


HFKT/HFKT-T

AUTOMOTIVE RELAY



Typical Applications
ABS control, Cooling fan,Engine control,Fuel pump,
Heating plug,Hazard warning lamp,Fog lamp & headlight,
EPS>window & mirror defogger

Features

- Max.continuous current 40A
- Max.making current 200A
- Extended temp. range up to 105°C
- With highly established reliability
- Strong resistance ability to shock & vibration
- Reflow soldering version available
- RoHS & ELV compliant

CHARACTERISTICS

Contact arrangement	1A	Release time ⁵⁾	Typ.: 1.5ms Max.: 5ms
Voltage drop (initial) ¹⁾	Typ.: 30mV (at 10A) Max.: 300mV (at 10A)	Ambient temperature	-40°C to 105°C
Max. continuous current ²⁾	40A (at 23°C) 33A (at 85°C) 22A (at 105°C)	Vibration resistance ⁶⁾	30Hz ~ 440Hz, 196m/s ² 294m/s ² ,
Max. switching current	Make: 200A ⁽³⁾ Break: 40A (Resistive, 13.5VDC)	Shock resistance ⁶⁾	close time of NO contacts <100µs 980m/s ² ,
Max. switching voltage	16VDC	Termination	PCB ⁷⁾
Min. contact load	1A 6VDC	Construction	Plastic sealed, Flux proofed
Electrical endurance	See "CONTACT DATA"	Unit weight	Approx. 11g
Mechanical endurance	2 x 10 ⁶ OPS	<div>1) Initial value</div> <div>2) Measured when applying 100% rated votage on coil.</div> <div>3) Inrush peak current under lamp load, at 13.5VDC.</div> <div>4) 1min, leakage current less than 1mA.</div> <div>5) The value is measured when voltage drops suddenly from nominal voltage to 0 VDC and coil is not paralleled with suppression circuit.</div> <div>6) when non-energized,close time of NO contacts shall not exceed 100µs, When energized, opening time of closed NO contacts shall not exceed 100µs.</div> <div>7) Since it is an environmental friendly product, please select lead-free solder when welding. The recommended soldering temperature and time is (250±3)°C , (5±0.3)s.</div>	
Initial insulation resistance	100MΩ (at 500VDC)		
Dielectric strength ⁴⁾	500VAC		
Operate time	Typ.: 4ms, Max.: 10ms		

CONTACT DATA¹⁾

Load voltage	Load type		Load current	On/Off ratio		Electrical endurance ¹⁾ OPS	Contact material	Ambient temp.
			1A	On s	Off s			
			NO					
13.5VDC	Resistive	Make	40	0.5	4.5	1×10 ⁵	AgSnO ₂	See Ambient Temp. Curve
		Break	40					
	Inductive L=0.5mH	Make	60	0.5	4.5	1×10 ⁵	AgSnO ₂	
		Break	35					
	Lamp	Make	200	0.5	4.5	1×10 ⁵	AgSnO ₂	
		Break	20					

1) Loads mentioned in this chart is for relays with no parallel diode or Zener Diode. For those with parallel diode, Zener Diode or other components, please contact Hongfa for more technical supports.
Please also contact Hongfa if the actual application load is diffrent from what mentioned above.

COIL DATA					23°C
Nominal voltage VDC	Pick-up voltage VDC max.	Drop-out voltage VDC min.	Coil resistance x(1±10%)Ω	Power consumption W	Max. allowable overdrive voltage ¹⁾ VDC
10	5.6	1.3	120	0.833	14.8
12	6.9	1.5	176	0.818	18

1) Max. allowable overdrive voltage is stated with no load applied.

ORDERING INFORMATION

Type

HFKT: Standard
HFKT-T: Reflow soldering version¹⁾

Coil voltage

10: 10VDC 12: 12VDC

Contact arrangement

H: 1 Form A

Construction

S: Plastic sealed²⁾ Nil: Flux proofed (Reflow soldering version)

Contact Material

T: AgSnO₂

Customer special code

HFKT /

12

-H

S

T

(XXX)

Notes: 1) The structure of HFKT-T is only flux proof, the open vent hole is on the top of the relay;
2) 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

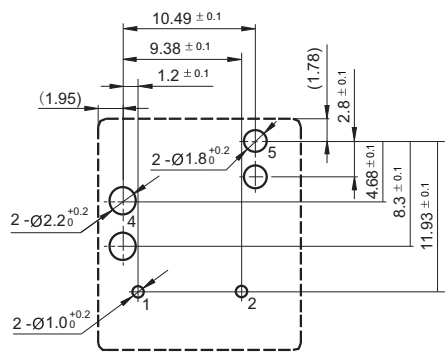


Remark: * The additional tin top is max. 1mm.

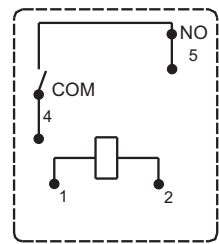
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

PCB Layout (Bottom view)



Wiring Diagram(Bottom view)



CHARACTERISTIC CURVES

Ambient temperature curve of the electrical endurance test

Ambient temp. curve (one cycle)



- 1) The minimum temperature is -40°C.
- 2) The maximum temperature is 85°C.

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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