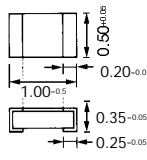
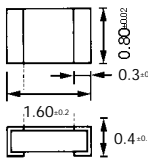
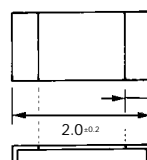
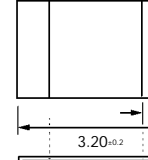


Thin Film Chip Resistors

- Exhibits excellent performance in resistance tolerance, temperature coefficient of resistance, current noise, linearity and suitability to high frequency circuit application.
- Precise dimensions minimizes errors during mounting.
- Thin film mass production line achieves high volume, high quality, low price and reliable supply.

Type	TFR10	TFR16	TFR21	TFR32
Physical Dimensions (Inch Type)	 (0402)	 (0603)	 (0805)	 (1206)

Type	TFR10			TFR16				TFR21				TFR32		
Power Rating	1/16W			1/16W				1/10W				1/8W		
Resistance Tolerance	±0.5% (D)			±0.1% (B)	±0.25% (C)		±0.5% (D)		±0.1% (B)	±0.25% (C)		±0.5% (D)		
Resistance Range	10 ~91	100 ~10K	11K ~100K	10 ~330K	10 ~330K	10 ~330K	10 ~330K	10 ~1M	10 ~1M	10 ~1M	10 ~1M	10 ~1M	10 ~1M	
Temperature Coefficient of Resistance	±100ppm/°C (A)	±25ppm/°C (E)	±100ppm/°C (A)	±25ppm/°C (E)	±50ppm/°C (C)	±25ppm/°C (E)	±100ppm/°C (A)	±25ppm/°C (E)	±50ppm/°C (C)	±25ppm/°C (E)	±100ppm/°C (A)	±25ppm/°C (E)	±50ppm/°C (C)	±25ppm/°C (E)
Resistance Value	E-24			E-24, E-96				E-24, E-96				E-24, E-96		
Maximum Operating Voltage	25V			75V				100V				150V		

* For marking specifications please see **Thick Film Chip Resistor** specifications.

* Thick Film Chip Resistors 0402, 0603, 0805, 1206, available in 1%, 50ppm.

Standard package:

- 1) 10,000 pcs per reel for TFR10
- 2) 5,000 pcs per reel for TFR 16,21,32

Tolerance:

- 1) .05% and .01% available upon request

Temperature Coefficient/ppm°C:

- 1) 5ppm/10ppm and 15ppm available upon request

Specifications

Maximum Rated Operating Temperature	+70°C
Maximum Operating Temperature	+125°C
Short-time Overload	±0.5%
Load Life	±0.5%
Temperature Cycle	±0.5%
Resistance to Soldering Heat	±0.5%
Terminal Strength	±0.5%
Moisture Load Life	±0.5%

Part Numbering System

TFR16	E	1002	B	T
Type	T.C.R	Nominal Resistance	Tolerance	Packaging
TFR 10	V=±5ppm/°C	Resistors	A = ± .05%	T Tape
TFR 16	N=±10ppm/°C		B = ± 0.1%	B Bulk
TFR 21	T=±15ppm/°C	4-Digit	C = ± 0.25%	
TFR 32	E=±25ppm/°C		D = ± 0.5%	
	C=±50ppm/°C	Jumper	F = ± 1%	
	A=±100ppm/°C			