1) Corresponds to the peak inrush current on initial actuation (motor).
2) When applied in flasher, a special silver alloy ($AgSnO_2$) contact material should be used and the customer special code should be (170) as a suffix. Please heed the anode and cathode's request when wired, common terminal should connect with anode.
3) When the load requirement is different from content of the table above, please contact Hongfa for relay application support.

COIL DATA

	Nominal voltage VDC	Pick-up voltage VDC			Drop-out voltage VDC			Coil resistance x(1±10%)Ω			Power consumption W
		23°C	85°C	125°C	23°C	85°C	125°C	23°C	85°C	125°C	23°C
Standard	12	⩽7.2	⩽9.0	⩽10.2	⩾1.0	⩾1.2	⩾1.4	225	280.8	316.8	0.64
Low pick-up voltage	12	⩽6.5	⩽8.2	⩽9.2	⩾1.0	⩾1.2	⩾1.4	180	224.6	253.4	0.8

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

ORDERING INFORMATION

HFKA / 012 -1Z S P T C (XXX)

Type **HFKA**: Standard
HFKA-T: Reflow soldering version/ High-temperature version

Coil voltage **012:** 12VDC

Contact arrangement **1H:** 1 Form A (Single version)
2H: 2 Form A (Twin version)
1Z: 1 Form C (Single version)
2Z: 2 Form C (Twin version)

Construction **S:** Plastic sealed [1] **Nil:** Flux proofed

Coil power **P:** Low pick-up voltage **Nil:** Standard

Contact material **T:** $AgSnO_2$

Packing style **C:** Tape and reel packing **Nil:** Tube packing

Special code[2] **XXX:** Customer special requirement **Nil:** Standard

Notes: 1) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.
2) The customer special requirement express as special code after evaluating by Hongfa. e.g. (170) stands for flasher load.

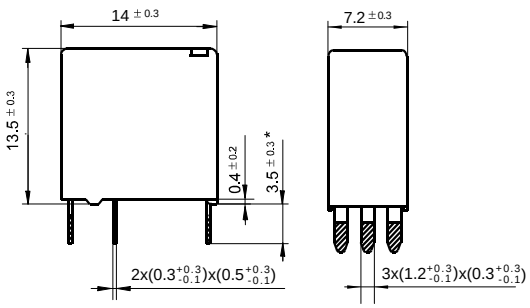
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

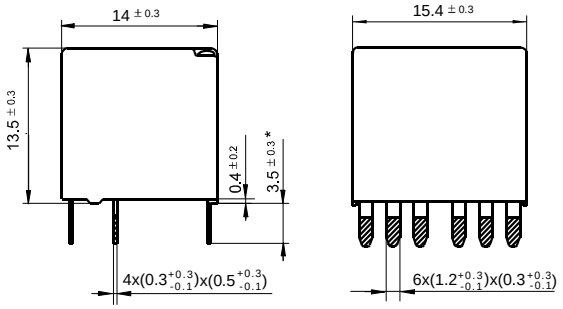
Outline Dimensions

HFKA (Standard)

1Z: 1 Form C (Single version)



2Z: 2 Form C (Twin version)

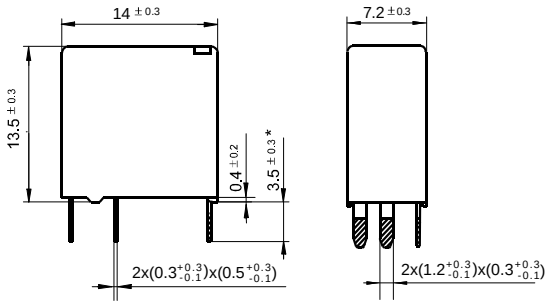


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

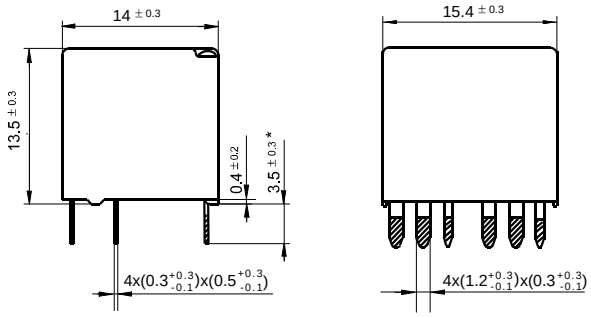
Unit: mm

Outline Dimensions

1H: 1 Form A (Single version)



