

HF42F

SUBMINIATURE INTERMEDIATE POWER RELAY



File No.:E133481



File No.:40012203



File No.:CQC09002034521



Features

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

CONTACT DATA

| | |
|----------------------------|----------------------------|
| Contact arrangement | 2A |
| Contact resistance | 100mΩ (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 | 1 x 10 ⁵ OPS |

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, Flux proofed | |

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

2) Please find coil temperature curve in the characteristic curves below.

COIL

| | |
|------------|-------|
| Coil power | 530mW |
|------------|-------|

COIL DATA

at 23°C

| Nominal Voltage VDC | Pick-up Voltage VDC | Drop-out Voltage VDC | Max. Allowable 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%) |

SAFETY APPROVAL RATINGS

| | |
|--------|-------------------|
| UL/CUL | 5A 250VAC |
| | 5A 30VDC |
| | TV-3 125VAC |
| VDE | 5A 250VAC COSφ =1 |

Notes: Only some typical ratings are listed above. If more details are required, please contact us.



HONGFA RELAY

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

2010 Rev. 1.00

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 Nil: Flux proofed |
| Contact material | T: AgSnO ₂ Nil: AgCdO |

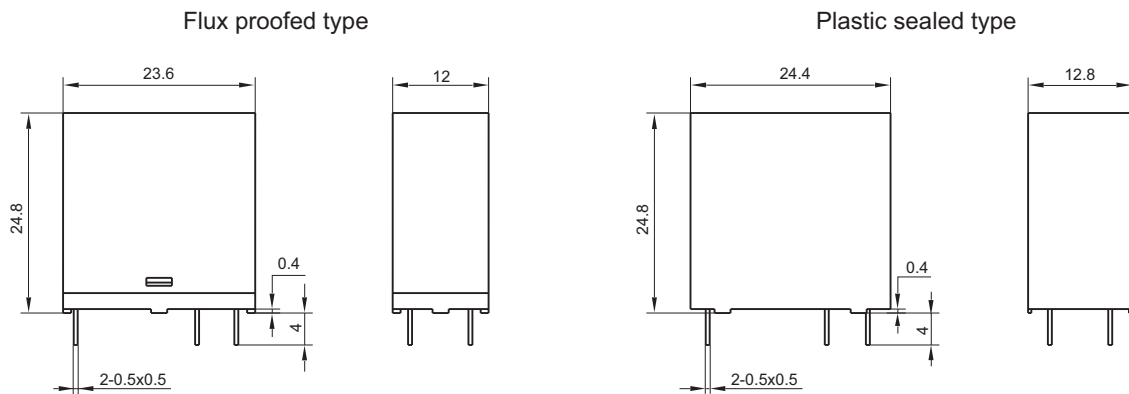
Customer special code

Notes: 1) Under the ambience with dangerous gas like H₂S, SO₂ or NO₂, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended.
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

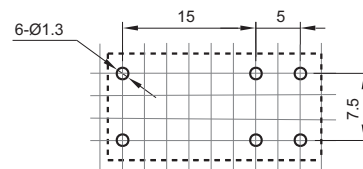
Outline Dimensions



Wiring Diagram
(Bottom view)



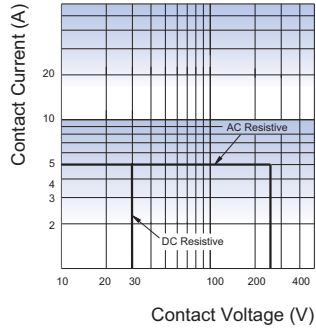
PCB Layout
(Bottom view)



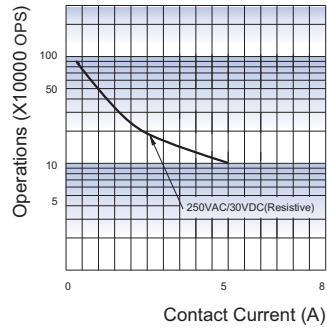
- Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.
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

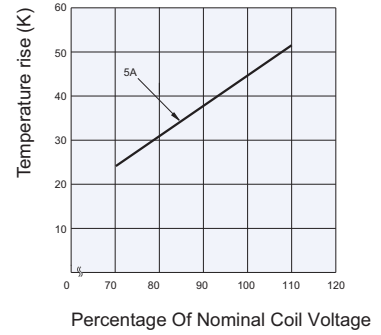
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL TEMPERATURE RISE



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.