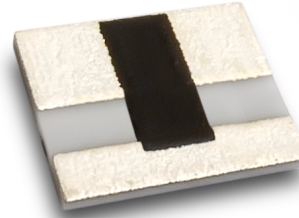


# Chip Attenuators

## PCAA Series: DC-18 GHz

The PCAA Series Chip Attenuators consist of  
a laser trimmed distributed thin film element on  
an alumina ceramic substrate with a protective  
paint layer and solderable terminals.



### FEATURES

- No wrap arounds minimize parasitics
- Solderable terminals
- SN62, SN96, Gold terminals available
- 0-20 dB values
- S-parameter data files available
- RoHS Compliant
- Design kits available

### GENERAL SPECIFICATIONS

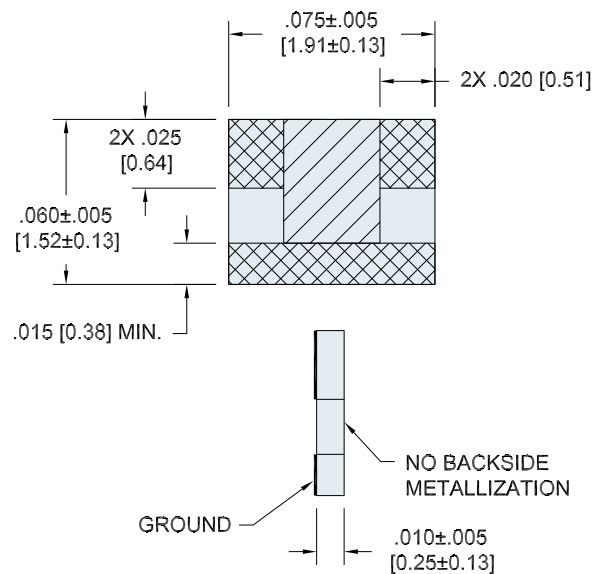
Resistive Element: Proprietary Thin Film

Substrate: Alumina

Terminal Finish: Electroplated Silver over Nickel

Attenuation Stability:  $\pm 0.0001$  dB/dB/°C

Operating Temperature Range: -55°C to +150°C



### ELECTRICAL SPECIFICATIONS

| Model Number | dB Value | Attenuation Accuracy <sup>1</sup> (dB) |         |           |            | Max VSWR |        |         | Power Rating <sup>2</sup> (W) |      |
|--------------|----------|----------------------------------------|---------|-----------|------------|----------|--------|---------|-------------------------------|------|
|              |          | DC-4GHz                                | 4-8GHz  | 8-12.4GHz | 12.4-18GHz | DC-4GHz  | 4-8GHz | 8-18GHz | Up                            | Down |
| PCAA-0       | 0        | +0.5/-0                                | +0.5/-0 | +0.5/-0   | +0.5/-0    | 1.25     | 1.35   | 1.50    | 0.5                           | 5.0  |
| PCAA-1       | 1        | ±0.5                                   | ±0.5    | ±0.5      | ±0.5       | 1.25     | 1.35   | 1.50    | 0.5                           | 5.0  |
| PCAA-2       | 2        | ±0.5                                   | ±0.5    | ±0.5      | ±0.5       | 1.25     | 1.35   | 1.50    | 0.3                           | 2.0  |
| PCAA-3       | 3        | ±0.5                                   | ±0.5    | ±0.5      | ±0.5       | 1.25     | 1.35   | 1.50    | 0.3                           | 2.0  |
| PCAA-4       | 4        | ±0.5                                   | ±0.5    | ±0.5      | ±0.75      | 1.25     | 1.35   | 1.50    |                               |      |
| PCAA-5       | 5        | ±0.5                                   | ±0.5    | ±0.5      | ±0.75      | 1.25     | 1.35   | 1.50    |                               |      |
| PCAA-6       | 6        | ±0.5                                   | ±0.5    | ±0.5      | ±0.75      | 1.25     | 1.35   | 1.50    | 0.2                           | 1.0  |
| PCAA-7       | 7        | ±0.5                                   | ±0.5    | ±0.75     | ±1.00      | 1.25     | 1.35   | 1.50    |                               |      |
| PCAA-8       | 8        | ±0.5                                   | ±0.5    | ±0.75     | ±1.00      | 1.25     | 1.35   | 1.50    |                               |      |
| PCAA-9       | 9        | ±0.5                                   | ±0.5    | ±0.75     | ±1.00      | 1.25     | 1.35   | 1.50    |                               |      |
| PCAA-10      | 10       | ±0.5                                   | ±0.5    | ±0.75     | ±1.00      | 1.25     | 1.35   | 1.50    | 0.2                           | 1.0  |
| PCAA-12      | 12       | ±0.75                                  | +0.5/-3 | +0.5/-4   |            | 1.25     | 1.35   | 1.50    | 0.15                          | 0.75 |
| PCAA-15      | 15       | ±0.75                                  | +0.5/-3 | +0.5/-4   |            | 1.25     | 1.35   | 1.50    | 0.15                          | 0.75 |
| PCAA-20      | 20       | ±1.00                                  | +0.5/-4 |           |            | 1.25     | 1.35   | 1.50    | 0.15                          | 0.75 |

