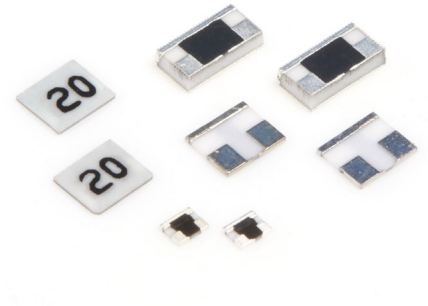


# RF Chip Attenuators >

As wireless, radar and satellite systems pack more functionality into smaller footprints, chip-style RF components become essential. With best-in-class thermal stability and superior impedance, RF Chip Attenuators meet high-frequency and wide-dynamic-range requirements by delivering up to 5W of power handling, DC to 18 GHz operation and a 1 to 20 dB attenuation range (up to 30 dB upon request), all in a compact package.



## ADVANTAGES AND FEATURES

### Saves space

Compact and lightweight, these surface-mount connectors overcome space-constrained limitations.

### Provides temperature stability

Robust materials allow high performance in harsh environments.

### Achieves specifications and affords tight tolerances

Laser-trimmed attenuation accuracy ( $\pm 0.1$  dB) and MIL-PRF-55342 Class S screening enable precise, repeatable performance under rigorous conditions.

### Supports the demands of advanced wireless, radar and satellite communication systems

These attenuators perform seamlessly at high frequencies, from DC to 18 GHz.

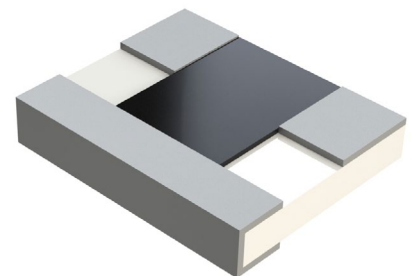
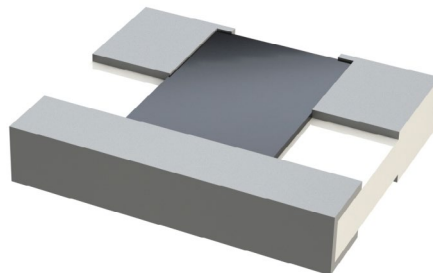
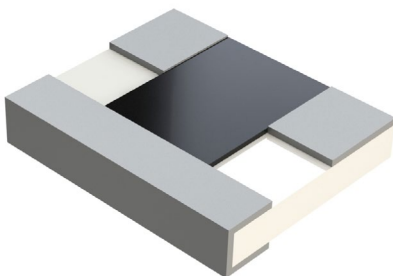
Power Handling	0.15 to 5W
Frequencies	DC to 18 GHz
VSWR (max.)	1.25:1 to 1.50:1
Impedance	50 Ohms
Attenuation	1 to 20 dB

### Has stable performance across the frequency band

Superior impedance matching with a return loss  $\geq 20$  dB, minimizes insertion-loss variability, maintaining consistent attenuation over the entire operating bandwidth.

### Minimizes reflected signal

Exceptional impedance matching reduces signal reflections and VSWR, improving link-budget and measurement accuracy in high-dynamic-range applications.



# RF Chip Attenuators

## MARKETS AND APPLICATIONS

### Aerospace

Proximity warning systems  
Traffic collision-avoidance systems

### Defense

E/W and T/R modules  
Integrated microwave assemblies  
Phased-array radars

### MedTech

MRI power electronics

### Wireless communications

FM and TV signal transmitters  
High-power terminations for isolators and amplifiers



*Traffic Collision-Avoidance Systems*



*Phased-Array Radars*



*MRI Power Electronics*



*FM and TV Signal Transmitters*

## SPECIFICATIONS

### Reference Information

Industry Standards and Testing: MIL-PRF-55342, MIL-PRF-55182, MIL-DTL-8833  
Selectable attenuation, laser-trimmed accuracy

### Electrical

Attenuation Range: 1 to 20 dB selectable, up to 30 dB on request  
Frequency Range: DC to 18 GHz  
Power Handling: Up to 5W continuous  
Impedance Match (Return Loss):  $\geq 20$  dB  
Thermal Stability:  $\Delta$ attenuation  $\leq \pm 0.1$  dB over  $-65$  to  $+150^{\circ}\text{C}$

### Mechanical

Mate Force of a 12-Power and 14-Signal Circuit Connector (max.): 140N  
Unmate Force of a 12-Power and 14-Signal Circuit Connector (min.): 10N  
Durability: 200 mating cycles

### Physical

Package Style: Chip-mount, tape-and-reel or waffle-pack  
Substrate Material: High-purity alumina ceramic  
Resistor-Wrap Configurations: Full-wrap, ground-wrap or no-wrap options  
Finish Options: Silver or tin-lead solder  
Attenuator Type: Fixed value