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 max.(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	1×10^7OPS	
Electrical endurance	1×10^5OPS	

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/s²
	Destructive	980m/s²
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% 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.
3) UL insulation system: Class A

COIL

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

COIL DATA at 23˚C

	Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	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	5.15	0.60	10.8	100 x (1±10%)
	12	6.80	0.80	14.4	180 x (1±10%)
	24	13.70	1.60	28.8	720 x (1±10%)

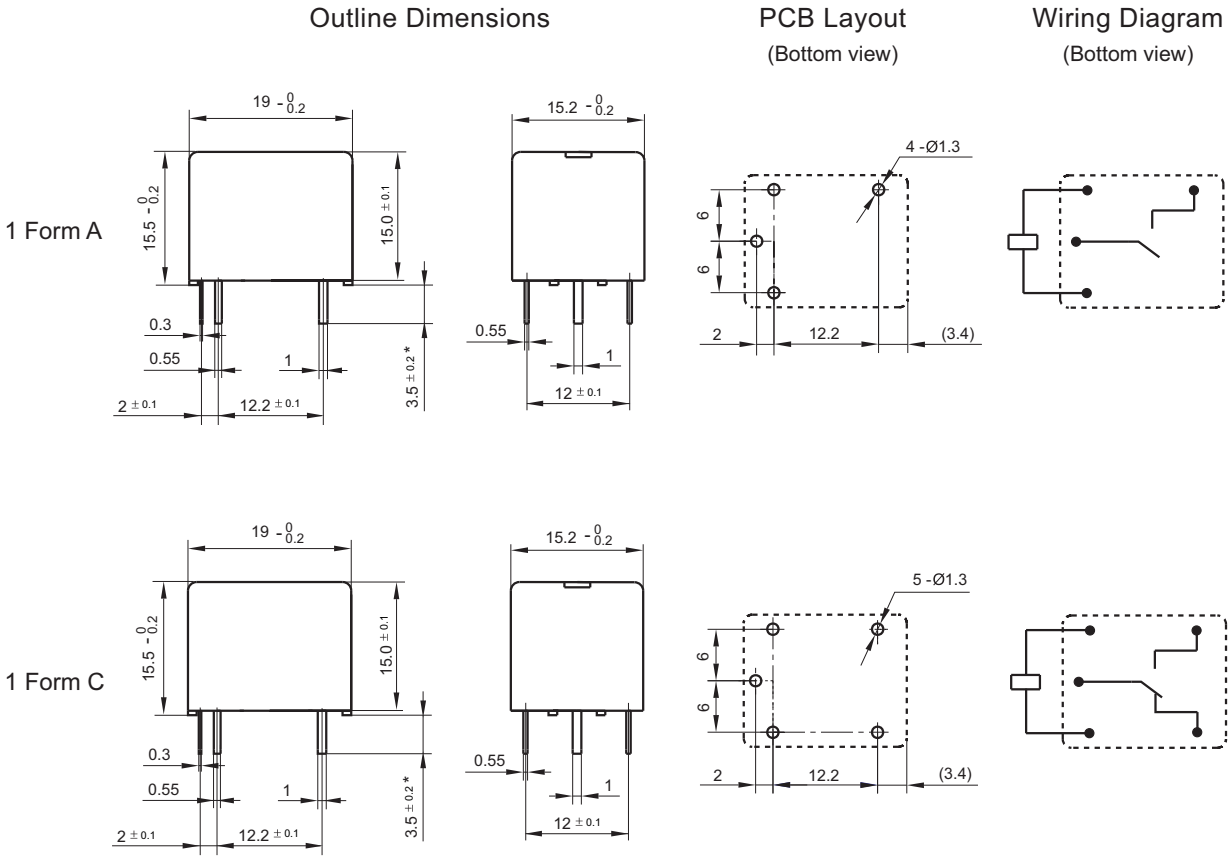
ORDERING INFORMATION

	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				
Construction[1)]	**S:** Plastic sealed **Nil:** Flux proofed				
Customer special code					

Notes: 1) We recommend flux proofed types for a clean environment (free from contaminations like H_2S, SO_2, NO_2, dust, etc.). We suggest to choose plastic sealed types and validate it in real application for an unclean environment (with contaminations like H_2S, SO_2, NO_2, 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 PC BOARD LAYOUT

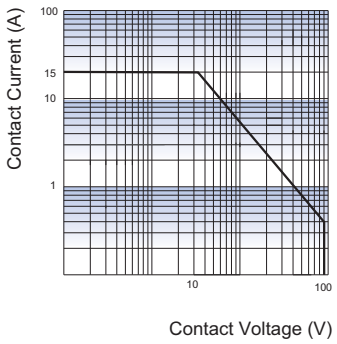
Unit: mm



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