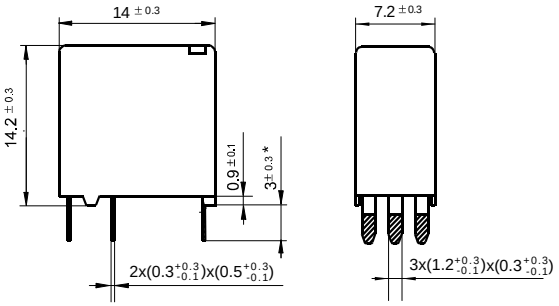
2H: 2 Form A (Twin version)



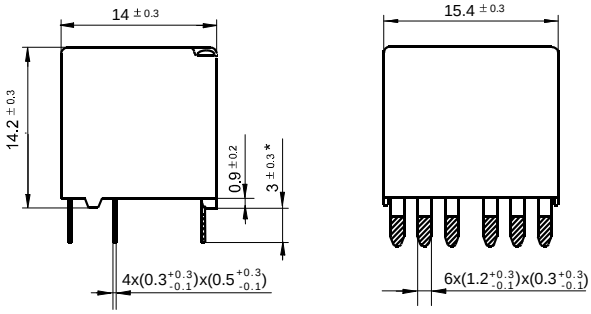
Remark: ***** The additional tin top is max. 1mm.

HFKA-T (Reflow soldering version / High-temperature version)

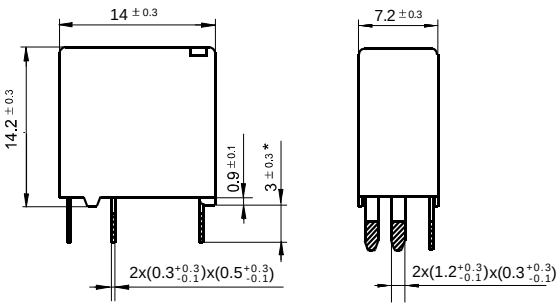
1Z: 1 Form C (Single version)



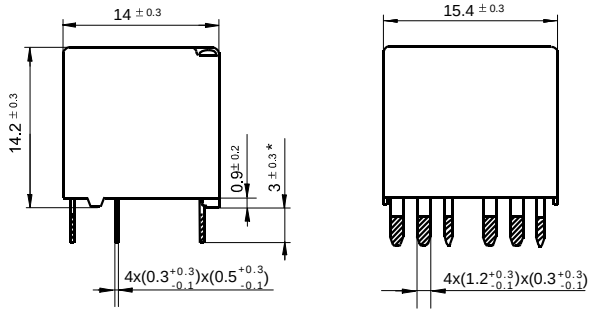
2Z: 2 Form C (Twin version)



1H: 1 Form A (Single version)



2H: 2 Form A (Twin version)



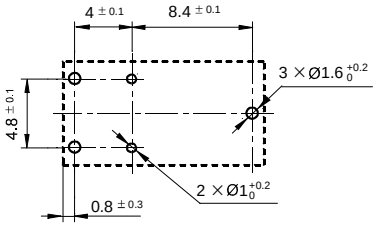
Remark: ***** The additional tin top is max. 1mm.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

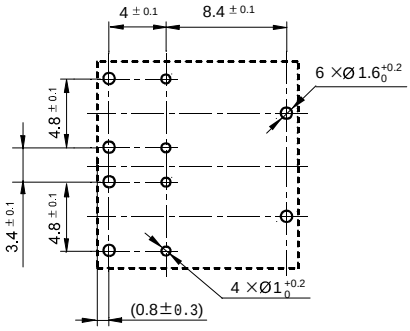
Unit: mm

PCB Layout (Bottom view)

