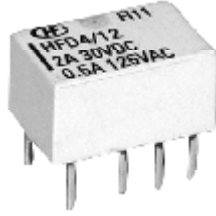


HFD4

SUBMINIATURE SIGNAL RELAY



Features

- Offers excellent board space savings
- Surge withstand voltage up to 2500V, meets FCC Part 68 and Telecordia
- Meets EN60950/EN41003
- SMT and DIP types available
- High contact capacity 2A 30VDC
- Low power consumption
- Single side stable and latching type available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (10.0 x 6.5 x 5.4) mm

CONTACT DATA

Contact arrangement	2C
Contact resistance	70mΩ
Contact material	Silver alloy, Gold clad
Contact rating (Res. load)	2A 30VDC 0.5A 125VDC
Max. switching current	2A
Max. switching voltage	220VDC / 250VAC
Max. switching power	60W / 62.5VA
Min. applicable load	10mV 10μA
Mechanical endurance	1 x 10 ⁸ OPS
Electrical endurance	1 x 10 ⁵ OPS (at 2A 30VDC) 1 x 10 ⁵ OPS (at 0.5A 125VAC)

COIL

Coil power	Single side stable	140mW
	1 coil latching	100mW
Temperature rise	50K max.	

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	1800VAC 1min
	Between open contacts	1000VAC 1min
	Between contact sets	1800VAC 1min
Surge withstand voltage		1500VAC (FCC part 68) 2500VAC (Telecordia)
Between open contacts (10×160μs)		
Between coil & contacts (2×10μs)		
Operate time (Set time)		3ms max.
Release time (Reset time)		3ms max.
Ambient temperature		-40°C to 85°C
Humidity		98% RH, 40 °C
Vibration resistance	Functional	10Hz to 55Hz 3.3mm DA
	Destructive	10Hz to 55Hz 5.0mm DA
Shock resistance	Functional	735m/s ²
	Destructive	980m/s ²
Termination		DIP, SMT
Unit weight		Approx. 0.8g
Construction		Wash tight

Notes: The data shown above are initial values.



HONGFA RELAY

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

2008 Rev. 1.00T

COIL DATA

at 23°C

Single side stable

Order Number	Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Coil Resistance Ω	Nominal Power mW	Max. Allowable Voltage VDC
HFD4/1.5	1.5	1.13	0.15	16 x (1±10%)	140	2.2
HFD4/3	3	2.25	0.3	64.3 x (1±10%)	140	4.5
HFD4/4.5	4.5	3.38	0.45	145 x (1±10%)	140	6.7
HFD4/5	5	3.75	0.5	178 x (1±10%)	140	7.5
HFD4/6	6	4.5	0.6	257 x (1±10%)	140	9.0
HFD4/9	9	6.75	0.9	579 x (1±10%)	140	13.5
HFD4/12	12	9	1.2	1028 x (1±10%)	140	18.0
HFD4/24	24	18	2.4	2880 x (1±10%)	200	36.0

1 coil latching

Order Number	Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Coil Resistance Ω	Nominal Power mW	Max. Allowable Voltage VDC
HFD4/1.5-L	1.5	1.13	1.13	22.5x (1±10%)	100	3.0
HFD4/3-L	3	2.25	2.25	90x (1±10%)	100	6.0
HFD4/4.5-L	4.5	3.38	3.38	203x (1±10%)	100	9.0
HFD4/5-L	5	3.75	3.75	250x (1±10%)	100	10.0
HFD4/6-L	6	4.5	4.5	360x (1±10%)	100	12.0
HFD4/9-L	9	6.75	6.75	810x (1±10%)	100	18.0
HFD4/12-L	12	9	9	1440x (1±10%)	100	24.0
HFD4/24-L	24	18	18	2880x (1±10%)	200	36.0

Notes: When user's requirements can't be found in the above table, please contact us.

ORDERING INFORMATION

	HFD4 /	24	-L	S	R	(XXX)
Type						
Coil voltage	1.5, 3, 4.5, 5, 6, 9, 12, 24, 48VDC					
Sort	L: 1 coil latching		Nil: Single side stable			
Terminal type	S: Standard SMT		Nil: DIP			
Packing style	R: Tape and reel packing (Only for SMT type) ¹⁾			Nil: Tube packing		
Customer special code						

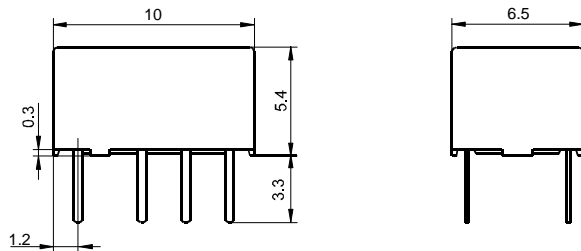
Notes: 1) For the R type, the letter "R" will only be printed on packing tag and will not appear on relay cover.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

