FUJITSU FUJITSU COMPONENT

Preliminary Specification

July 1, 2008

Surface-mounting, 1GHz-Band, Miniature, DPDT, High-frequency Relay

<u>Ultra Miniature Flat High-frequency Relay</u>

FTR-B3-RF Series

FEATURES

- •Excellent high frequency characteristics up to 1GHz (Impedance 50 ohm) by specialized shield structure.
- Surface mounting type (Insertion mounting type available)
- •Ultra miniature flat package saves space. (Height 6.7mm, Mounting area 97mm²)
- •Low consumption power : Standard type 140mW (24V: 230mW)
 - Latching type 100mW (24V: 120mW)
- High reliability : bifurcated contacts

■ SPECIFICATIONS

- •Contact Rating : 1W (1GHz)
- •Contact Arrangement : 2 Form C
- •Consumption Power : 100mW~230mW
- •High Frequency Characteristics (Impedance 50 ohm, 1GHz)
 - •Isolation : 30dB min.
 - Insertion loss : 0.2dB max.V.S.W.R. : 1.2 max.
- ■NOMENCLATURE





RoHS compliant

COIL DATA CHART

• Standard Type

Nominal voltage [VDC]	Coil resistance [ohm](±10%)	Must operate voltage [VDC]	Must release voltage [VDC]	Nominal power [mW]
1.5	16.1	1.13	0.15	140
3	64.3	2.25	0.3	140
4	114	3	0.4	140
4.5	145	3.38	0.45	140
6	257	4.5	0.6	140
9	579	6.75	0.9	140
12	1028	9	1.2	140
24	2504	18	2.4	230

• Single Winding Latching Type

Nominal voltage [VDC]	Coil resistance [ohm]($\pm 10\%$)	Must operate voltage [VDC]	Must release voltage [VDC]	Nominal power [mW]
1.5	22.5	1.13	1.13	100
3	90	2.25	2.25	100
4.5	203	3.38	3.38	100
6	360	4.5	4.5	100
9	810	6.75	6.75	100
12	1440	9	9	100
24	4800	18	18	120

■ SPECIFICATIONS

Item			Ordering Code	
			FTR-B3G()()Z-RF	
	Arrangement		2 Form C (SPDT)	
	Material		Gold overlay silver alloy	
	Style		Bifurcated	
	Resistance (initial)		Max. 75mohm	
Contact	Rating (resi	istive)	125VAC 0.3A/ 30VDC 1A/ 1GHz 1W	
	Maximum Carrying Current		2A	
	Maximum S	Switching Power	62.5VA/30W	
	Maximum S	Switching Voltage	30VDC	
	Maximum Switching Current		1A	
	Isolation		30dB min. (at 1GHz)	
High Frequency Characteristics	Insertion Lo	DSS	0.2dB max. (at 1GHz)	
	V.S.W.R.		1.2max. (at 1GHz)	
	Maximum carry power		1W (at 1GHz)	
	Maximum switching power		3W (at 1GHz)	
Coil	Nominal Power (at 20°C)		0.2W	
	Operate Power (at 20°C)		0.1W	
	Operating Temperature		-40° C to $+85^{\circ}$ C (No frost)	
Time Value	Operate (at nominal voltage)		Maximum 3ms	
	Release (at 0V)		Maximum 3ms	
Insulation	Resistance (at 500VDC)		Minimum 1,000Mohm	
	Dielectric Strength	between open contacts	750VAC 1minute	
		between adjacent contacts	750VAC 1minute	
		between coil and contacts	750VAC 1minute	
		between grand and coil/contacts	500VAC 1minute	
Life	Mechanical		50×10^6 operations minimum	
	Electrical		100×10^3 operations minimum (at nominal load)	
Other	Vibration	Misoperation	10 to 55Hz (double amplitude of 3.3mm)	
	Resistance	Endurance	10 to 55Hz (double amplitude of 5.0mm)	
	Shock	Misoperation	$750 \text{m/s}^2 (11 \pm 1 \text{ms})$	
	Resistance	Endurance	$1,000 \text{m/s}^2 (6 \pm 1 \text{ms})$	
	Unit Mass		Approximately 1.3g	

FTR-B3-RF Series

DIMENSIONS

• Dimensions





• Schematics (Top view)





• Suggested mounting pad (Top view)



(Unit : mm)

■REFERENCE DATA – High Frequency Characteristics

Sample relay : Coil nominal voltage 12V type Measuring condition : Impedance 50 ohm







