

### Features

- 35A switching capability
- Ambient temp.: range up to 125°C
- 1 Form A & 1 Form C contact arrangement
- Dust protected
- RoHS & ELV compliant

### Typical Applications

Heaters (seat, front/rear windows), Fan motors control, Fuel pump control, Wiper control, Headlight control, Air-conditioning, Electromagnet control, Lighting control, Start / stop control, Linkage device

**RoHS compliant**

## CHARACTERISTICS

Contact arrangement	1A, 1C
Voltage drop	NO: Typ. 15mV, 250mV max. (at 10A) NC: Typ. 20mV, 250mV max. (at 10A)
Max. continuous current <sup>1)</sup>	NO: 35A(23°C), 30A(85°C), 15A(125°C) NC: 25A(23°C), 20A(85°C), 10A(125°C)
Max. switching current	Make (NO): 150A <sup>2)</sup> Breaker(NO): 35A(Resistive, 13.5VDC)
Min. contact load	1A 6VDC <sup>3)</sup>
Electrical endurance	See "CONTACT DATA"
Mechanical endurance	1×10 <sup>6</sup> OPS 300OPS/min
Insulation resistance	100MQ(500VDC)
Dielectric strength <sup>4)</sup>	500VAC
Operate time	Max.: 10ms(at rated voltage)
Release time <sup>5)</sup>	Parallel transient suppression resistors, max.: 15ms Without parallel components, max.: 10ms
Ambient temperature	-40°C to 125°C

Vibration resistance <sup>6)</sup>	10Hz Vibration spectrum density 1.9324(m/s <sup>2</sup> )/Hz 20Hz Vibration spectrum density 4.8085(m/s <sup>2</sup> )/Hz 100Hz Vibration spectrum density 4.8085(m/s <sup>2</sup> )/Hz 800Hz Vibration spectrum density 0.0962(m/s <sup>2</sup> )/Hz 2000Hz Vibration spectrum density 0.0962(m/s <sup>2</sup> )/Hz
Shock resistance <sup>6)</sup>	294m/s <sup>2</sup>
Flammability <sup>7)</sup>	UL94-HB or better (meets FMVSS 302)
Termination	QC
Construction	Dust protected
Unit weight	Approx 24g

- 1) For NO contacts, measured when applying 100% rated voltage on coil.
- 2) Inrush peak current under lamp load, at 13.5VDC.
- 3) This value can change due to the switching frequency, environmental conditions and desired reliability level, therefore it is recommended to check this with the actual load.
- 4) 1min, leakage current less than 1mA.
- 5) The value is measured when voltage drops suddenly from nominal voltage to 0 VDC and coil is not paralleled with suppression circuit.
- 6) When energized or non-energized, opening time of NO contacts shall not exceed 1ms.
- 7) FMVSS: Federal Motor Vehicle Safety Standard.

## COIL DATA

Nominal Voltage VDC	Pick-up Voltage VDC max	Drop-out voltage VDC min	Coil Resistance ×(1±10%)Ω	Parallel Resistance ×(1±5%)Ω	Equivalent Resistance ×(1±10%)Ω	Power Consumption W	Max. allowable overdrive voltage <sup>1)</sup> VDC
12	8.0	1.0	125	—	—	1.2	18
12	8.0	1.0	125	1000	111	1.3	18

1) Max. allowable overdrive voltage is stated with no load applied and minimum coil resistance.



HONGFA RELAY

ISO9001、IATF16949、ISO14001、OHSAS18001、IECQ QC 080000 CERTIFIED

2021 Rev. 1.00

## CONTACT DATA

Load voltage	Load type		Load current			On/Off ratio		Electrical endurance OPS	Contact material	Ambient temp
			1A		1C	On s	Off s			
			NO	NC	NO					
14 VDC	Resistive	Make	35	20	35	2	2	1×10 <sup>5</sup>	AgSnO <sub>2</sub>	See Ambient temp. curve
		Break	35	20	35					
	Inductive	Make <sup>1)</sup>	80	40	80	2	2	1×10 <sup>5</sup>	AgSnO2	
		Break	30	20	30					
	Lamp	Make	150 <sup>2)</sup>	—	150	2	2	1×10 <sup>5</sup>	AgSnO2	
		Break	30	—	30					

1) Corresponds to the peak inrush current on initial actuation.

