

# APPLICATION NOTES



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Rev A

## TERMINATIONS

### Overview

All transmission lines have a characteristic impedance that need to be matched for maximum power transfer from the source to the load. Terminating the lines with the right termination corresponding to a transmission line's characteristic impedance, is crucial in achieving this.

A properly terminated transmission line, should have very little reflected power back to the source, hence a voltage standing wave ratio (VSWR) closer to unity.

Although, most transmission lines are 50  $\Omega$  or 75  $\Omega$  (for some communication systems), there are also terminations available to match specific characteristic impedances.



Figure 1: BroadWave Terminations

### Types of terminations

Terminations come in various connector types and power ratings. Two main types of high power terminations are conduction cooled (Figure 2) and convection cooled (Figure 3).



Figure 2: BroadWave Convection Cooled Terminations

#### Conduction Cooled

- These units conduct heat to an externally supplied heat sink.
- The units come without any heat sink.
- Normally smaller than the convection cooled.
- Less costly than convection cooled units.

#### Convection Cooled

- These units come with heat sinks.
- Good high power handling capacity.
- Good heat dissipation.

### Applications

- High power applications
- Test systems
- Medical imaging equipment
- High precision applications (defense, military, etc)



Figure 3: BroadWave Conduction Cooled Termination

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#### **BroadWave Technologies Terminations**

Given below are some of the general specifications of BroadWaves' terminations. Standard 50  $\Omega$  and 75  $\Omega$  units are available. Other termination values are available upon request. For more detailed information, specifications or to view entire catalog, please visit our website. If you are unable to find something to your specifications, feel free to contact us.

#### Terminations (Part no: 5XX-XXX-XXX)

Connector Types	BNC, F, N, SMA, TNC, 7/16
Impedance *	Typically 50 $\Omega$ and 75 $\Omega$
Input Power (Average)	Up to 1000W
Heat Dissipation **	Both convection and conduction cooled units
Frequency Range	DC to 40 Ghz

Note: \* Different impedance values are available upon request. Contact us for more information.

\*\* We stock variety of both conduction and convection units. Visit our website or contact us for more details



Phone; 317-888-8316

Email: [sales@broadwavetechnologies.com](mailto:sales@broadwavetechnologies.com)

Website: <http://www.broadwavetechnologies.com>