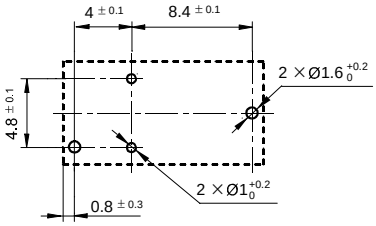
1Z: 1 Form C (Single version)



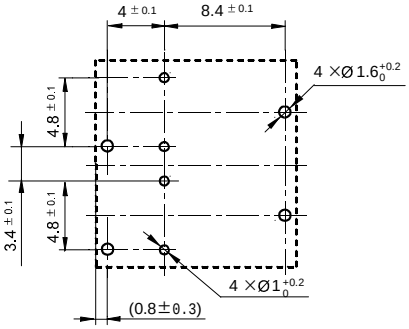
2Z: 2 Form C (Twin version)



1H: 1 Form A (Single version)

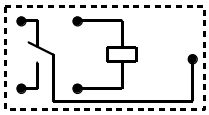


2H: 2 Form A (Twin version)

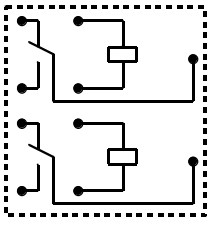


Wiring Diagram (Bottom view)

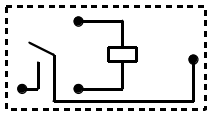
1Z: 1 Form C (Single version)



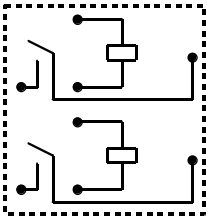
2Z: 2 Form C (Twin version)



1H: 1 Form A (Single version)



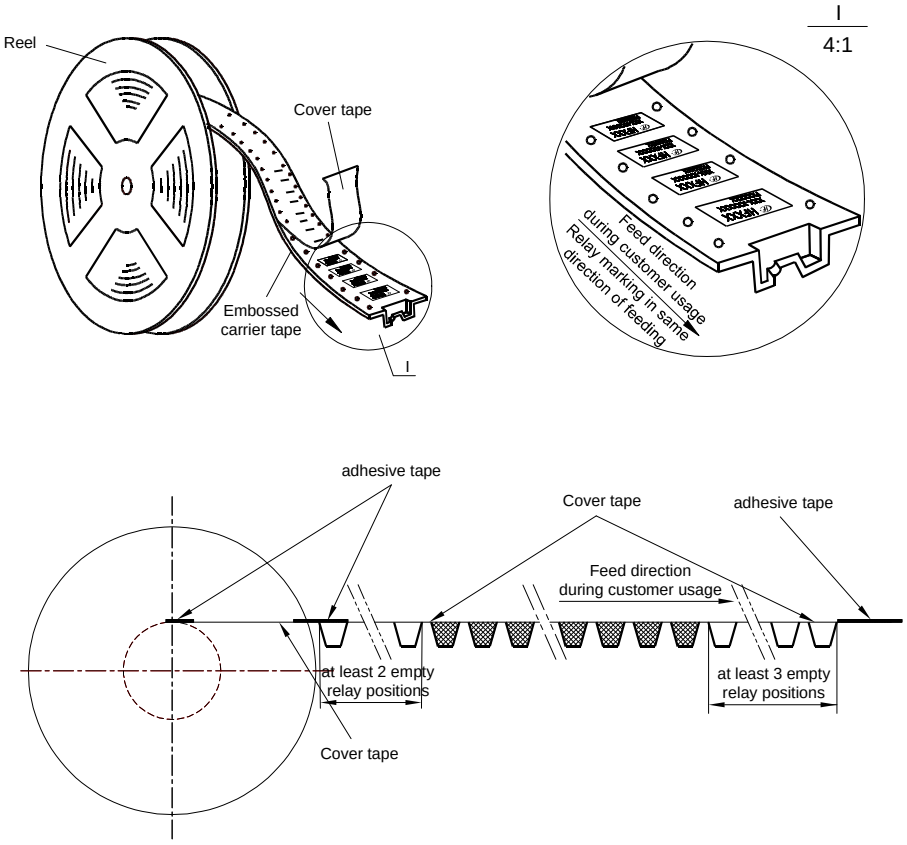
2H: 2 Form A (Twin version)



