Agilent
Hybrid Power Dividers

87302C   0.5 to 26.5 GHz
87303C   1 to 26.5 GHz
87304C   2 to 26.5 GHz

Data Sheet

- High isolation
- Broadband to 26.5 GHz
- Low insertion loss
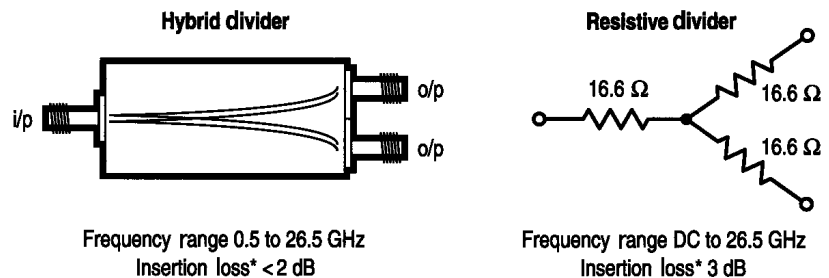- Accurate amplitude and phase tracking

Features and Description

The Agilent 87302C, 87303C, and 87304C power dividers are compact, hybrid microwave power dividers designed for power-splitting applications that require a minimal insertion loss and high isolation. The 87302C covers the entire 0.5 to 26.5 GHz frequency range with a maximum insertion loss of 1.9 dB. The 87303C and 87304C restrict the lower frequency limit for further improvement in the insertion loss. The 87303C covers 1 to 26.5 GHz with a maximum insertion loss of 1.6 dB and the 87304C operates from 2 to 26.5 GHz with a worst-case insertion loss of 1.4 dB. Maximum insertion loss of the 87302C, 87303C, and 87304C is in addition to 3 dB coupling loss. All units use industry standard 3.5 mm (SMA compatible) connectors for rugged trouble-free operation.

Applications

These hybrid power dividers are excellent for any application where two-way power division with high isolation and low insertion loss is required. They typically exhibit an insertion loss that is 1 to 2 dB lower than an equivalent resistive power divider (see Figure 1).

Hybrid divider

i/p   o/p   o/p

Frequency range 0.5 to 26.5 GHz
Insertion loss* < 2 dB

Resistive divider

16.6 Ω   16.6 Ω   16.6 Ω

Frequency range DC to 26.5 GHz
Insertion loss* 3 dB

* Plus 3 dB Power division loss

Figure 1. Hybrid power divider.

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Product Specifications

Frequency range	Model	Band segment	VSWR	Insertion[1] loss (db)	Isolation (dB)	Amplitude tracking (dB)	Phase tracking (deg.)
0.5 to 26.5 GHz	87302C	0.5 to 18	1.45	1.5	19	0.3	6
		18 to 26.5	1.60	1.9	19	0.5	10
1.0 to 26.5 GHz	87303C	1.0 to 18	1.45	1.2	19	0.3	6
		18 to 26.5	1.60	1.6	21	0.5	10
2.0 to 26.5 GHz	87304C	2.0 to 18	1.45	1.1	19	0.3	6
		18 to 26.5	1.60	1.4	18	0.5	10

1. Insertion loss is in addition to 3 dB coupling loss

Power rating	10 W, CW (2:1 maximum load SWR)
Connectors	3.5 mm F, (SMA compatible)
Weight	170 g (6 oz) net, 340 g (12 oz) shipping

Note: Amplitude and phase tracking are the ratio of one output in dB or degrees, respectively.
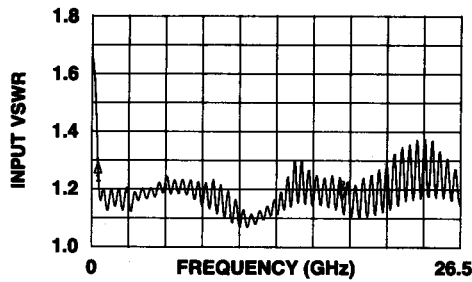
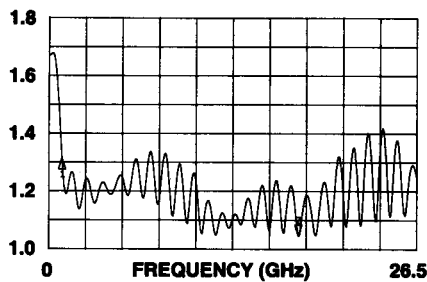## Dimensions
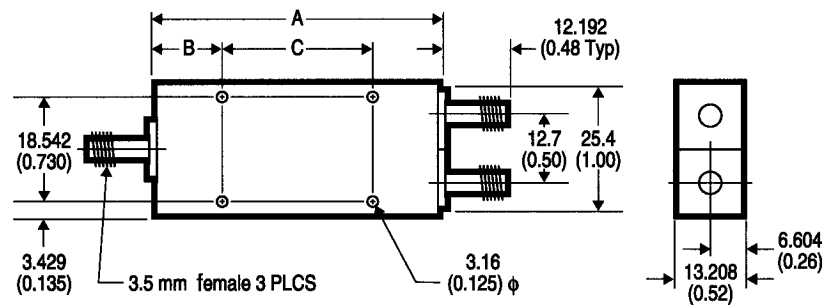
Dimensions are in millimeters and (inches).

