



Antenna Development Corporation
151 S. Walnut Street, Suite B-6, Las Cruces, NM 88001

Reactive Power Divider/Combiners

Antenna Development Corporation, Inc. (*AntDevCo*) employees have designed and manufactured spacecraft microstrip patch antennas for spacecraft and missile/rocket programs. Many of these antennas have incorporated internal reactive power divider/combiners to realize arrays of individual elements. The stand-alone power divider/combiners described here and offered by *AntDevCo* fill a niche by providing efficient solutions for small arrays on spacecraft and other applications that do not require isolation between the output ports.

All power divider/combiners are supplied with extensive testing data including insertion losses and return losses. Simulations of the expected performance on your satellite antenna array that uses these devices can be supplied for additional fees.

The power divider/combiners may also be ordered with an internal grounding structure that will eliminate charging issues with floating conductors internal to microstrip patch or other antenna types. The power divider/combiners can be specified to provide minimal insertion loss in the case of a failure of the array cable connectors.

Contact us if you require units with more output ports.



Two-way Unit



Three-way Unit

These units are:

- Space qualified
- Low mass
- Low Loss

Preliminary Specifications

- Insertion Loss: 0.3 dB in excess of theoretical, each port. 0.2 dB balance between output ports.
- Output Ports: 2 way or 3 way available
- Isolation: Reactive divider, no internal impedance matching loads
- Frequency: S-band (1500 – 2300 MHz) (C-band, & X-band frequencies are available)
- Bandwidth: 600 MHz typical at S-band
- Impedance: 50 Ohms (measured with outputs terminated 50 Ohms)
- VSWR: < 1.3
- Grounding: Optional internal DC short (may limit the bandwidth)
- Connector: SMA Females
- Failure Mode: Optional tolerance to cable/antenna connector failure
- Dimensions: 2.175" X 2.685" X 0.120" (Excluding projection of connectors)
- Mounting: 1.75" X 2.25" 4-hole rectangle, 0.158" dia thru holes.
- Mass: < 50 grams
- Temperature: -65 C to +100 C
- Power: up to 10 Watts CW

AntDevCo is ISO 9001:2000 certified.

Contact us for more details and discussions about your particular application.

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