
Insulation standard	F: Class F					
Special code ¹⁾	XXX: Customer special requirement Nil: Standard					

Notes: 1) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

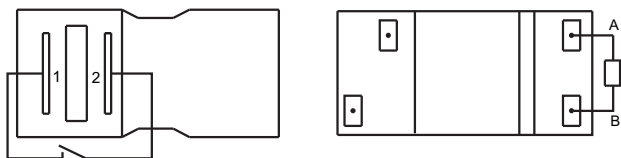
Unit: mm

Outline Dimensions



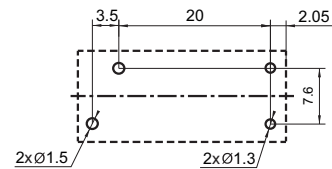
Wiring Diagram

(Bottom view)



PCB Layout

(Bottom view)

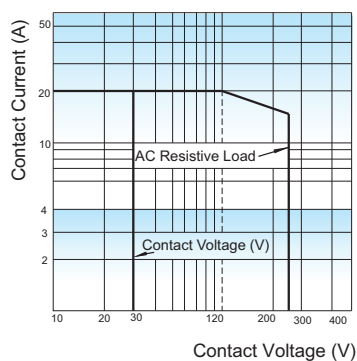


Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.

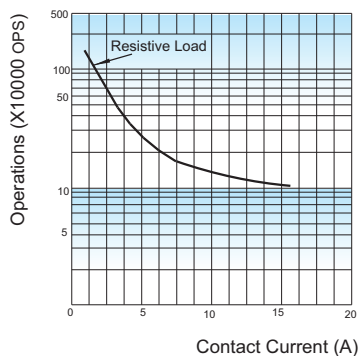
2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

CHARACTERISTIC CURVES

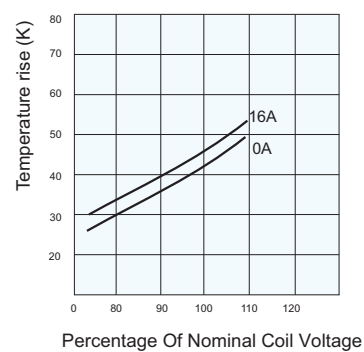
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



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.

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