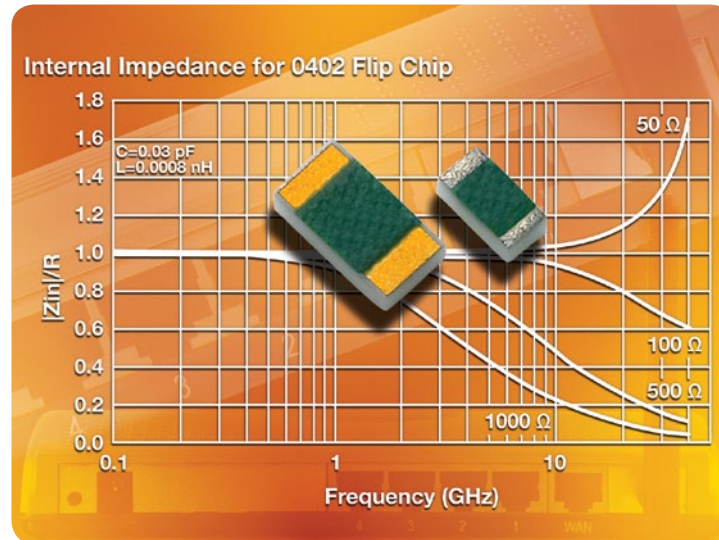


High-Frequency Thin Film Chip Resistors



KEY BENEFITS

- Small size (20 mil x 40 mil min)
- Frequency response: 20 GHz
- Tolerances to 0.1 %
- Termination solder (lead or lead (Pb)-free), ribbon- or wire-bondable

APPLICATIONS

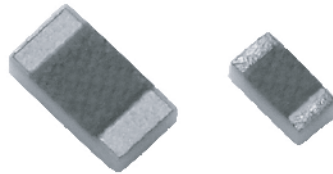
- Low-noise amplifiers
- High-speed routers
- Attenuation circuitry
- High-frequency line termination

RESOURCES

- Datasheet: FC Series - <http://www.vishay.com/doc?60093>
- For technical questions contact thinfilm@vishay.com



High-Frequency Thin Film Chip Resistors



FC series chip resistors are designed with low internal reactance. They function as almost pure resistors on a very high range of frequencies. The specialized laser edge trimming allows for precision tolerances to 0.1 %.

FEATURES

- Small standard size 0402 case size
- Edge trimmed block resistors
- Alumina substrate high purity (99.6 %)
- Ohmic range (10 Ω to 1000 Ω)
- Small internal reactance (< 10 m Ω)
- Low TCR (down to ± 25 ppm/ $^{\circ}\text{C}$)
- Epoxy bondable termination available
- Compliant to RoHS Directive 2002/95/EC



APPLICATIONS

- Low noise amplifiers
- Attenuation
- Line termination

STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
Material	Passivated nichrome	-
Resistance Range	10 Ω to 1000 Ω	Case size dependent
TCR: Absolute	± 25 ppm/ $^{\circ}\text{C}$ (standard) (≥ 50 Ω) to ± 100 ppm/ $^{\circ}\text{C}$	- 55 $^{\circ}\text{C}$ to + 125 $^{\circ}\text{C}$
Tolerance: Absolute	± 0.1 % to ± 5.0 %	+ 25 $^{\circ}\text{C}$
Stability: Absolute	$\Delta R \pm 0.02$ %	2000 h at 70 $^{\circ}\text{C}$
Stability: Ratio	-	-
Voltage Coefficient	0.1 ppm/V	-
Working Voltage	30 V to 75 V	-
Operating Temperature Range	- 55 $^{\circ}\text{C}$ to + 125 $^{\circ}\text{C}$	-
Storage Temperature Range	- 55 $^{\circ}\text{C}$ to + 150 $^{\circ}\text{C}$	-
Noise	< - 35 dB	-
Shelf Life Stability: Absolute	$\Delta R \pm 0.01$ %	1 year at + 25 $^{\circ}\text{C}$

COMPONENT RATINGS

CASE SIZE	POWER RATING (mW)	WORKING VOLTAGE (V)	RESISTANCE RANGE (Ω)
0402	50	30	10 to 1000
0505	125	37	20 to 1000
0603	125	50	10 to 1000
0805	200	50	10 to 1000
1005	250	75	10 to 1000
1206	330	75	10 to 1000

Revision 05-Dec-11

* Pb containing terminations are not RoHS compliant, exemptions may apply

** Please see document "Vishay Material Category Policy": www.vishay.com/doc?99902

Resistors - High Frequency up to 20 GHz