Broadband Resistors

R35-2010BB50R00Fx1QE

Product Features

Case Size	Std. Resistance
2010	50Ω

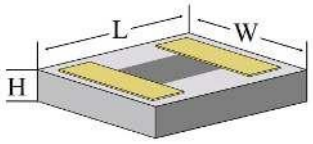
Mechanical Dimensions

L = 0.020" ± 0.002" (0.508mm ± 0.051mm)

W = 0.010" ± 0.001" (0.254mm ± 0.051mm)

H = 0.010" ± 0.001" (0.254mm ± 0.025mm)

Style: 1 Recessed Pad

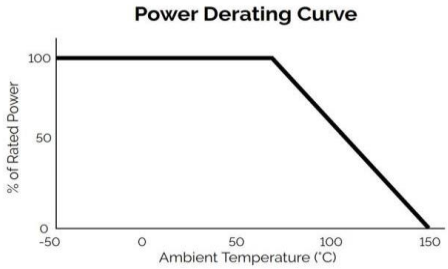


1% standard tolerance (other tolerances available)

Specifications

Operating Frequency	DC to 67 GHz
Operating Temperature Range	-55°C to +150°C
Resistive Material	Tantalum Nitride (TaN)
Temperature Coefficient	±150 ppm/°C standard
Resistance Tolerance	±1% standard
Substrate	Alumina (Al_2O_3) other substrates available
Metallization	A = Tantalum/Palladium/Gold (TaN/Pd/Au) R = Titanium/Platinum/Gold (Ti/Pt/Au)
Power Derating *See Chart at Right*	Full power up to 70°C Derated linearly to zero power at 150°C

**All PPI Thin Film parts are Non-Magnetic*



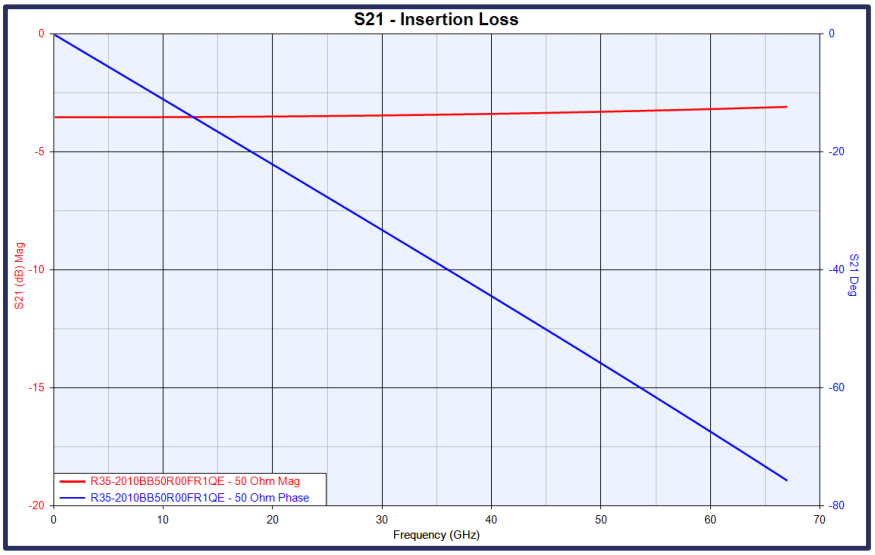
Part Numbering

R 35 - 2010 BB 50R00 F R 1 Q E

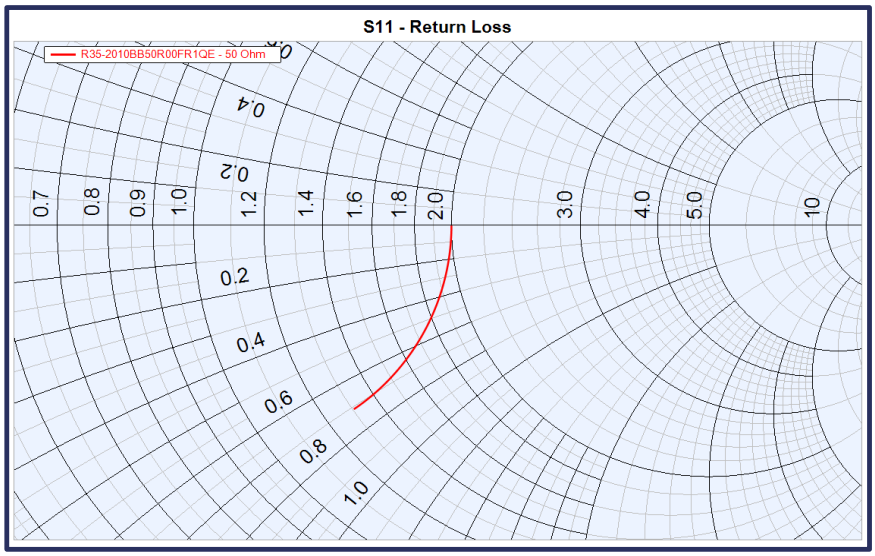
- **R** — Resistor
- **35** — Material: 35 = Alumina
- **2010** — Case Size (0.020" x 0.010")
- **BB** — Broadband: BB
- **50R00** — Resistance Value: 50Ω = 50R00
  Digits 1-4 are significant; Digit 5 is number of zeros to follow
- **F** — Tolerance: F = ±1%
- **R** — Metallization: **R** = For Soldering; **A** = For wirebonding
- **1** — Style: 1
  Best for wire bonding or surface mount applications Flip Chip Configuration compatible
- **Q** — TCR: Q = ±150ppm/°C
- **E** — Power Handling: E =100mW

Performance Curves - Insertion and Return Loss Charts

20 x 10 50 Ω Insertion Loss



20 x 10 50 Ω Return Loss



Simulated Test Conditions / Pad Dimensions / Dielectric

Modelithics calculated data for 50 Ohm and 100 Ohm resistors from 0.1 to 67.0 GHz on 4 mil Rogers 4350B, Dielectric constant = 4.15. The pad dimensions used to develop the datasheet plots were: Length = 4.0 (0.102), Width = 10.0 (0.254), Gap = 13.0 (0.330). Units in mil (mm). Reference planes were at the pad edges.

Packaging

Parts are available in Waffle Packs and Tape & Reel. Contact PPI for additional packaging options.