

## Автомобильные реле серии FBR51(-WF) Технические характеристики

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Воронеж (473)204-51-73	Курск (4712)77-13-04	Оренбург (3532)37-68-04	Сочи (862)225-72-31	Череповец (8202)49-02-64
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Единый адрес для всех регионов: [fst@nt-rt.ru](mailto:fst@nt-rt.ru) || [www.fujitsu.nt-rt.ru](http://www.fujitsu.nt-rt.ru)

# COMPACT POWER RELAY

## 1 POLE—20 A (FOR AUTOMOTIVE FLASHER LAMP LOAD APPLICATIONS )

### FBR51(-WF) SERIES

#### ■ FEATURES

- Relay for flasher lamp load (automotive application) newly added to our compact power relay, FBR51 Series.
- Long life  
Special contact allows more than 250k operations at flasher lamp load of 14 V DC, 11 A inrush, rated 80 W.



#### ■ ORDERING INFORMATION

[Example]     $\frac{\text{FBR51}}{\text{(a)}}$      $\frac{\text{N}}{\text{(b)}}$      $\frac{\text{D12}}{\text{(c)}}$     -     $\frac{\text{WF}}{\text{(d)}}$      $\frac{\text{---}}{\text{(e)}}$

(a)	Series Name	FBR51 : FBR51 Series (contact gap 0.3 mm)
(b)	Structure	N : Plastic sealed type
(c)	Nominal Voltage	D09 : 9 VDC D10 : 10 VDC D12 : 12 VDC
(d)	Contact Material	WF : Special contact *
(e)	Custom Designation	To be assigned custom specification

\* The contact materials of the movable and stationary contacts are different. Therefore, the specified load polarity must be observed to achieve rated life. Refer to life test examples and schematic.

# FBR51 (-WF) SERIES

## ■ SPECIFICATIONS

Item		FBR51 Series	
Contact	Arrangement	1 form A	
	Material	Special contact	
	Voltage Drop (resistance)	Maximum 100 mV (at 2 A 12 VDC)	
	Ratings	14 VDC–80 W (load: tungsten lamp)	
	Maximum Carrying Current	30 A/ 1 hour (25°C, 100% rated coil voltage)	
	Max. Inrush Current (reference)	80 A	
	Max. Switching Current (reference)	35 A 16 VDC	
	Min. Switching Load*1 (reference)	6 VDC, 1 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 <sup>7</sup> operations minimum	
	Electrical	2.5 × 10 <sup>6</sup> ops. 14 VDC inrush 11 A (0.35s ON, 0.35s OFF), 80 W (load: tungsten lamp)	
Other	Vibration Resistance		10 to 55 Hz (double amplitude of 1.5 mm)
	Shock Resistance	Misoperation	100 m/s <sup>2</sup>
		Endurance	1,000 m/s <sup>2</sup>
	Weight		Approximately 6 g
Polarity		N.O. Terminal: (+)side COM. Terminal: (–)side	

\*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.

