SMA 180 Degree Hybrid Coupler from 15 GHz to 26.5 GHz Rated to 20 Watts

FMCP1172

Features

- Wide frequency coverage
- Hybrid coupler design
- 3 dB Attenuation
- Insertion loss: 2.5 dB Max
- Isolation: 15 dB Min
- Amplitude balance: ±0.8 dB
- Phase balance: ±10°
- Power handling 20 W (CW)
- SMA Female Connectorized package

Applications

- Test and Measurement
- Wireless Communications
- Radar Systems
- Military and Aerospace
- Signal Distribution Networks
- Power Combining/Dividing

Description

This 3 dB hybrid coupler is designed for RF and microwave signal distribution applications. 180 Degree SMA Hybrid Coupler from 15 GHz to 26.5 GHz Rated to 20 Watts. It provides signal splitting and combining with a phase relationship of 180°, insertion loss of 2.5 dB, isolation of 15 dB, amplitude balance of ±0.8 dB, and phase balance of ±10°. The unit is optimized for reliable performance across its specified frequency range and power handling capability.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	15		26.5	GHz
Impedance		50		Ohms
Phase Difference		180		Degrees
Coupling		3		dB
Insertion Loss		1.8	2.5	dB
Isolation	15	18		dB
VSWR		1.5:1	1.7:1	
Amplitude Balance		±0.6	±0.8	dB
Phase Balance		±6	±10	Degrees
Input Power (CW)			20	Watts
Input Power (Peak)			300	Watts

1 µSec PW, 10% Duty Cycle

Mechanical Specifications

Size

Length	1.17 in [29.72 mm]
Width	0.95 in [24.13 mm]
Height	0.43 in [10.92 mm]
Weight	0.08 lbs [36.29 g]
Finish	Grey Paint

Configuration

RF Connector Type	SMA Female

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Contact Material and Plating	Stainless Steel

Environmental Specifications

Temperature	
Operating Range	-40 to +85 deg C
Storage Range	-50 to +105 deg C
Humidity	100% RH at 35ºC, 95% RH at 40ºC
Shock	20G for 11msec half sine wave, 3 axis both directions
Vibration	25gRMS (15 degrees 2KHz) endurance, 1 hour per axis
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)

Compliance Certifications (see product page for current document)

Plotted and Other Data

Notes:

Typical Performance Data

SMA 180 Degree Hybrid Coupler from 15 GHz to 26.5 GHz Rated to 20 Watts from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: SMA 180 Degree Hybrid Coupler from 15 GHz to 26.5 GHz Rated to 20 Watts FMCP1172

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FMCP1172 CAD Drawing

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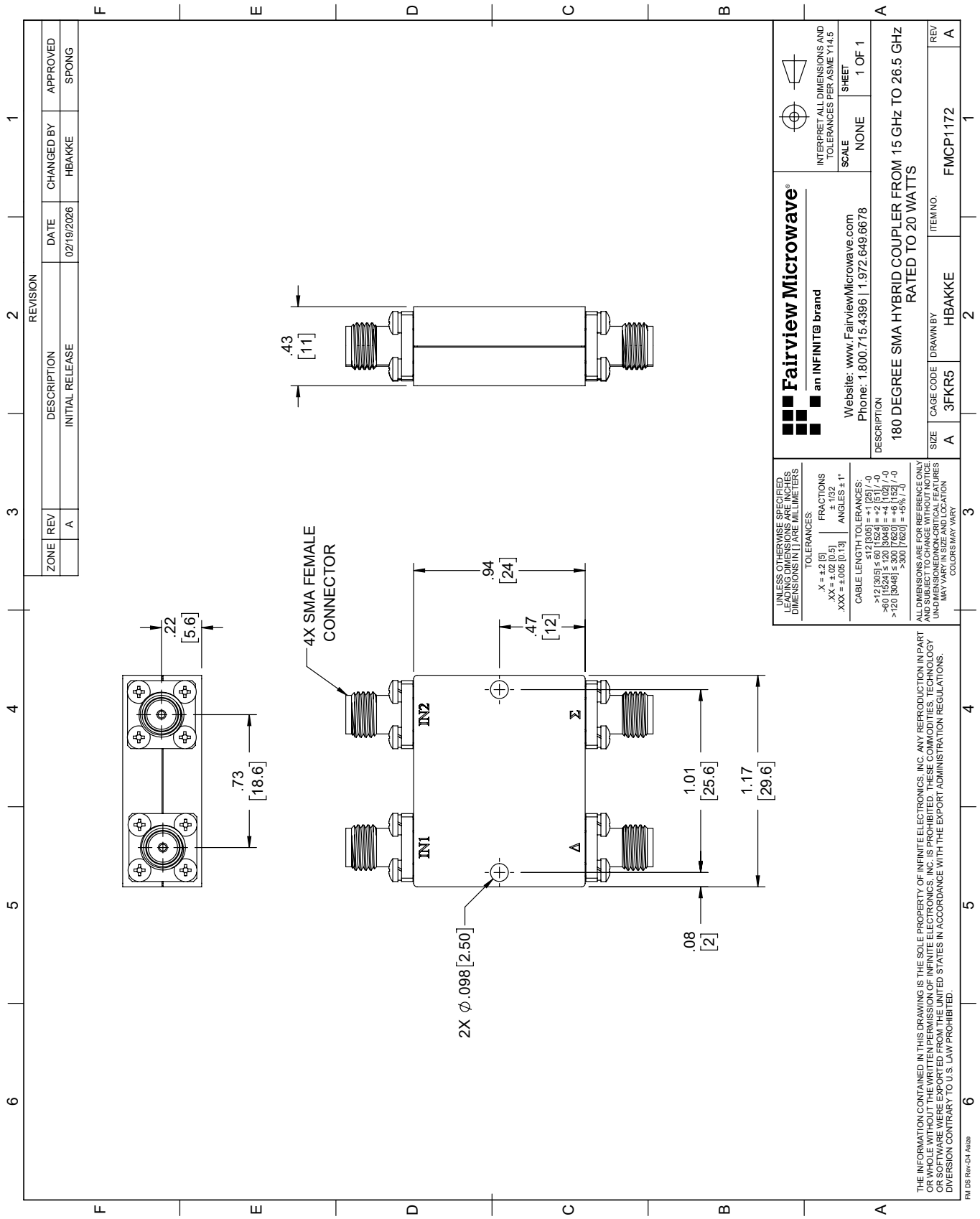

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