

COMPACT POWER RELAY

1 POLE X 2—12A (28VDC) (FOR 24V BATTERY AUTOMOTIVE APPLICATIONS)

FBR572, 582 SERIES

■ FEATURES

- Two independent relays mounted in a single package (43% of the volume of the two FRL-270 relays)
- High current contact capacity (carrying current: 40 A/2 minutes, 30 A/1 hour)
- Suitable for controlling 24 V motors in trucks and other large vehicles
- High heat resistance and extended operating voltage
- Two types of contact gap (FBR572: 0.8 mm, FBR582: 1.4 mm)



■ ORDERING INFORMATION

[Example] $\frac{\text{FBR572}}{\text{(a)}}$ $\frac{\text{N}}{\text{(b)}}$ $\frac{\text{D24}}{\text{(c)}}$ $-$ $\frac{\text{W}}{\text{(d)}}$ $\frac{\text{**}}{\text{(e)}}$

(a)	Series Name	FBR572: FBR572 Series relay (contact gap 0.8 mm) FBR582: FBR582 Series relay (contact gap 1.4 mm)
(b)	Structure	N : Plastic sealed type
(c)	Nominal Voltage	D24 : 24 VDC
(d)	Contact Material	W : Silver-tin oxide indium Y : Silver-tin oxide N : Silver copper nickel
(e)	Custom Designation	To be assigned custom specification

FBR572, 582 SERIES

■ SPECIFICATIONS

Item		FBR570 Series	FBR580 Series
Contact	Arrangement	1 form C × 2 (SPDT ×2)	
	Material	Silver-tin oxide indium (–W type) Silver copper nickel (–N type)	Silver-tin oxide indium (–W type) Silver-tin oxide (–Y type)
	Voltage Drop (Resistance)	Maximum 100 mV (at 12 VDC 2 A)	
	Ratings	28 VDC 12 A (locked motor load) 28 VDC inrush 15 A, break 2.5 A (motor free load)	
	Maximum Carrying Current	40 A/2 minutes, 30 A/ 1 hour (25°C, 100% rated coil voltage)	
	Maximum Inrush Current (Reference)	–W,–Y type: 60 A –N type: 40 A	
	Max. Switching Current (Reference)	12 A 28 VDC	14 A 32 VDC
	Minimum Switching Load*1 (Reference)	–W, –Y Type: 6 VDC 1 A –N Type: 6 VDC 2 A	
Coil	Operating Temperature	–40°C to +85°C (no frost)	
	Storage Temperature	–40°C to +100°C (no frost)	
Time Value	Operate (at nominal voltage)	Maximum 10 ms	
	Release (at nominal voltage)	Maximum 5 ms	
Life	Mechanical	1 ×10 ⁷ operations minimum	1 ×10 ⁶ operations minimum
	Electrical	1 ×10 ⁵ operations minimum (locked motor load) 5 ×10 ⁵ operations minimum (motor free load)	1 ×10 ⁵ operations minimum (locked motor load)
Other	Vibration Resistance		10 to 55 Hz (double amplitude of 1.5 mm)
	Shock Resistance	Misoperation	100 m/s ²
		Endurance	1,000 m/s ²
	Weight		Approximately 18 g

*1 Values when switching a resistive load at normal room temperature and humidity, and in a clean environment.
The minimum switching load varies with the switching frequency and operating environment.

■ COIL DATA CHART

ORDERING CODE	Rated coil voltage	Coil resistance (±10%)	Must operate voltage	Thermal resistance
FBR572ND24-W FBR572ND24-N	24 VDC	384 Ω	14.4 VDC (at 20°C)	67°C/W
FBR582ND24-W FBR582ND24-Y		170 Ω	18.0 VDC (at 85°C)	56°C/W

