HF37F MINIATURE HIGH POWER RELAY

File No.:E134517

File No.:40025378

File No.:CQC13002102287

Features

- 30A switching capability
- 70A withstands inrush current
- TV-15 (at 120VAC) available
- 1 Form A configuration
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (35.2 x 32.2 x 24.0) mm

CONTACT DATA

Contact arrangement	1A
Contact resistance 1)	100mΩ max.(at 1A 6VDC)
Contact material	$AgSnO_2$, AgCdO
Contact rating (Res. load)	30A 250VAC
Max. switching voltage	277VAC
Max. switching current	30A
Max. switching power	7500VA
Mechanical endurance	5×10^6OPS
Electrical endurance	1HT, 1H type: 6×10^3OPS (30A 250VAC, Resistive load, at 40°C, 1s on 9s off) 1H type: 5×10^4OPS (23A cosØ=1 250VAC, Resistive load, at 70°C, 1.5s on 1.5s off)

Notes: 1) The data shown above are initial values.

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1200VAC 1min
Operate time (at nomi. volt.)		20ms max.
Release time (at nomi. volt.)		5ms max.
Shock resistance	Functional	196m/s²
	Destructive	980m/s²
Vibration resistance		10Hz to 55Hz 1.5mm DA
Ambient temperature		-40°C to 70°C
Humidity		5% to 85% RH
Termination		QC
Unit weight		Approx. 55g
Construction		Dust protected

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. 1.2W

COIL DATA at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.1)	Drop-out Voltage VDC min.1)	Max. Voltage VDC *2)	Coil Resistance Ω
5	3.50	0.50	6.0	20.8 x (1±10%)
6	4.20	0.60	7.2	30 x (1±10%)
9	6.30	0.90	10.8	67.5 x (1±10%)
12	8.40	1.20	14.4	120 x (1±10%)
24	16.8	2.40	28.8	480 x (1±10%)
48	33.6	4.80	57.6	1920 x (1±10%)
60	42.0	6.00	72.0	3000 x (1±10%)

Notes: 1) The data shown above are initial values.
2)*Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

UL/CUL	$AgSnO_2$	30A 250VAC 2HP 125VAC/250VAC TV-15 120VAC
	AgCdO	30A 250VAC 2HP 125VAC/250VAC TV-15 120VAC
VDE	AgCdO	23A 250VAC at 70°C

Notes: 1) All values unspecified are at room temperature.
2) Only typical loads are listed above. Other load specifications can be available upon request.

ORDERING INFORMATION

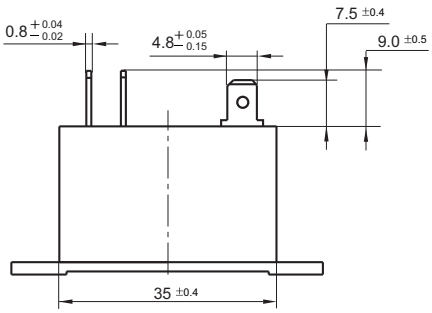
	HF37F /	012	-1H	T	(XXX)
Type					
Coil voltage	5, 6, 9, 12, 24, 48, 60VDC				
Contact arrangement	**1H:** 1 Form A				
Contact material	**T:** $AgSnO_2$ **Nil:** AgCdO				
Special code[2)]	**XXX:** Customer special requirement **Nil:** Standard				

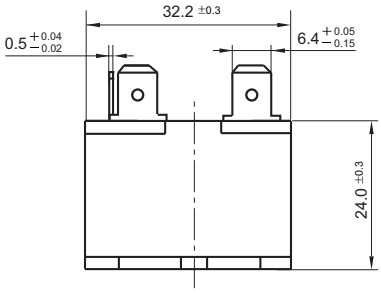
Notes: 1) The terminal for HF37F is QC type. Please don't weld directly on terminal.
2) The customer special requirement express as special code after evaluating by Hongfa.

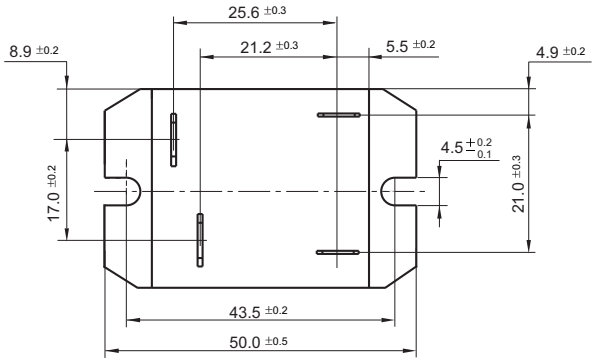
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions



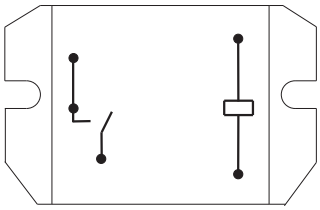




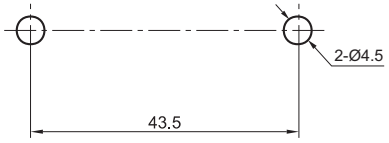
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Wiring Diagram (Top view)



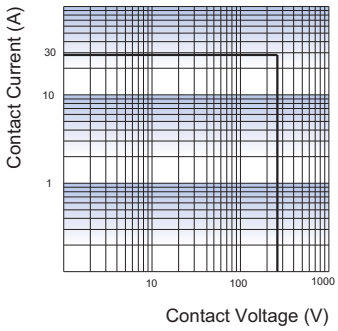
Mounting holes



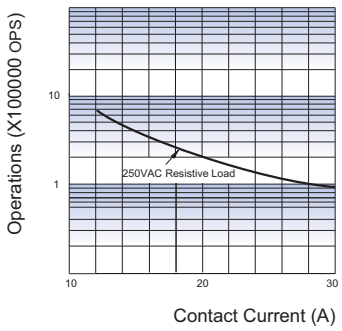
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.

CHARACTERISTIC CURVES

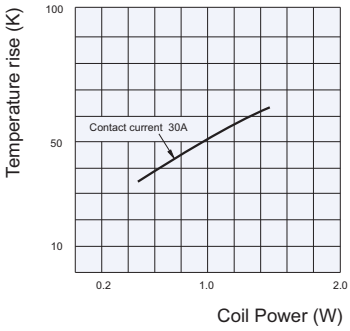
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



Notes:
1) Curve:1HT type (or 1H type)
2) Test conditions: at 70˚C, 1s on 9s off.

Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications 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.