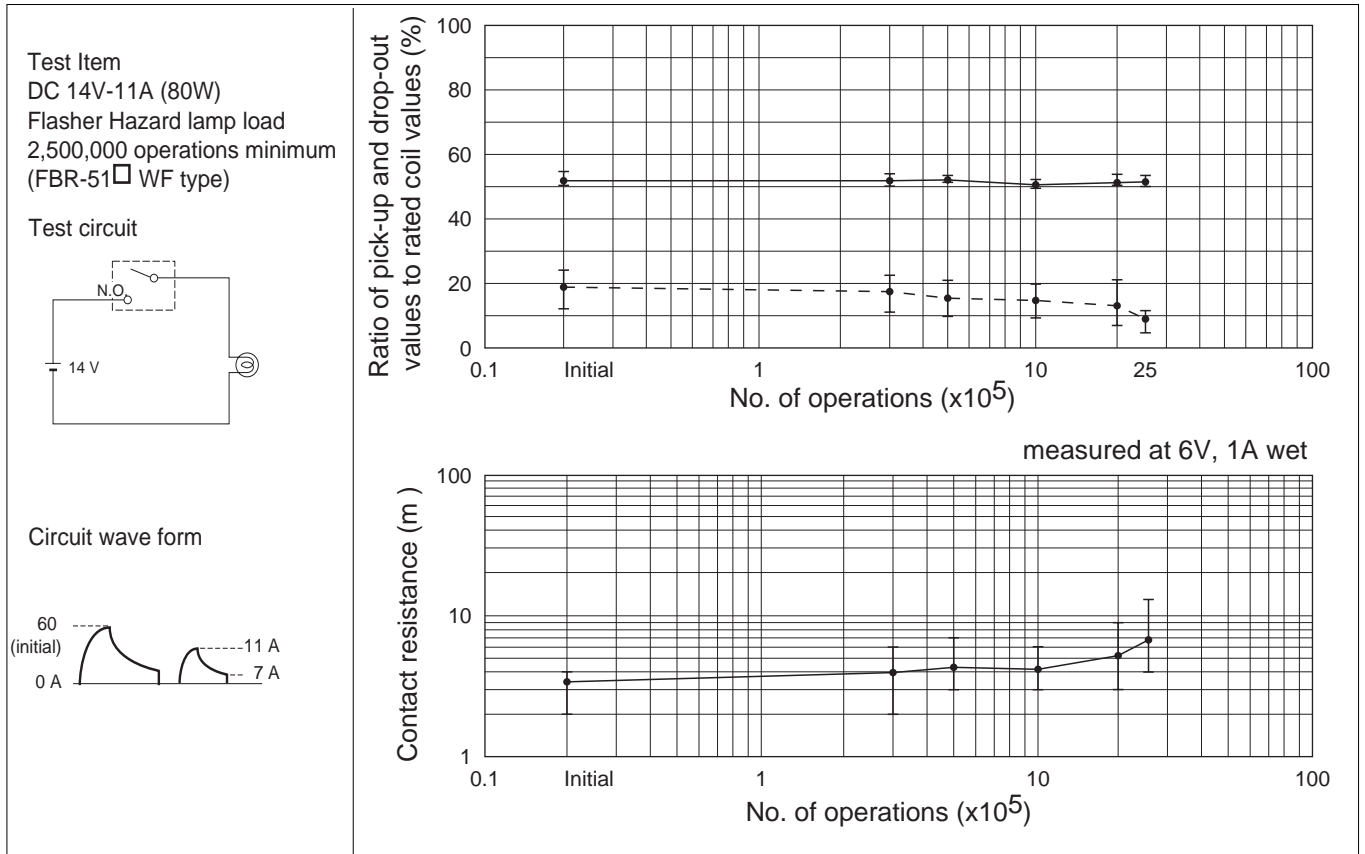
## ■ COIL DATA CHART

MODEL	Nominal voltage	Coil resistance (±10%) (at 20°C)	Must operate voltage	Thermal resistance
FBR51 Series				
FBR51ND09-WF	9 VDC	135 Ω	5.4 VDC (at 20°C) 6.8 VDC (at 85°C)	73°C/W
FBR51ND10-WF	10 VDC	180 Ω	6.3 VDC (at 20°C) 7.9 VDC (at 85°C)	
FBR51ND12-WF	12 VDC	240 Ω	7.3 VDC (at 20°C) 9.2 VDC (at 85°C)	