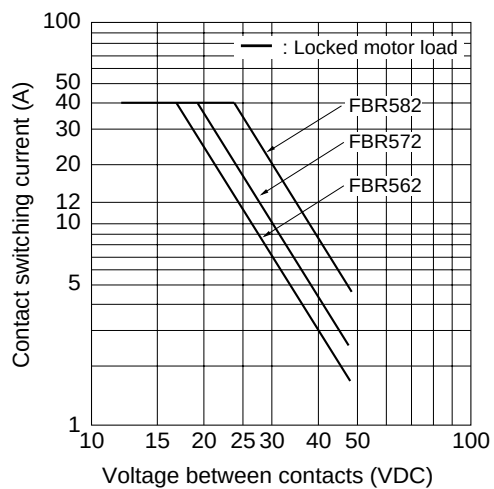
FBR572, 582 SERIES

■ SUITABLE APPLICATIONS

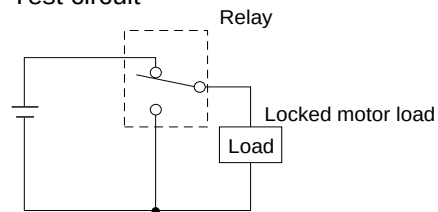
Application	Normal load current		Life x 10 ³	Recommended model (example)
Power Windows	10 to 12 A (switching at motor locking)		100	FBR572ND24-W
Automatic Door Lock	5 A/2 door (switching at motor locking)		100	FBR572ND24-W
Intermittent Wipers	INRUSH 15 to 30 A BREAK 2 to 8 (motor free)	Current wave	300	FBR572ND24-W
				FBR572ND24-N

■ CHARACTERISTIC DATA

1. MAXIMUM BREAK CAPACITY



• Test circuit



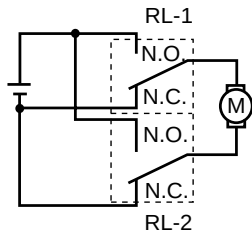
FBR572, 582 SERIES

2. LIFE TEST (EXAMPLE)

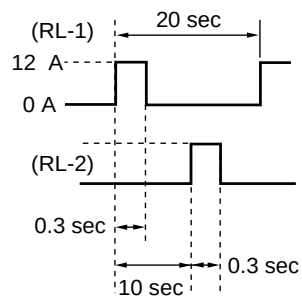
[FBR572 type]

- Test item
28 VDC-12 A
Motor lock
100,000 operations minimum
(FBR572 □-W type)

