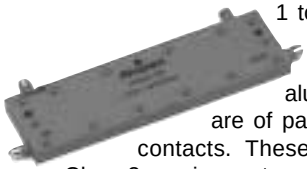
Aluminum Cased Connectorized Components

3 dB 90° & 180° HYBRID COUPLERS

3 dB Hybrid couplers split power equally between two output ports. There are 90 degree and 180 degree versions providing a fixed phase difference between the two outputs. These couplers are constructed using strip transmission line in solid aluminum housings. Connectors are of passivated stainless steel with gold plated contacts. These couplers meet MIL-E-5400 Class 3 requirements. Units are available in the frequency range of .062 to 18 GHz in octave and multi-octave frequency coverage. Standard models have power handling capability up to 1500 watts at frequencies of 30 MHz, to 30 watts at 18 GHz. High power models are rated at greater than 1 kw at 500 MHz.

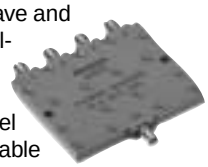
DIRECTIONAL COUPLERS

Directional couplers are available as "In-Line" or "H" Style. In-line designs can be inserted in a transmission line path with a coupled output at right angles. "H" Styles provide the coupler output at 180 degrees. Coupling values from 6 to 20 dB at frequencies from 1 to 18 GHz are available. These couplers are constructed using strip transmission line in solid aluminum housings. Connectors are of passivated steel with gold plated contacts. These couplers meet MIL-E-5400 Class 3 requirements.



POWER DIVIDERS

Output signals are equal in amplitude and phase. Models cover the frequency range to 18 GHz and are available in 2, 3, 4 and 8-way versions. Power handling of 2-way standard splitters is 10 watts when the outputs are terminated in a VSWR of 1.2:1 or less. Octave and multi-octave frequency coverage is available.Construction consists of printed circuits on teflon-glass substrates contained in an aluminum housing with stainless steel connectors. Various connectors are available dependent on the model number selected. The units meet MIL-E-5400 Class 3 requirements.



MODULATORS

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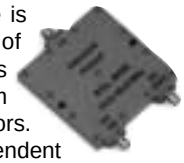

ATTENUATORS

Linearized and current controlled attenuators are available. The linearized series has an input control sensitivity of 6 dB/volt where the attenuation is linearly related to the control voltage. The attenuators are also available with control of current to diodes without the linearizing circuit. All units are absorptive type providing good input and output VSWR. Switching speed is less than 650 nsec. Power rating is 0.4 watts for all units. Units are available to 12.4 GHz. Units are constructed using stripline technology meeting MIL-E-5400 Class 3 requirements.

PHASE DISCRIMINATORS (CORRELATORS)

Phase discriminators accept two RF signals of the same frequency and produce outputs proportional to the amplitude of the inputs and relative phase between them. On the 20750 series, signal voltages are available for video viewing or processing. The 2A0750 series detector outputs are combined and amplified in an AC coupled amp. The video outputs from either series can be used to provide a polar oscilloscope display where the radius is proportional to signal strength and angular deflection is proportional to relative phase between the input signals.

MIXERS

Balanced mixers featuring low conversion loss and good VSWR. The Orthoquad design provides both good match and high isolation between the LO and RF ports. Double balanced mixers provide high isolation and good conversion loss and also wider ranges or frequencies for RF, LO and IF. Quadratures mixers provide two IF outputs that are equal in amplitude and 90° offset from one another. Image rejection mixers are available with internal 90° IF couplers that provide cancellation of the image frequency term. Some models are available in biased versions that allow DC bias current to make up for low local oscillator power. Bias can also be used for optimizing mixer parameters including conversion loss and intercept point. Stripline construction with stainless steel connectors and Schottky diodes are standard.

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Item 1. Full Electrical Performance Test per ATP.

Item 2. Sine Vibration per MIL-STD-202F, Method 204D, Test Condition G, 10 to 2000 Hz, 30G Peak, 4 hours/axis.

Item 3. Electrical Performance Test.

Item 4. Random Vibration per MIL-STD-202F, Method 214, Test Condition I, E, 0.2 Gz/Hz, 16.4 g RMS overall, 15 minutes/axis.

Item 5. Electrical Performance Test.

Item 6. Shock per MIL-STD-202F, Method 213B, Test Condition J, 30g Peak, 11 msec, Half Sine, 3 blows each direction of each axis, non-operating.

Item 7. Electrical Performance Test.

Item 8. Thermal Shock per MIL-STD-202F, Method 107D, Test Condition B, non-operating.

(Except temperature extremes are -55 and +125 Degree Celsius and number of cycles are 10 with a 30 minute dwell at extremes.)

Item 9. Electrical Performance Test.

Item 10. Barometric Pressure per MIL-STD-202F, Method 105C, Test Condition D, 1000,000 Ft., non-operating.

Item 11. Electrical Performance Test.

Item 12. Salt Spray per MIL-STD-202F, Method 101D, Test Condition A, 96 hours, non-operating.

Item 13. Electrical Performance Test.

Item 14. Moisture Resistance per MIL-STD-810C, Method 507, Procedure I, 10 days, non-operating.

Item 15. Final Electrical Performance Test per ATP.

Note: Testing is done Per QTP 99023.