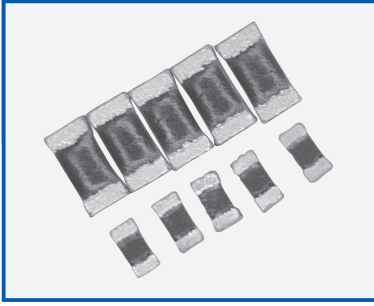


# Thick film chip resistors

■ PFR series and GFR series



## Features

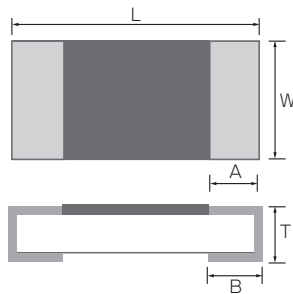
- TCR +/-100ppm/°C is realized for resistors over 1MΩ
- The same terminal structure as thin film counterparts assures reliability
- In consideration of the environment, the glass passivation is Pb free and the resin passivation is halogen free.



## Specifications

\*E-24 series are standard stock items. E-96 series are made to order.

### Dimensions



Dimension (mm)	PFR02S (01005S)	PFR03S (0201S)	PFR05, GFR05 (0402)
L	0.40±0.02	0.60±0.03	1.00±0.05
W	0.20±0.02	0.30±0.03	0.50±0.05
T	0.13±0.02	0.23±0.03	0.35±0.05
A	0.10±0.03	0.10±0.05	0.20±0.10
B	0.10±0.03	0.15±0.05	0.25±0.05

### Electrical characteristics

Series name	PFR02S				PFR03S					PFR05			GFR05				
	Jumper	1/32W			Jumper	1/20W				Jumper	1/16W		Jumper	1/16W			
E series offered	—	E-24	E-24, E96	E-24	—	E-24	E-24, E96			E-24	—	E-24, E-96		—	E-24, E-96		
Resistance range (Ω)	50m or less	1.0~9.1	10~91	100~1.62M	100~10M	50m or less	1.0~9.1	10~91	100~100K	100~1M	100~10M	50m or less	10~97.6	100~1M	1.02~10M	50m or less	10~10M
Resistance tolerance (%)	±0.5% (D)	—	—	—	—	—	—	○	—	—	—	—	○	○	—	—	○
	±1.0% (F)	—	—	○	○	—	○	○	—	○	—	—	○	○	○	—	○
	±2.0% (G)	—	—	—	○	—	—	—	—	○	—	—	—	—	—	—	—
	±5.0% (J)	—	○	—	—	○	—	—	—	○	—	—	—	—	—	—	—
Temperature coefficient of resistance (ppm/°C)	±50	—	—	—	—	—	—	—	—	—	—	—	—	○	—	—	—
	±100	—	—	—	—	—	—	—	—	—	—	—	○	—	○	—	—
	±200	—	—	—	○	○	—	—	○	○	○	—	—	—	—	—	○
	±300	—	—	○	—	—	—	○	—	—	—	—	—	—	—	—	—
	+600~-200	—	○	—	—	—	○	—	—	—	—	—	—	—	—	—	—
Maximum voltage	0.5A	15V			1A	25V				1A	50V		1A	50V			
Operating temperature	-55°C~125°C																
Packaging	10,000pcs	—			○					○			○				
	20,000pcs	○			—					—			—				

## Part numbering system

**PFR05 R-102-D-(2)-(T20)**

— Packaging: Given to PFR02S 20,000/reel

— "1" for PbSn and "2" for Sn are given only to PFR05 and GFR05

— Resistance tolerance: PFR03, GFR05 jumpers: X

— Resistance value: 3digit (E-24), 4digit (E-96), 000 (jumper)

— Temperature coefficient of resistance: PFR03:S, GFR05 jumper: J

— Part code