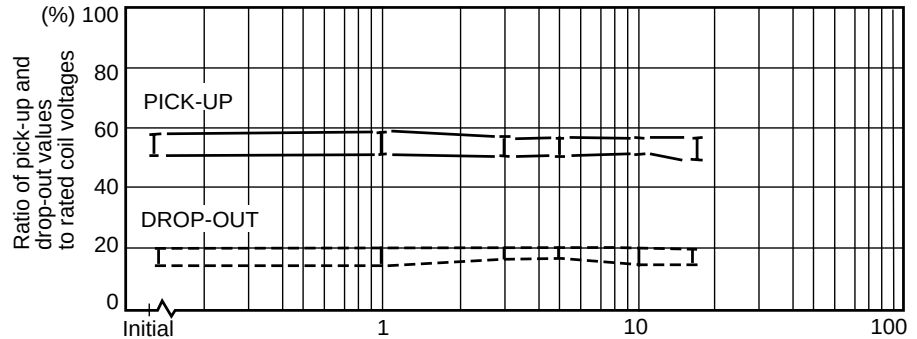
• Test circuit



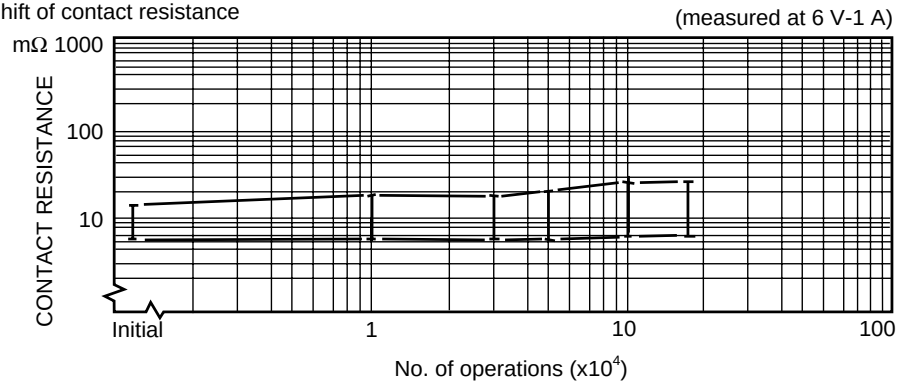
• Current wave form



• Shift of pick-up drop-out voltage



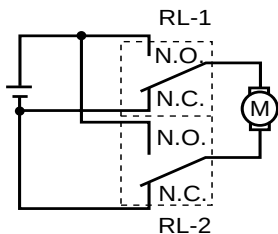
• Shift of contact resistance



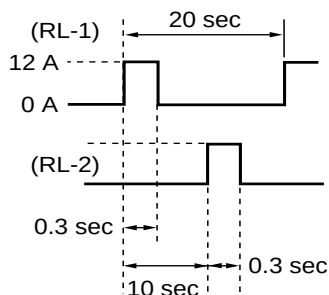
[FBR582 type]

- Test item
28 VDC-12 A
Motor lock
100,000 operations minimum
(FBR582 □-W type)

