

HF3FF-M

SUBMINIATURE HIGH POWER RELAY



Features

- 15A switching capability
- Subminiature, standard PCB layout
- 1 Form A and 1 Form C contact arrangement
- Plastic sealed and Flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (19.0 x 15.2 x 15.5) mm

CONTACT DATA

Contact arrangement	1A	1C
Contact resistance	100mΩ (at 1A 6VDC)	
Contact material	AgSnO ₂	
Contact rating (Res. load)	15A 13.5VDC	NO: 15A 13.5VDC NC: 5A 13.5VDC
Max. switching voltage	30VDC	
Max. switching current	15A	
Max. switching power	210W	
Mechanical endurance	1 x 10 ⁷ OPS	
Electrical endurance	1 x 10 ⁵ OPS	

COIL

Coil power	HF3FF-M: 450mW
	HF3FF-M1: 640mW
	HF3FF-M2: 800mW

COIL DATA

at 23°C

	Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
HF3FF-M	9	6.75	0.90	11.7	180 x (1±10%)
	12	9.00	1.20	15.6	320 x (1±10%)
	24	18.00	2.40	31.2	1280 x (1±10%)
HF3FF-M1	9	5.85	0.65	11.3	126 x (1±10%)
	12	7.80	0.90	15.0	225 x (1±10%)
	24	15.60	1.80	30.0	900 x (1±10%)
HF3FF-M2	9	4.95	0.60	10.8	100 x (1±10%)
	12	6.60	0.80	14.4	180 x (1±10%)
	24	13.20	1.60	28.8	720 x (1±10%)

CHARACTERISTICS

Insulation resistance	100MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	1500VAC 1min
	Between open contacts	750VAC 1min
Operate time (at nomi. volt.)	10ms max.	
Release time (at nomi. volt.)	10ms max.	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Humidity	35% to 85% RH	
Ambient temperature	-40°C to 85°C	
Termination	PCB	
Unit weight	Approx. 10g	
Construction	Plastic sealed, Flux proofed	

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



HONGFA RELAY

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

2010 Rev. 1.00

ORDERING INFORMATION

HF3FF-M / 012 -1H S (XXX)

Type
 HF3FF-M: 0.45W
 HF3FF-M1: 0.64W
 HF3FF-M2: 0.80W

Coil voltage 009: 9VDC 012: 12VDC 024: 24VDC

Contact arrangement 1H: 1 Form A 1Z: 1 Form C

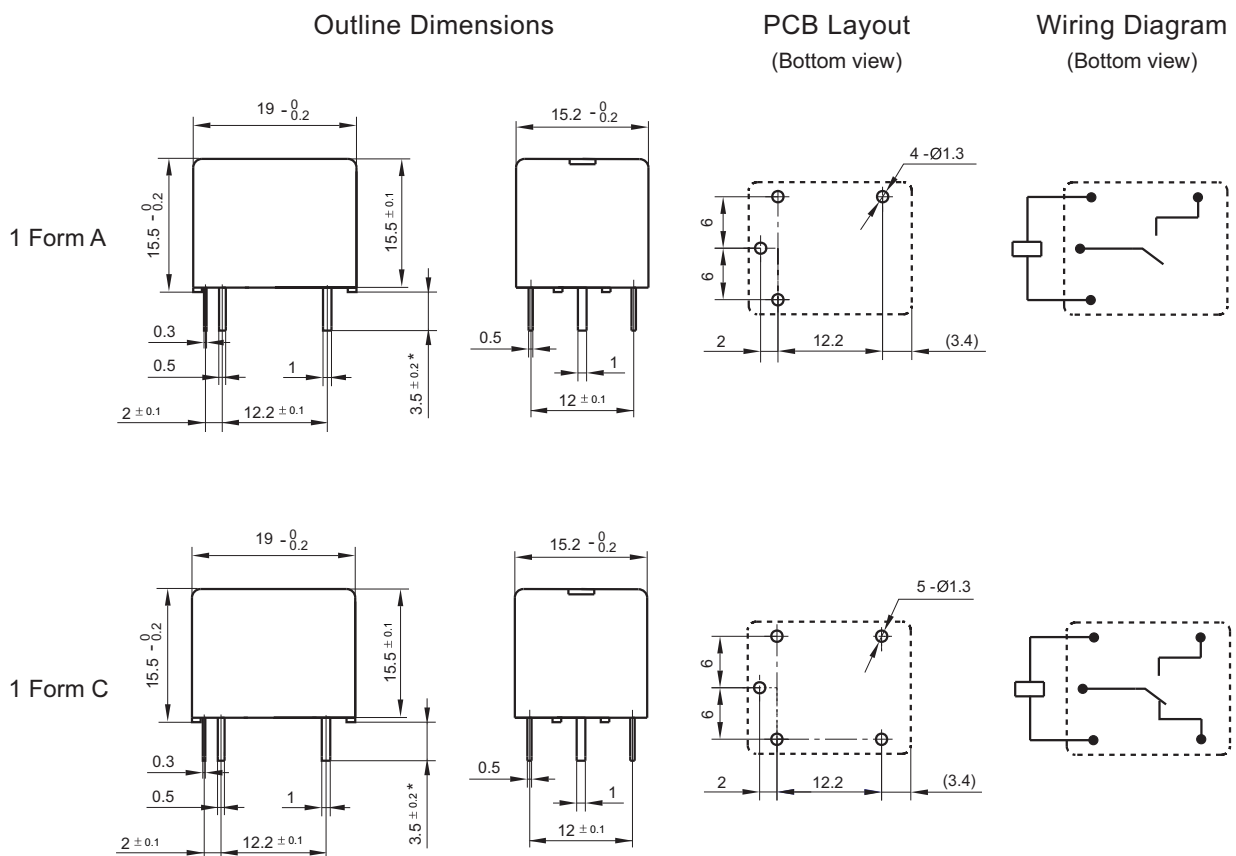
Construction¹⁾ S: Plastic sealed Nil: Flux proofed

Customer special code

Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H₂S, SO₂, NO₂, dust, etc.). We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H₂S, SO₂, NO₂, dust, etc.).
 If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PCB BOARD LAYOUT

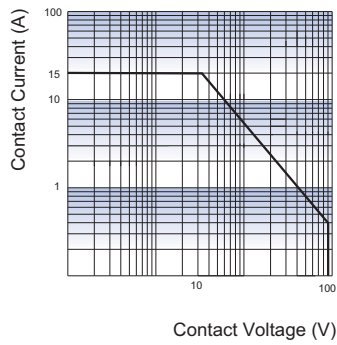
Unit: mm



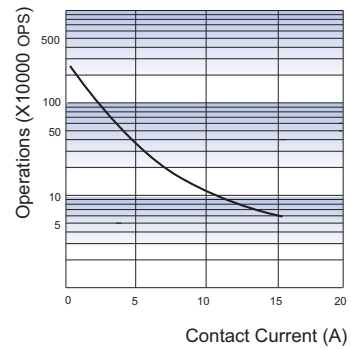
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
 2) The tolerance without indicating for PCB layout is always ±0.1mm.

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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