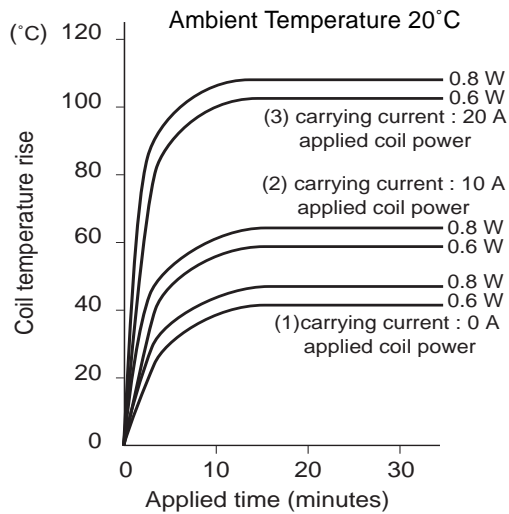
# FBR51 (-WF) SERIES

## CHARACTERISTIC DATA

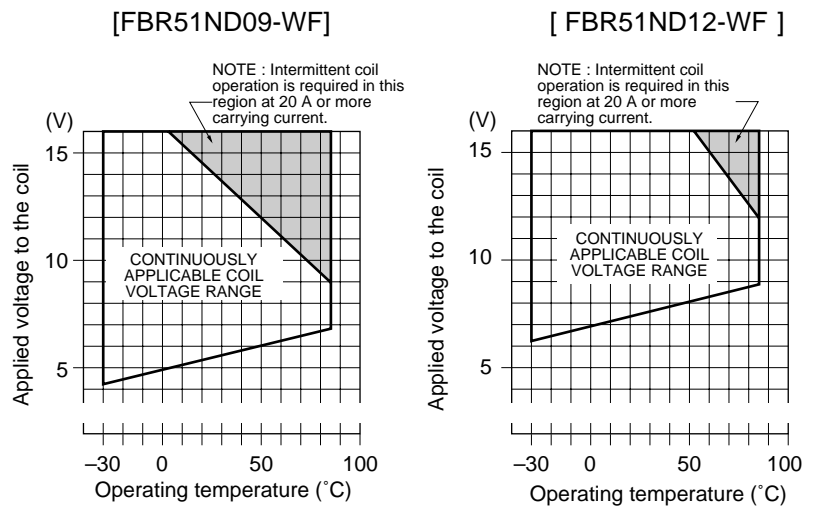
### 1. LIFE TEST (EXAMPLES)