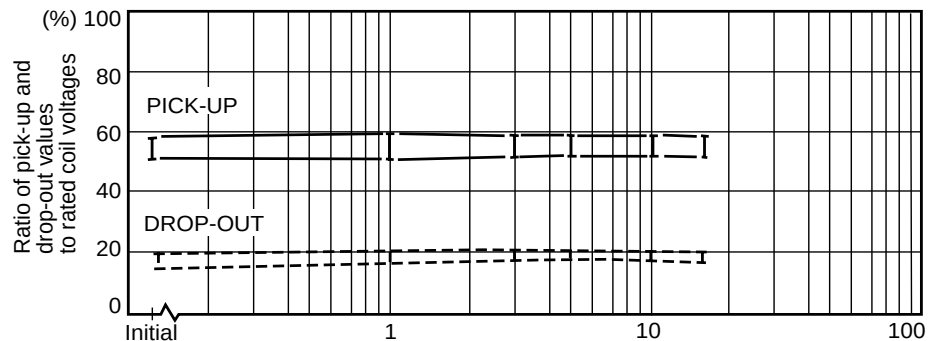
• Test circuit



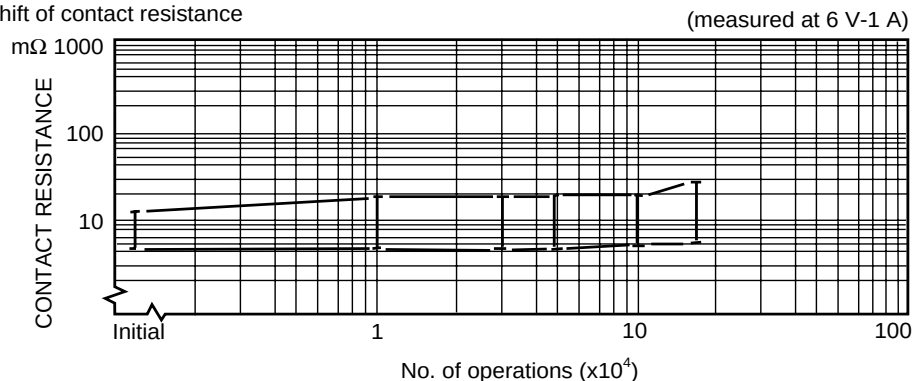
• Current wave form



• Shift of pick-up drop-out voltage



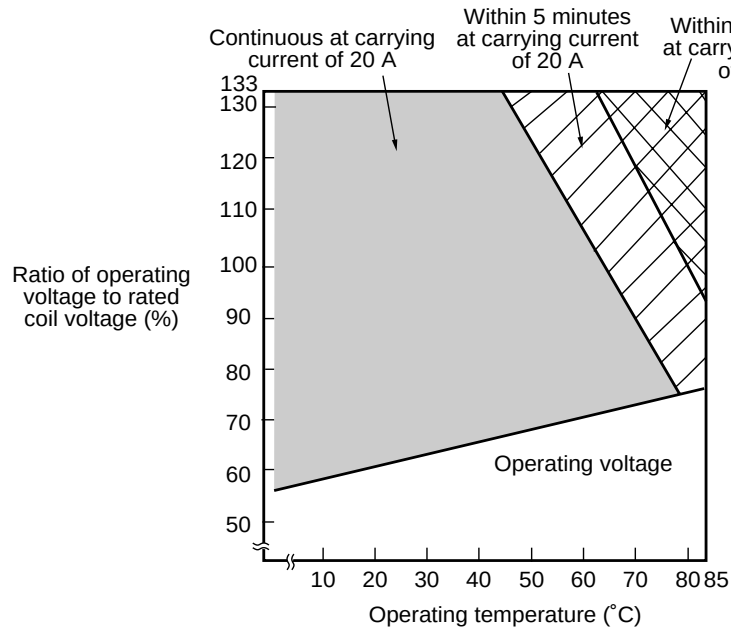
• Shift of contact resistance



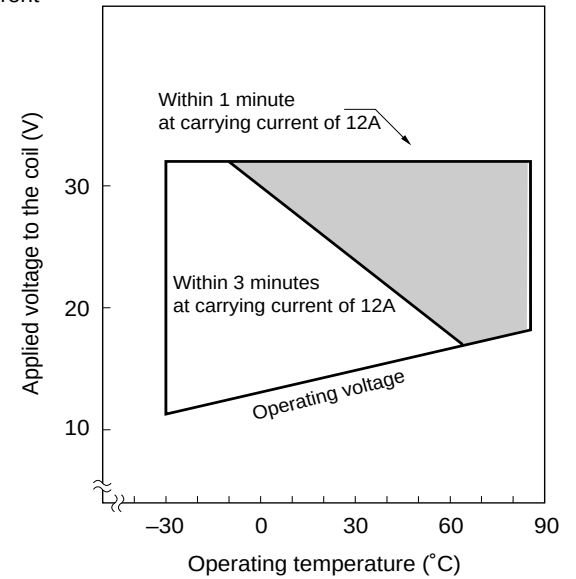
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3. OPERATING COIL VOLTAGE RANGE

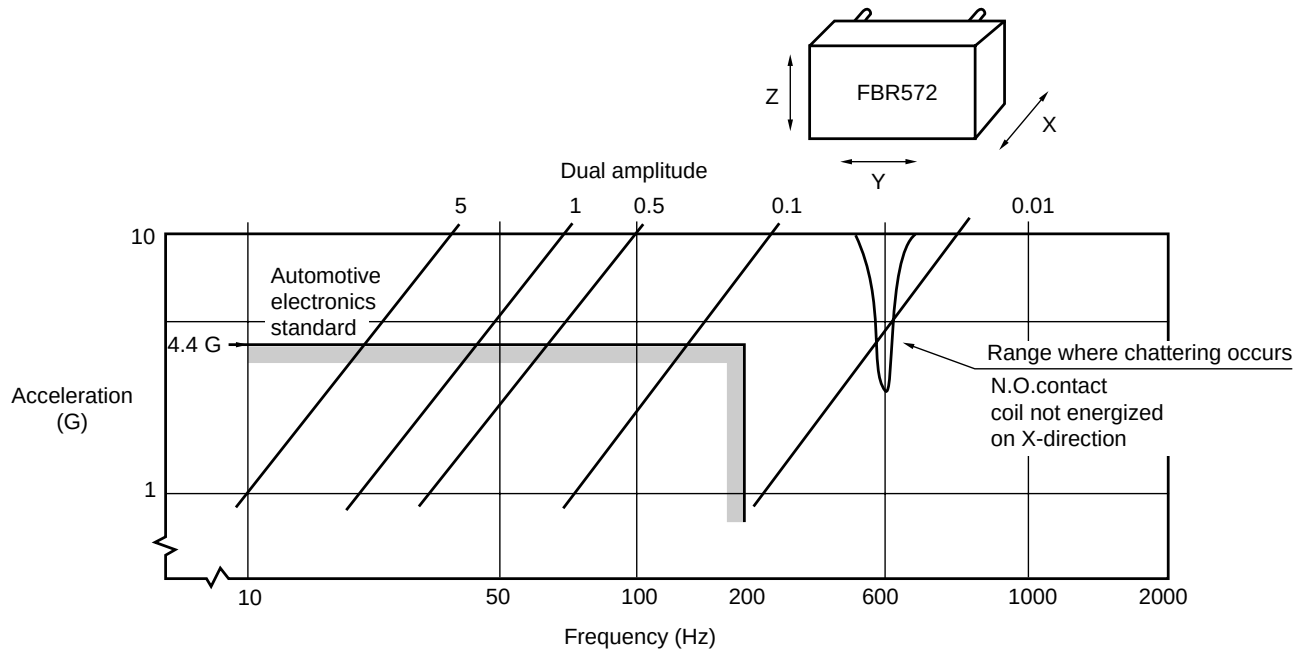
[FBR572 type]



