

HF42F

SUBMINIATURE INTERMEDIATE POWER RELAY



File No.:E133481



File No.:R50278397



File No.:CQC09002034521



Features

- 5A switching capability
- TV-3 125VAC approved by UL standard
- 2 Form A slim configuration
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (23.6 x 12.0 x 24.8) mm

CONTACT DATA

| | |
|----------------------------|---|
| Contact arrangement | 2A |
| Contact resistance | 100mΩ max. (at 1A 6VDC) |
| Contact material | AgSnO ₂ , AgCdO |
| Contact rating (Res. load) | 5A 250VAC/30VDC |
| Max. switching voltage | 250VAC / 30VDC |
| Max. switching current | 5A |
| Max. switching power | 1250VA / 150W |
| Mechanical endurance | 1 x 10 ⁷ OPS |
| Electrical endurance | 5 x 10 ⁴ OPS (5A 250VAC, Resistive load, Room temp., 1s on 9s off) |

CHARACTERISTICS

| | | |
|-------------------------------|-------------------------|---------------------|
| Insulation resistance | 1000MΩ (at 500VDC) | |
| Dielectric strength | Between coil & contacts | 4000VAC 1min |
| | Between open contacts | 1000VAC 1min |
| | Between contact sets | 2000VAC 1min |
| Operate time (at nomi. volt.) | 15ms max. | |
| Release time (at nomi. volt.) | 10ms max. | |
| Humidity | 5% to 85% RH | |
| Ambient temperature | -40°C to 70°C | |
| Shock resistance | Functional | 98m/s ² |
| | Destructive | 980m/s ² |
| Vibration resistance | 10Hz to 55Hz 1.5mm DA | |
| Termination | PCB | |
| Unit weight | Approx. 14.5g | |
| Construction | Plastic sealed | |

- 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. 530mW |
|------------|---------------|

COIL DATA

at 23°C

| Nominal Voltage VDC | Pick-up Voltage VDC max. | Drop-out Voltage VDC min. | Max. Voltage VDC * | Coil Resistance Ω |
|---------------------|--------------------------|---------------------------|--------------------|-------------------|
| 5 | 3.75 | 0.25 | 6.5 | 47 x (1±10%) |
| 6 | 4.50 | 0.30 | 7.8 | 68 x (1±10%) |
| 9 | 6.75 | 0.45 | 11.7 | 155 x (1±10%) |
| 12 | 9.00 | 0.60 | 15.6 | 270 x (1±10%) |
| 18 | 13.5 | 0.90 | 23.4 | 620 x (1±10%) |
| 24 | 18.0 | 1.20 | 31.2 | 1080 x (1±10%) |
| 48 | 36.0 | 2.40 | 62.4 | 4400 x (1±10%) |

Notes: *Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

SAFETY APPROVAL RATINGS

| | |
|--------|-------------|
| UL/CUL | 5A 250VAC |
| | 5A 30VDC |
| | TV-3 125VAC |
| TÜV | 5A 250VAC |
| | 5A 30VDC |

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



HONGFA RELAY

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

2014 Rev. 1.11

ORDERING INFORMATION

| | |
|----------------------------|----------------------------------|
| Type | HF42F / 012 -2H S T (XXX) |
| Coil voltage | 5, 6, 9, 12, 18, 24, 48VDC |
| Contact arrangement | 2H: 2 Form A |
| Construction ¹⁾ | S: Plastic sealed |
| Contact material | T: AgSnO ₂ Nil: AgCdO |

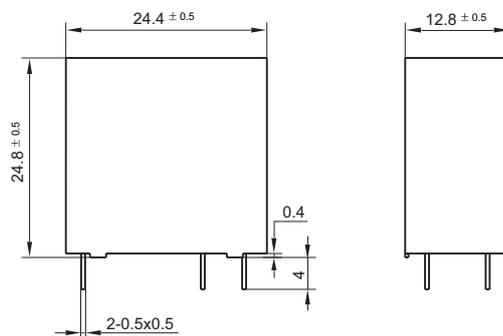
Customer special code

Notes: 1) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.

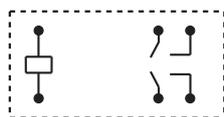
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

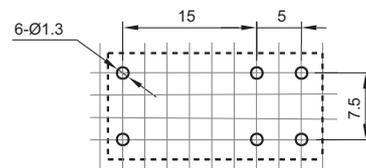
Outline Dimensions



Wiring Diagram
(Bottom view)



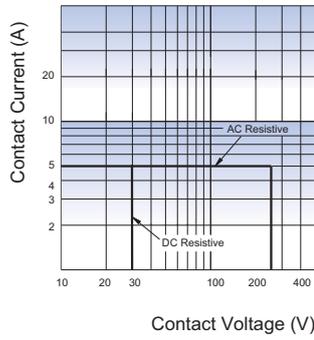
PCB Layout
(Bottom view)



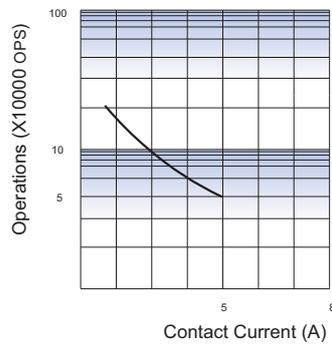
- Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.
 2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.
 3) The width of the gridding is 2.5mm.

CHARACTERISTIC CURVES

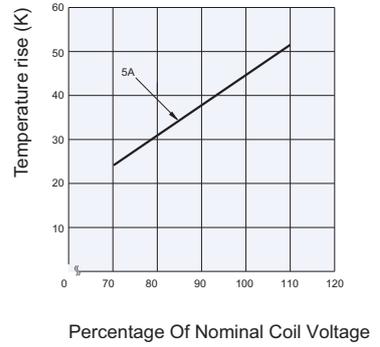
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



Test conditions:
5A 250VAC, Resistive load,
Room temp., 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.