

HF12FF

SUBMINIATURE HIGH POWER RELAY


File No.:E134517


File No.:CQC09002036155



Features

- 12A switching capability
- 1 Form A configuration
- Subminiature, standard PCB layout
- Plastic sealed and flux proofed types available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (18.4 x 15.2 x 10.2) mm

CONTACT DATA	
Contact arrangement	1A
Contact resistance	100mΩ max.(at 1A 24VDC)
Contact material	AgSnO ₂
Contact rating (Res. load)	10A 277VAC/30VDC 12A 125VAC
Max. switching voltage	277VAC
Max. switching current	12A
Max. switching power	2770VA / 300W
Mechanical endurance	1 x 10 ⁷ OPS
Electrical endurance	1 x 10 ⁵ OPS

CHARACTERISTICS		
Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	2500VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)		8ms max.
Release time (at nomi. 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
Unit weight		Approx. 6g
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	Approx. 450mW

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	
3	2.25	0.15	3.90	20 x (1±10%)	
5	3.75	0.25	6.50	55 x (1±10%)	
6	4.50	0.30	7.80	80 x (1±10%)	
9	6.75	0.45	11.7	180 x (1±10%)	
12	9.00	0.60	15.6	320 x (1±10%)	
18	13.5	0.90	23.4	720 x (1±10%)	
24	18.0	1.20	31.2	1280 x (1±10%)	

SAFETY APPROVAL RATINGS	
UL/CUL	12A 125VAC
	10A 277VAC
	13.5A 125VAC
	10A 30VDC
	TV-5
1/4HP 125VAC / 250VAC	

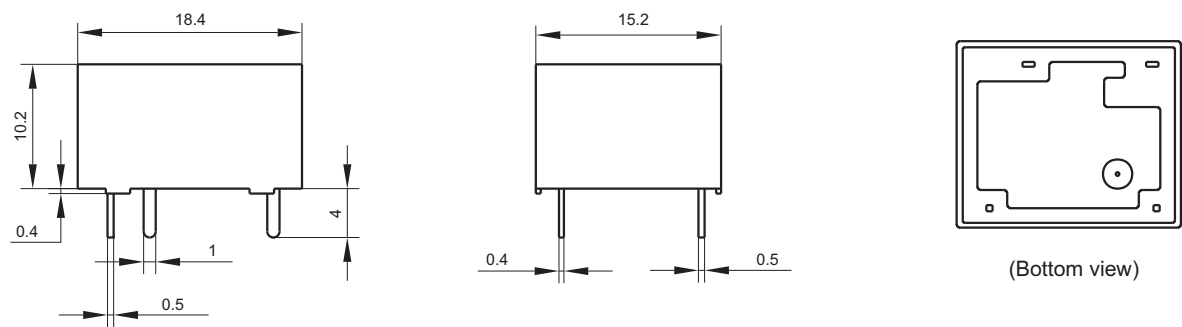
Notes: Only some typical ratings are listed above. If more details are required, please contact us.

ORDERING INFORMATION				
Type	HF12FF /	012	-H	S (XXX)
Coil voltage	3, 5, 6, 9, 12, 18, 24VDC			
Contact arrangement	H: 1 Form A			
Construction ¹⁾	S: Plastic sealed Nil: Flux proofed			
Customer special code				
Notes: 1) Under the ambience with dangerous gas like H₂S, SO₂ or NO₂, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended. If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.				

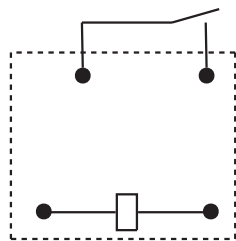
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

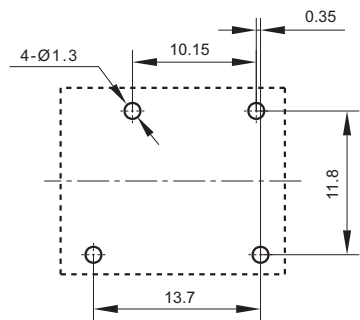
Outline Dimensions



Wiring Diagram
(Bottom view)



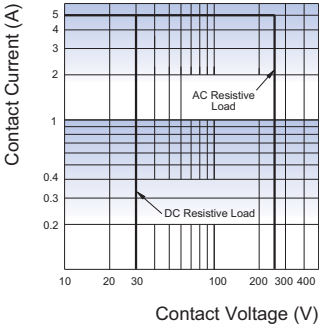
PCB Layout
(Bottom view)



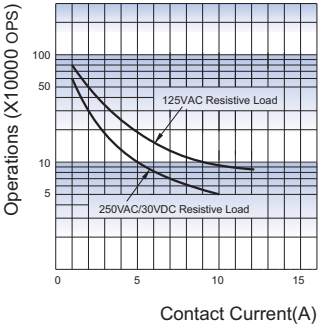
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension > 1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.

CHARACTERISTIC CURVES

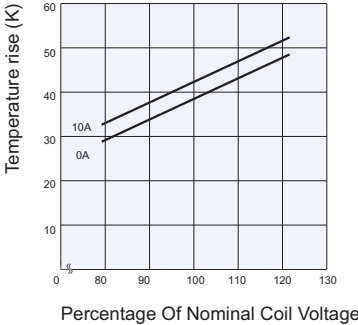
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



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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