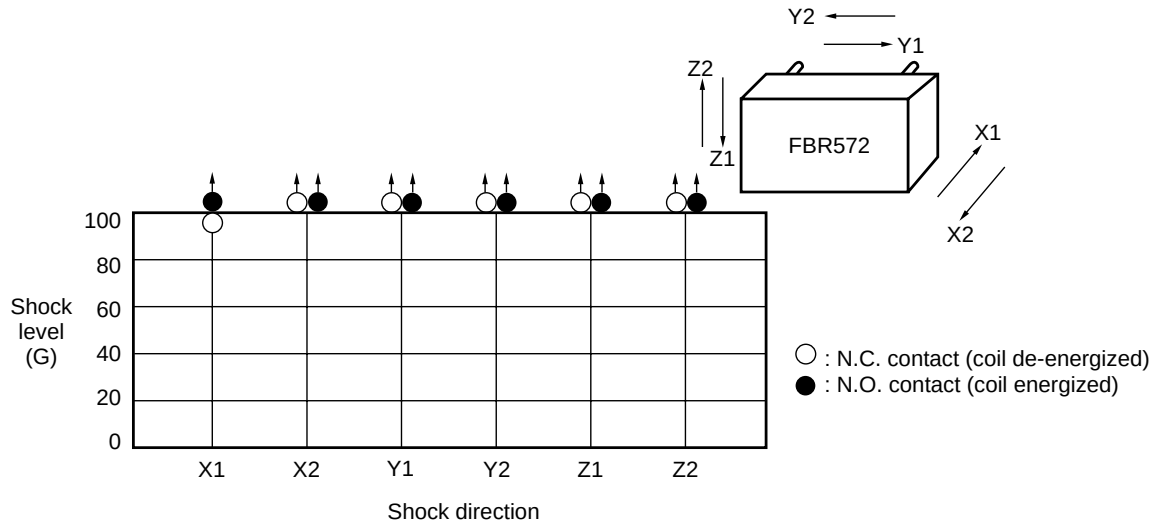
[FBR582 type]



