



High Frequency Resistors

R35-1209BB100R0FxxQC

Product Features

Case Size	Std. Resistance
1209	100Ω

Mechanical Dimensions

$L = 0.012'' \pm 0.001''$ (0.305mm $\pm$ 0.051mm)
 $W = 0.009'' \pm 0.001''$ (0.229mm $\pm$ 0.051mm)
 $H = 0.005'' \pm 0.001''$ (0.127mm $\pm$ 0.025mm)

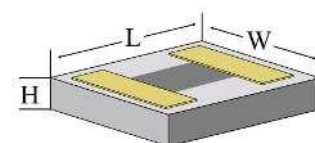


Style: 1 Recessed Pad

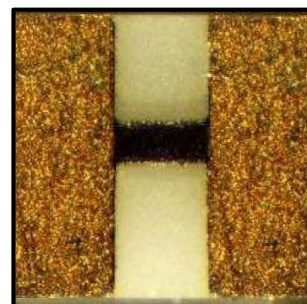
Specifications

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	$\pm 1\%$ standard
Substrate	Alumina (Al ₂ O 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

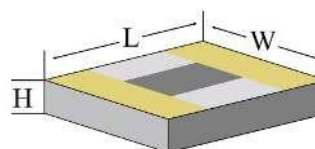
*All PPI Thin Film parts are Non-Magnetic



1% standard tolerance (other tolerances available)



Style: 2 Full Pad



1% tolerance only

Part Numbering

R 35 - 1209BB 100R0 F R 1 Q C

Resistor

Case Size
(0.012" x .009")

Material
35 = Alumina

Resistance Value
100Ω = 100R0

*Digits 1-4 are significant;
Digit 5 is number of zeros to follow*

Tolerance
F = $\pm 1\%$

Metallization
R = For Soldering;
A = For wirebonding

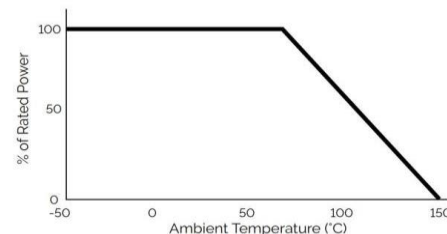
Style
1 or 2

*Both styles Flip Chip
Configuration compatible*

Power
Handling
C = 50mW

TCR
Q = ± 150 ppm/°C

Power Derating Curve

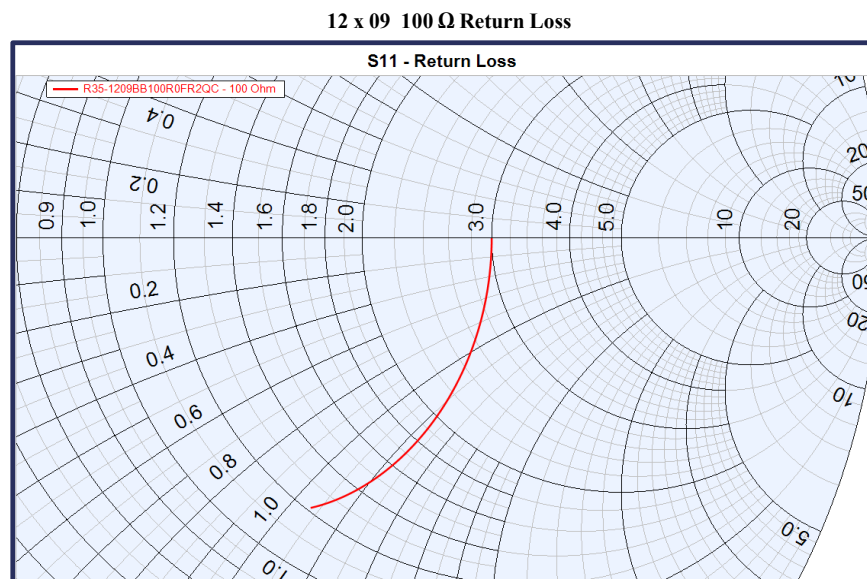
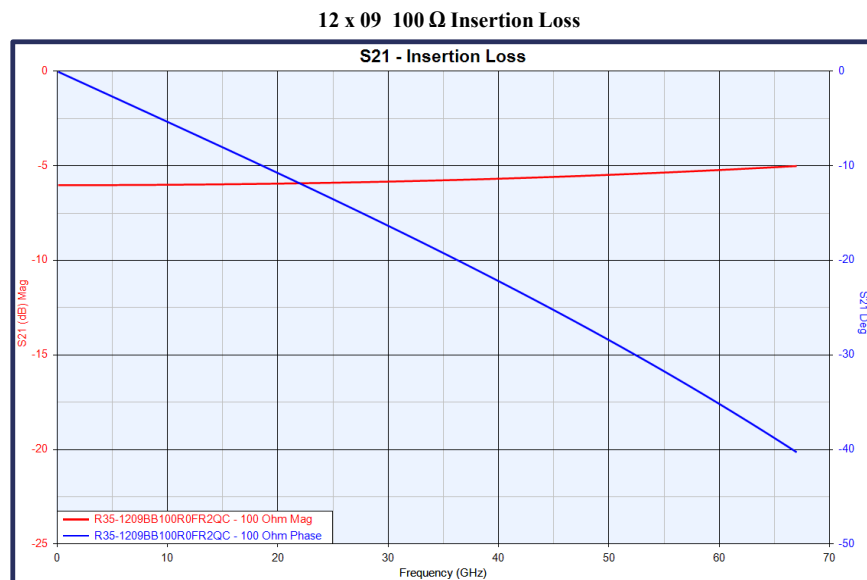




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Performance Curves - Insertion and Return Loss Charts



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 = 5.0 (0.127). Units in mil (mm). Reference planes were at the pad edges.

Packaging

Parts are available in Waffle Packs. Contact PPI for additional packaging options.