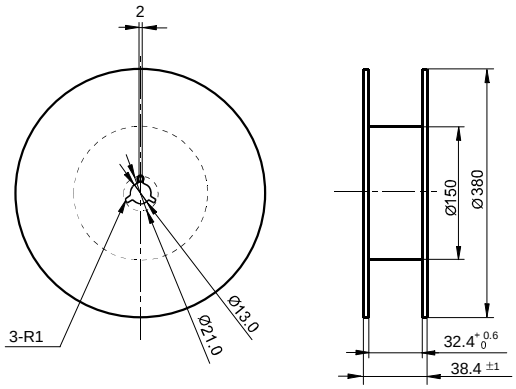
TAPE AND REEL PACKING

Unit: mm

Direction of Relay Insertion



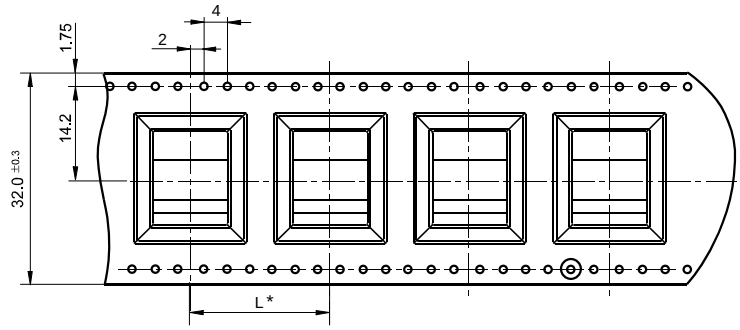
Reel Dimensions



TAPE AND REEL PACKING

Unit: mm

Tape Dimensions

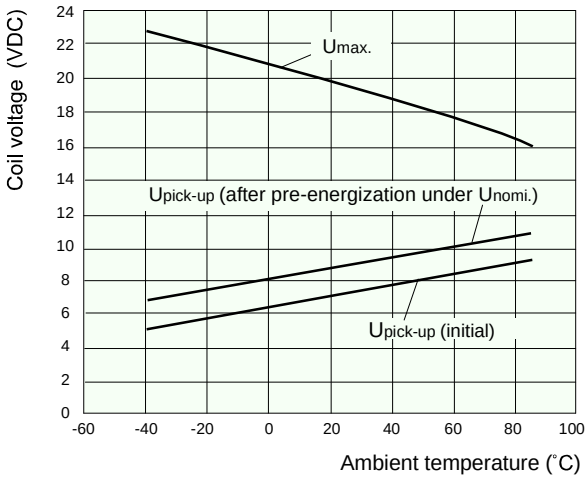


Remark: ***** For Single relay, L is 20mm; for Twin relay, L is 28mm.

CHARACTERISTIC CURVES

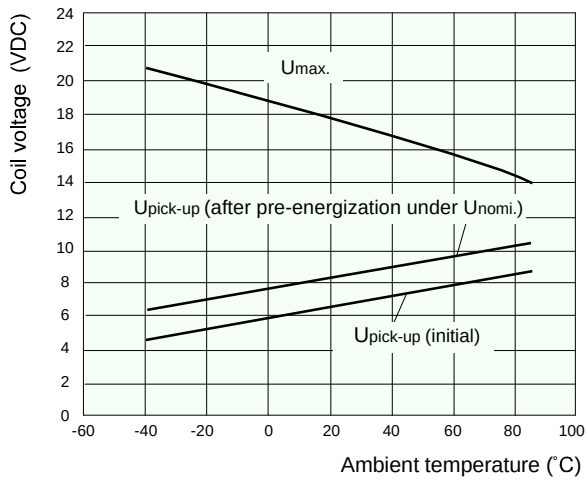
1. Coil operating voltage range

225Ω coil resistance



1) There should be no contact load applied when maximum continuous operation voltage is applied on coil.
2) The operating voltage is connected with coil pre-energized time and voltage. After pre-energized, the operating voltage will increase.
3) The maximum allowable coil temperature is 180°C. For the coil temperature rise which is measured by resistance is average value, we recommend the coil temperature should be below 170°C under the different application ambient, different coil voltage and different load etc.
4) If the actual operating coil voltage is out of the specified range, please contact Hongfa for further details.