4. VIBRATION RESISTANCE CHARACTERISTICS

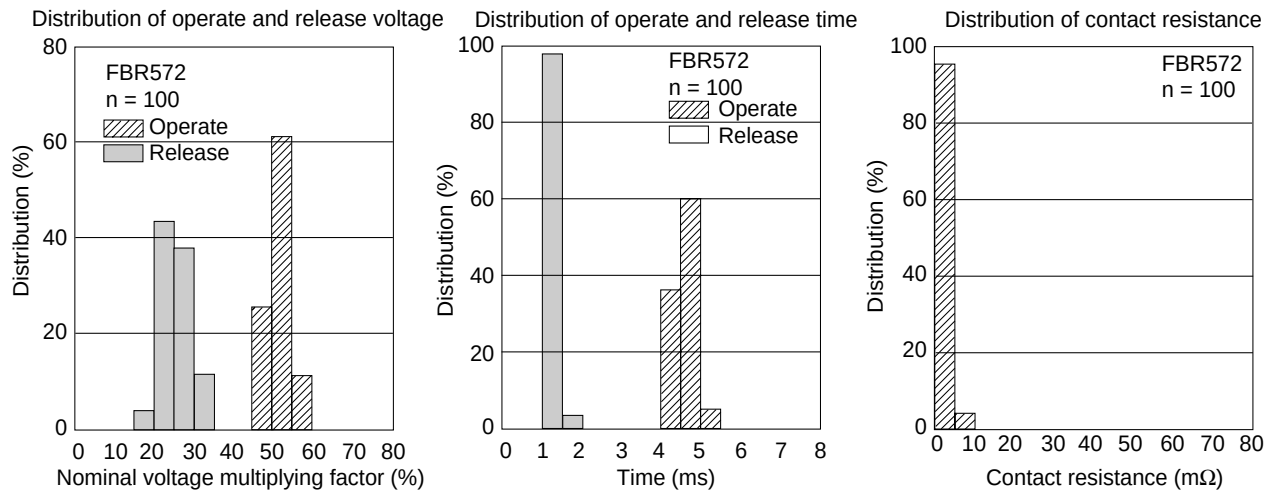


5. SHOCK RESISTANCE CHARACTERISTICS

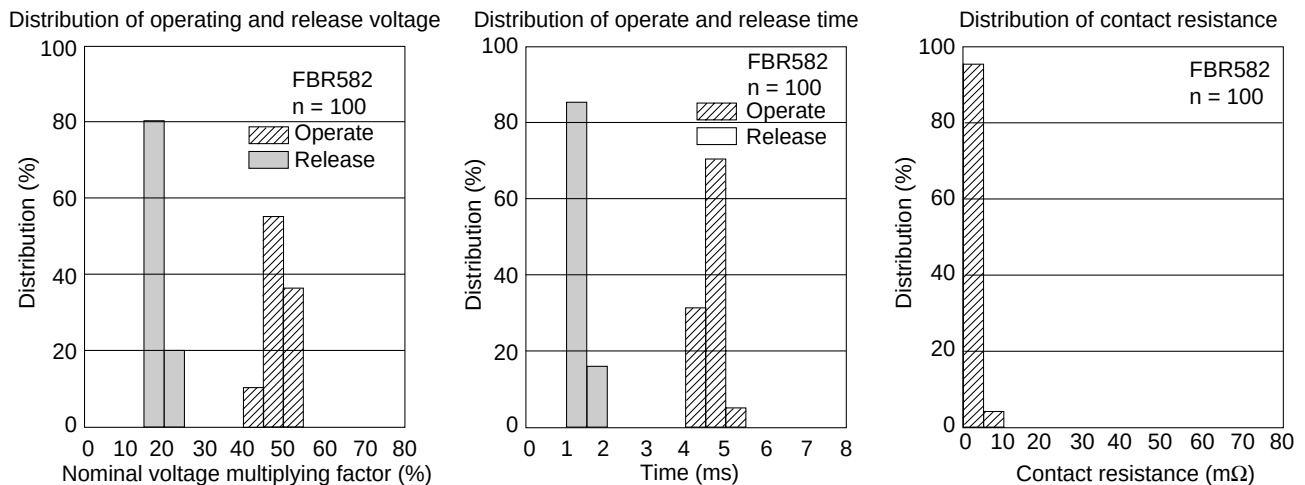


REFERENCE DATA

[FBR572 type]



[FBR582 type]

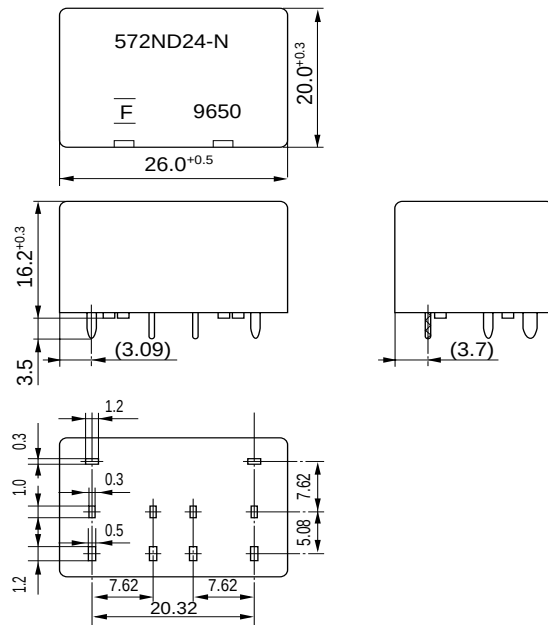


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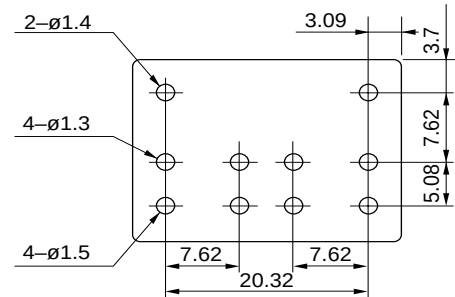
■ DIMENSIONS