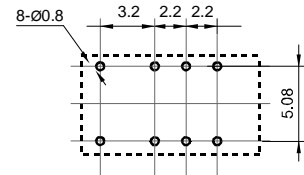
Unit: mm

DIP type

Outline Dimensions

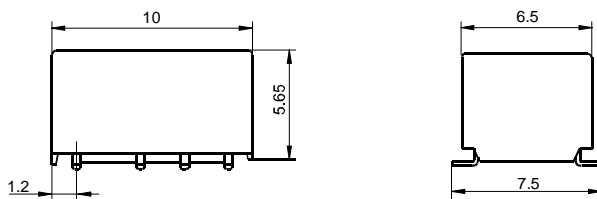


PCB Layout
(Bottom view)

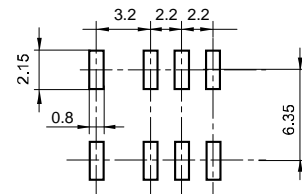


SMT type

Outline Dimensions

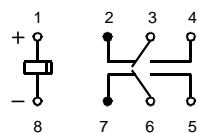


PCB Layout
(Bottom view)



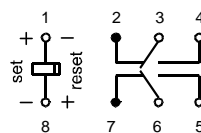
Wiring Diagram
(Bottom view)

Single side stable



No energized condition

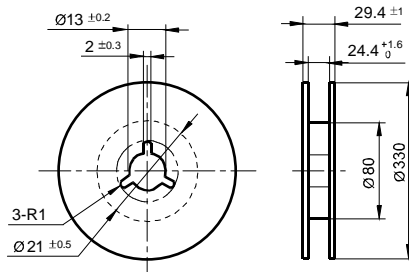
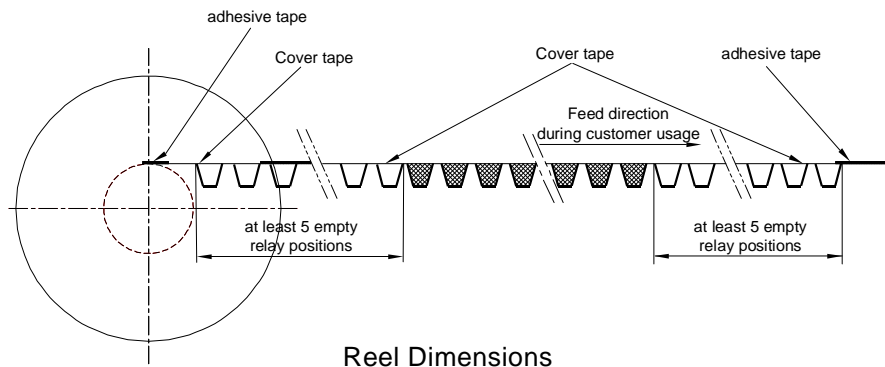
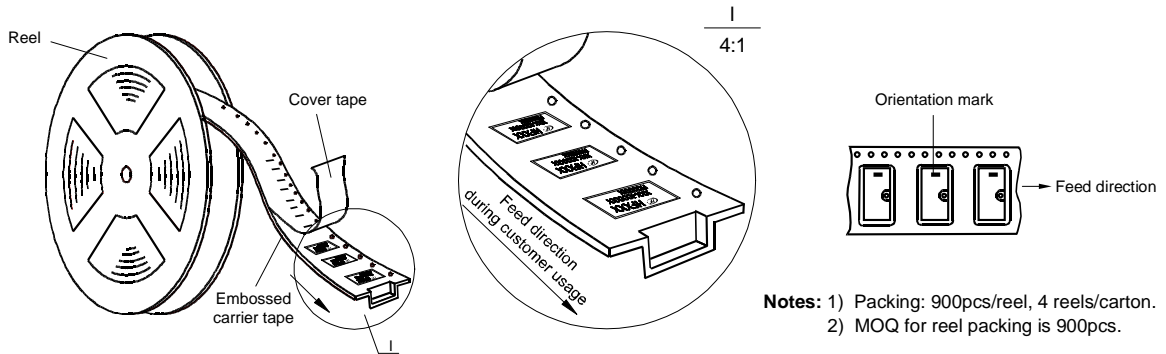
1 coil latching



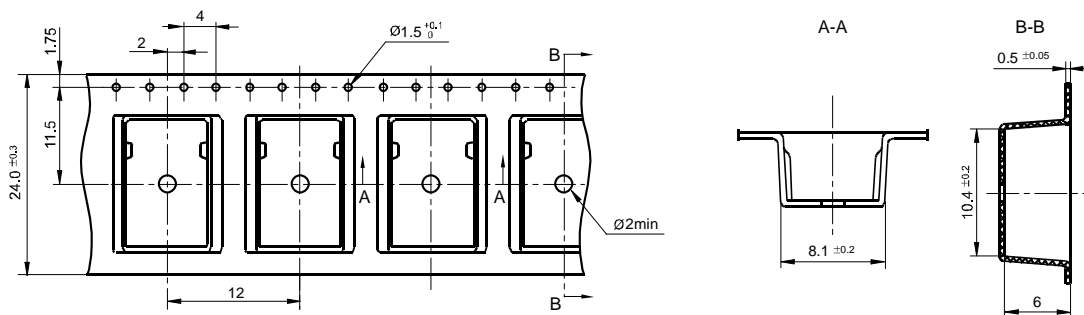
reset condition

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

Direction of Relay Insertion



Tape Dimensions (S type: Standard SMT)



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.