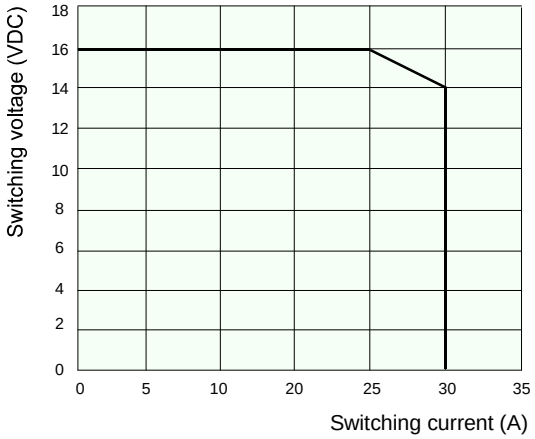
180Ω coil resistance



1) There should be no contact load applied when maximum continuous operation voltage is applied on coil.
2) The operating voltage is connected with coil pre-energized time and voltage. After pre-energized, the operating voltage will increase.
3) The maximum allowable coil temperature is 180°C. For the coil temperature rise which is measured by resistance is average value, we recommend the coil temperature should be below 170°C under the different application ambient, different coil voltage and different load etc.
4) If the actual operating coil voltage is out of the specified range, please contact Hongfa for further details.

CHARACTERISTIC CURVES

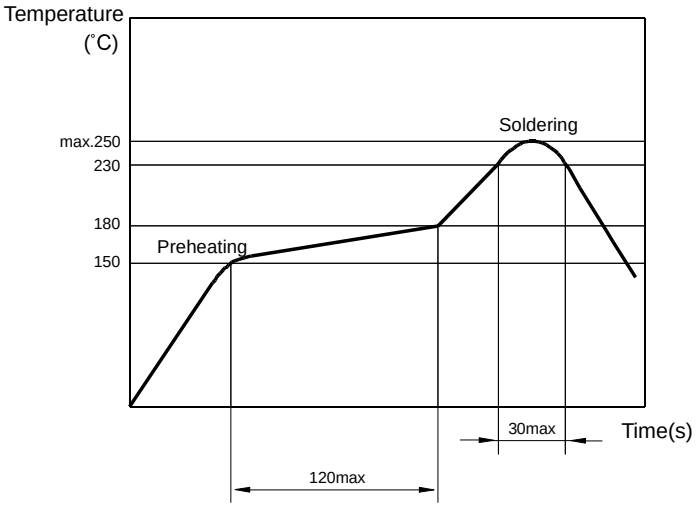
2. Load limit curve (at 23˚C)



1) This chart takes NO contact, resistive load as example.
2) The load and electrical endurance tests are made according to “CONTACT DATA” parameters’ table. If actual load voltage, current or operate frequency is different from “CONTACT DATA” table, please arrange corresponding tests for confirmation.

3. Reflow soldering, temperature on PCB board.

(Recommended soldering temperature, only for reflow soldering version)



CHARACTERISTIC CURVES

4. Coil temperature rise

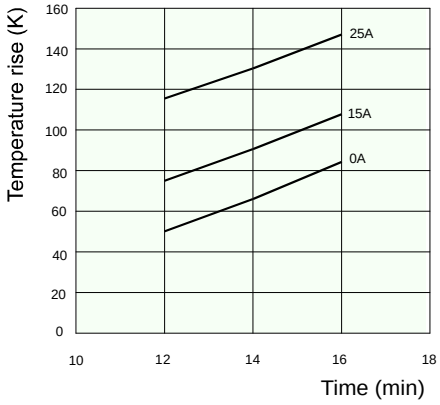
(1) Coil temperature rise（23℃）

Experiment：HFKA/012-1ZSPT

Amount：three

Carrying current：0A,15A,25A

Ambient temp：23℃



(2) Coil temperature rise（85℃）

Experiment：HFKA/012-1ZSPT

Amount：three

Carrying current：0A,15A,25A

Ambient temp：85℃