[FBR572 type]

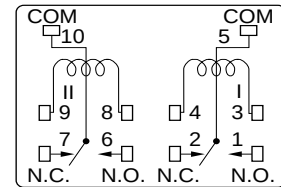
● Dimensions



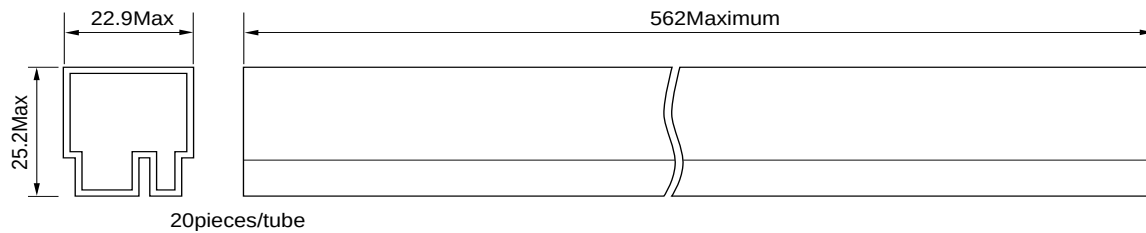
● PC board mounting hole layout (BOTTOM VIEW)



● Schematic (BOTTOM VIEW)



● Tube carrier



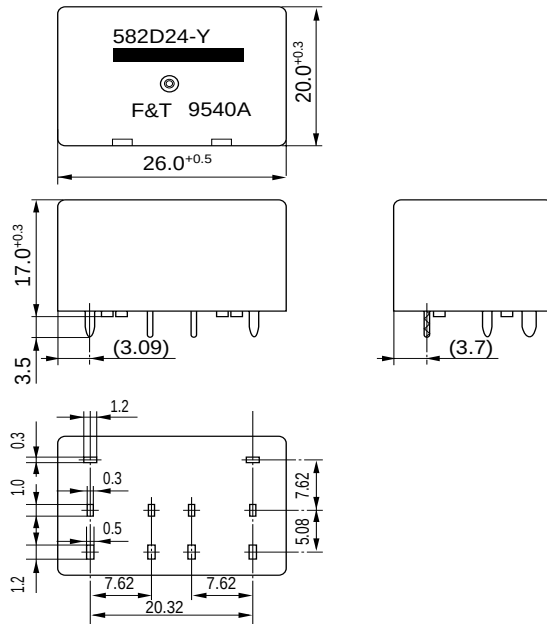
Unit: mm

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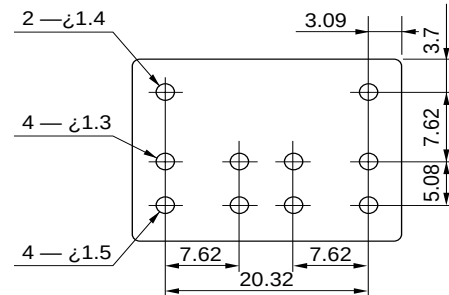
■ DIMENSIONS

[FBR582 type]

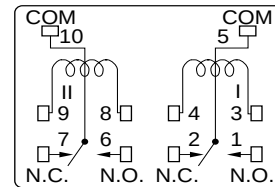
● Dimension



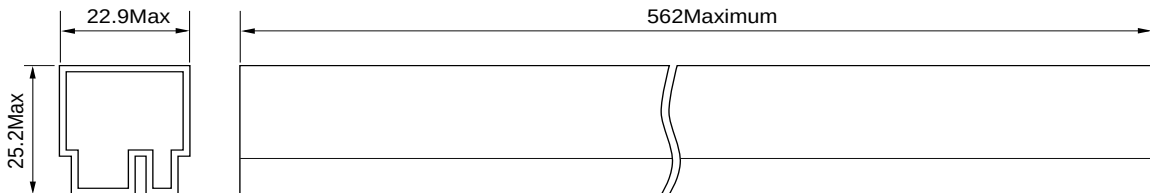
● PC board mounting hole layout (BOTTOM VIEW)



● Schematic (BOTTOM VIEW)



● Tube carrier



20pieces/tube

Unit: mm

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С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
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- Формирование склада под заказчика.
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- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
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