2) Corresponds to the peak inrush current on initial actuation (cold filament).

3) 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 different from what mentioned above.

## ORDERING INFORMATION

Type	HFV6H-G / 12 -H 7 <input type="checkbox"/> T J R (XXX)
Coil voltage	12: 12VDC
Contact arrangement	H: 1 Form A Z: 1 Form C
Construction	7: hexagon bolt Nil: QC type (Without metal bracket)
Coil power	Nil: Dust protected
Contact material	T : AgSnO <sub>2</sub>
Terminal	J: QC Terminal without hole Nil: QC Terminal with hole
Parallel coil components <sup>1)</sup>	R: Parallel transient suppression resistors Nil: Without parallel components
Special code	XXX: Customer special requirement Nil: Standard

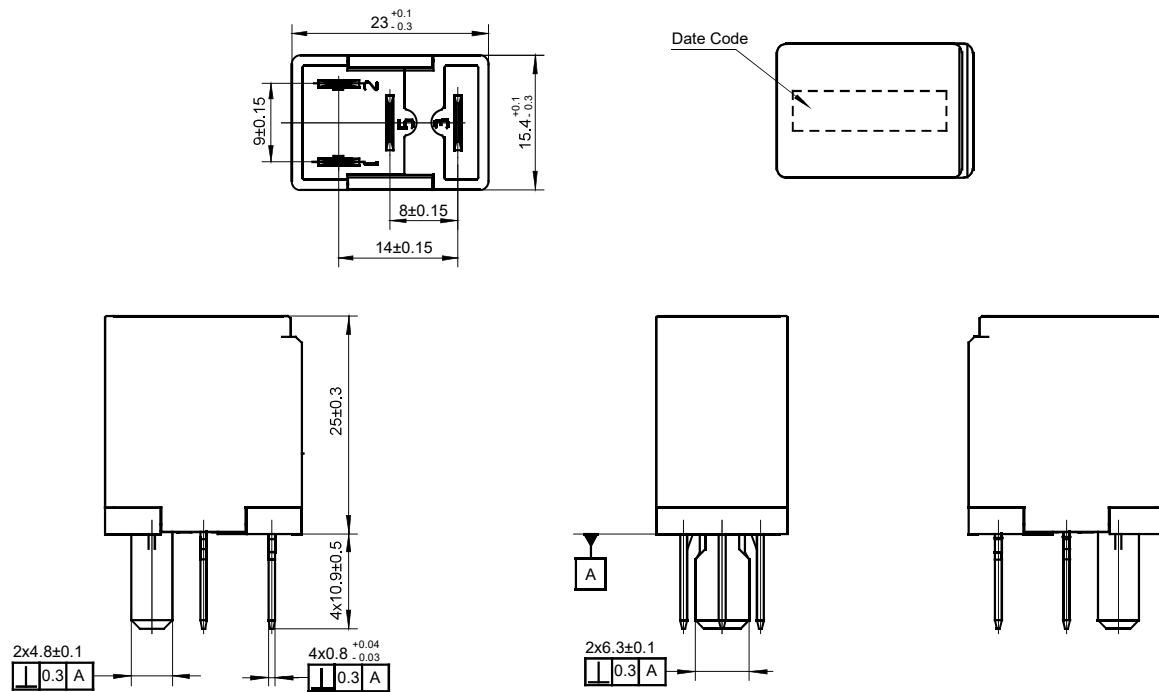
1) Recommended using dust-proof covers;

2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB;