### 2. COIL TEMPERATURE RISE

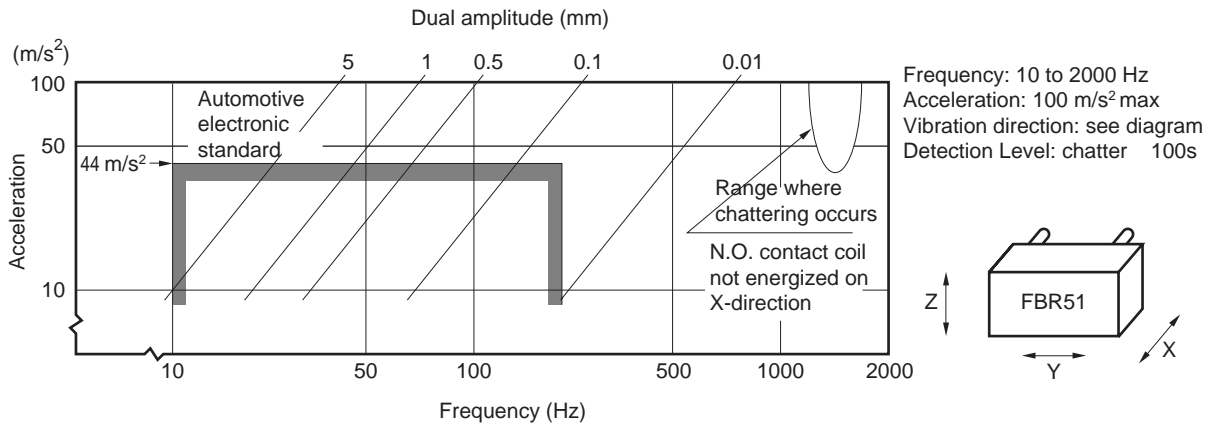


### 3. OPERATING COIL VOLTAGE RANGE (EXAMPLE)

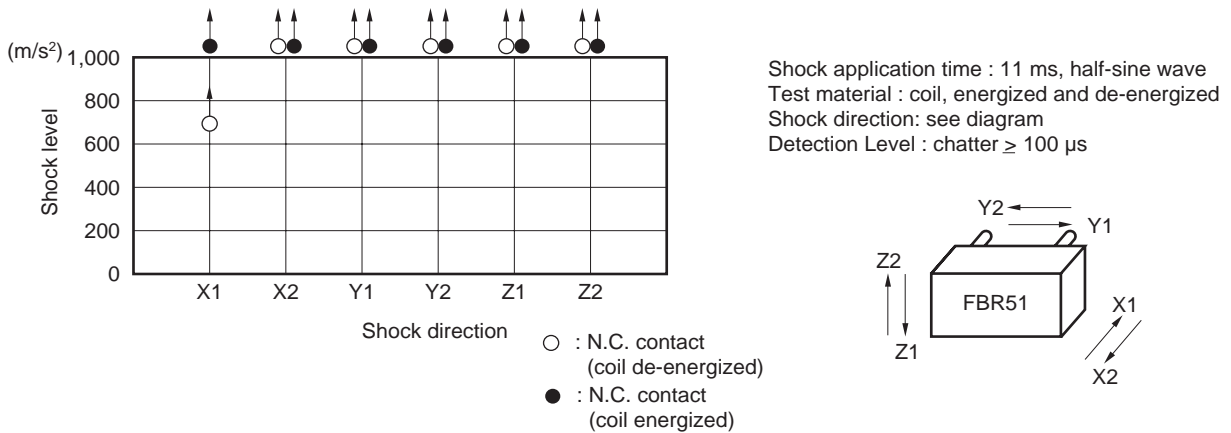


# FBR51 (-WF) SERIES

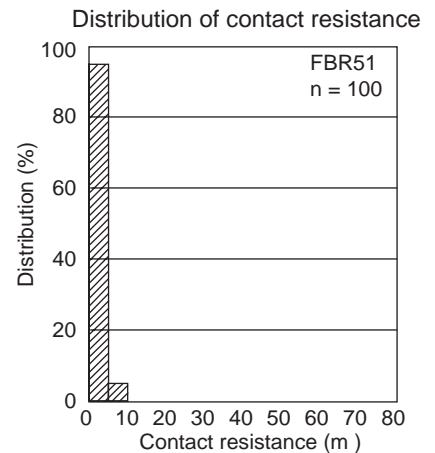
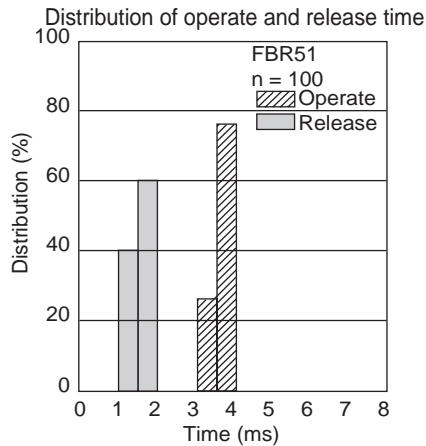
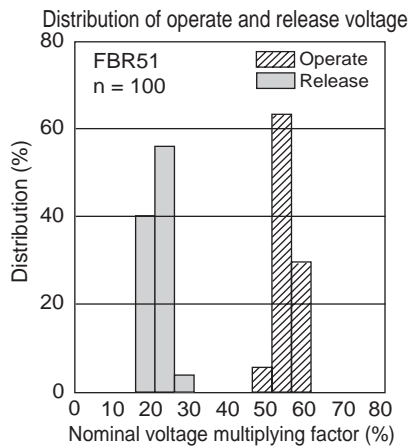
## 4. VIBRATION RESISTANCE CHARACTERISTICS



## 5. SHOCK RESISTANCE CHARACTERISTICS



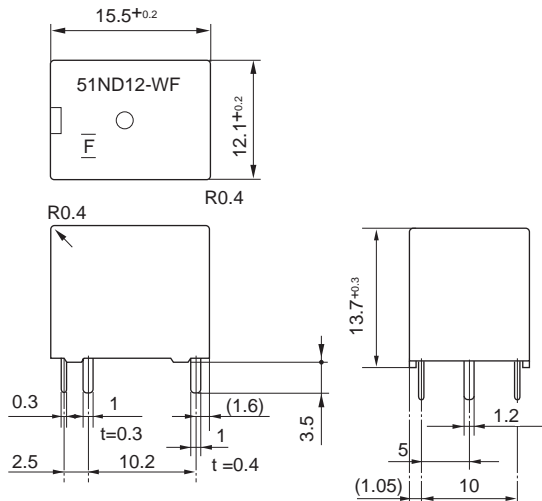
## REFERENCE DATA



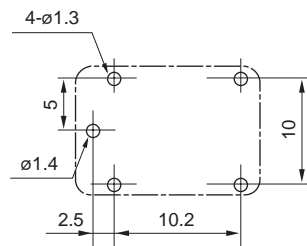
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## ■ DIMENSIONS

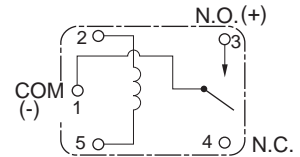
### ● Dimensions



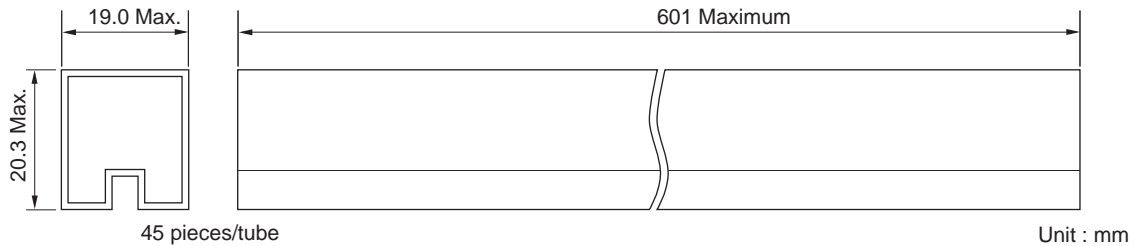
### ● PC board mounting hole layout BOTTOM VIEW



### ● Schematics BOTTOM VIEW FBR50-WF



### ● Tube carrier



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