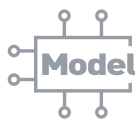
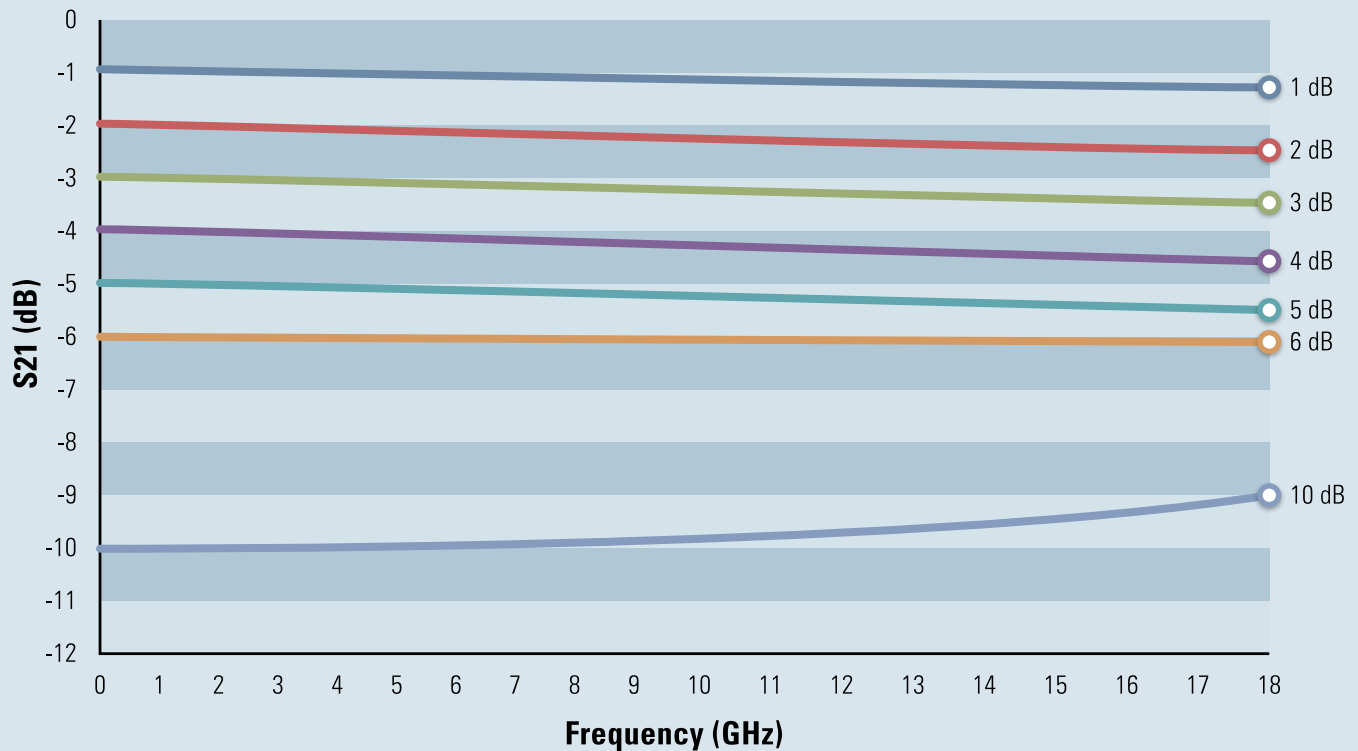
<sup>1</sup>Performance is based on device mounted in matched 50Ω line. <sup>2</sup>Assumes 100° C mounting temperature derated linearly to 0 Watts at 150° C, mounted circuit side up or down

# Chip Attenuators

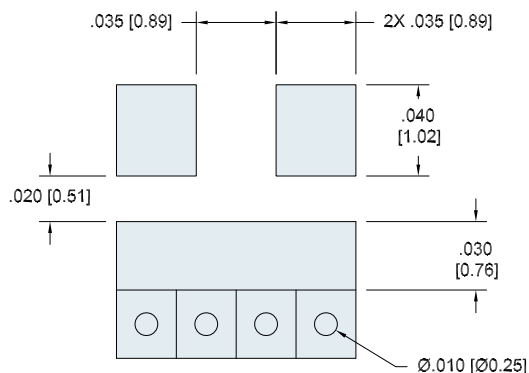
## PCAA Series: DC-18 GHz



### ATTENUATION VS. FREQUENCY



### PC BOARD LAYOUT



### ORDERING KEY

Model Number

**PCAA-T3** — dB Value

Terminal Options

- = Silver over Nickel [standard]
- T** = Tin Lead Solder
- H** = Lead Free Solder
- G** = Gold Plated



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