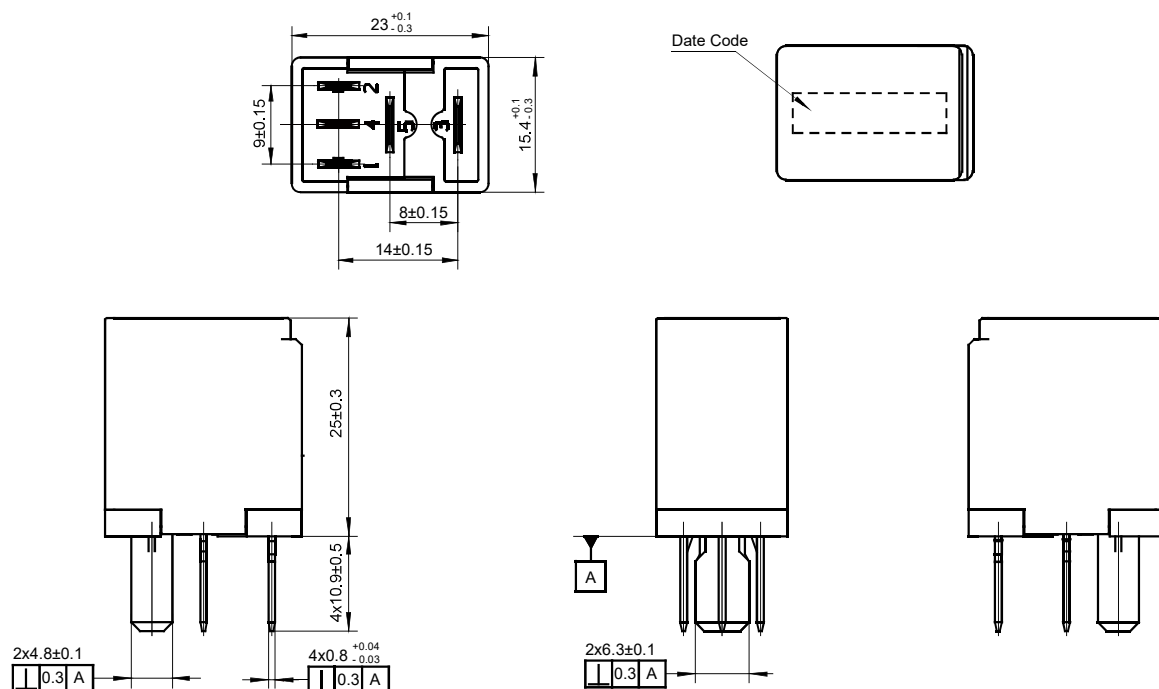
3) The performance parameters of products with characteristic numbers shall be subject to the specific specifications provided by Hongfa.

## Outline Dimensions

HFV6H-G/12-HTJ-R(XXX)



HFV6H-G/12-ZTJ-R(XXX)

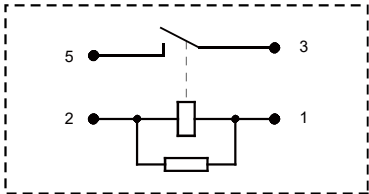


# OUTLINE DIMENSIONS, WIRING DIAGRAM AND TERMINAL FUNCTION DEFINITION

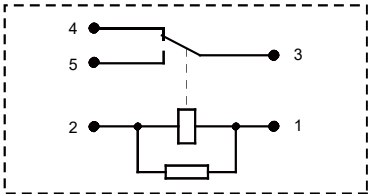
Unit: mm

## Wiring Diagram

HFV6H-G/□□-H□□T□-R(XXX)



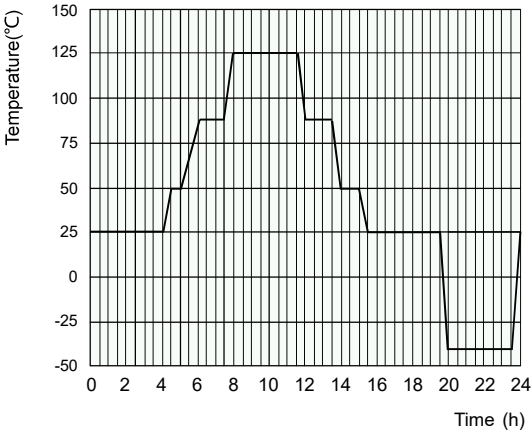
HFV6H-G/□□-Z□□T□-R(XXX)



## 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 125°C.

### Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. In case there is specific criterion (such as mission profile, technical specification, PPAP etc.) checked and agreed by and between customer and Hongfa, this specific criterion should be taken as standard regarding any requirement on Hongfa product. 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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