Model	Dimensions		
	A	B	C
87302C	196.85	28.702	139.7
	(7.75)	(1.13)	(5.50)
87303C	105.41	26.162	2.10
	(4.15)	(1.03)	(53.34)
87304C	57.15	28.702	0.00
	(2.25)	(1.13)	(0.00)

Technical Performance Curves

87302C
Markers at 0.5 and 18 GHz

87303C
Markers at 1 and 18 GHz

87304C
Markers at 2 and 18 GHz
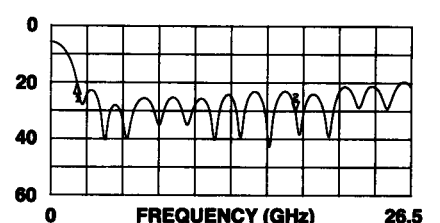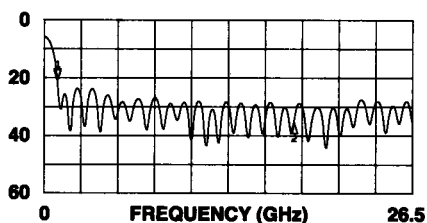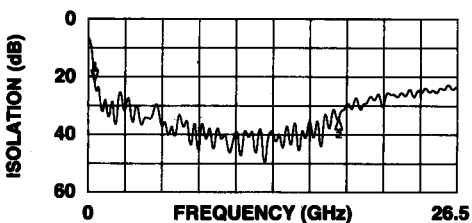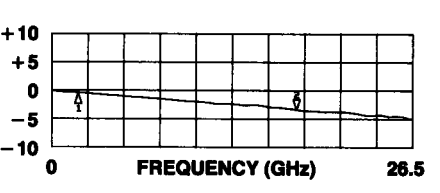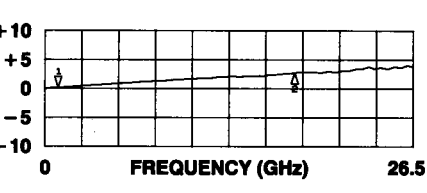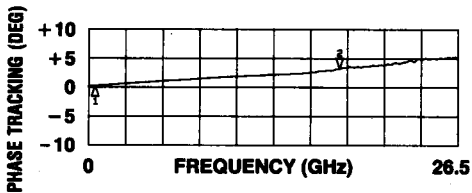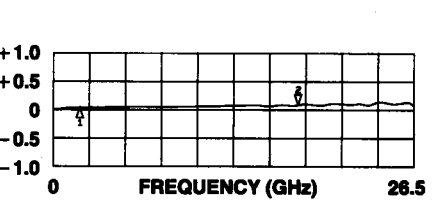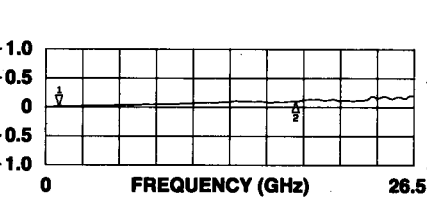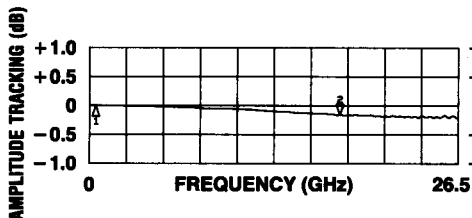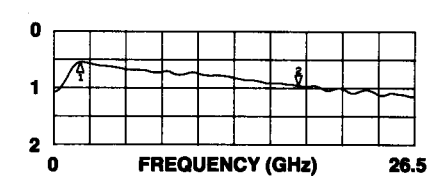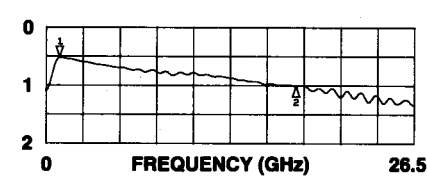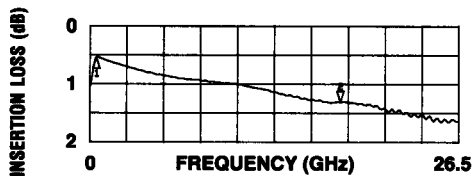
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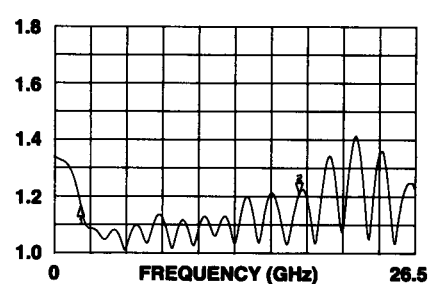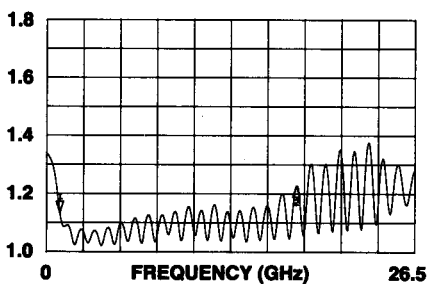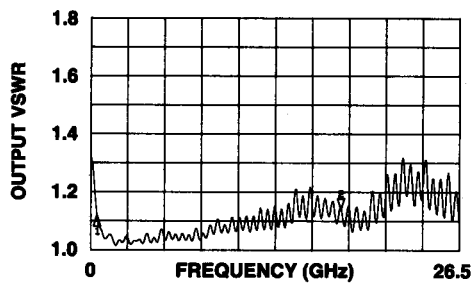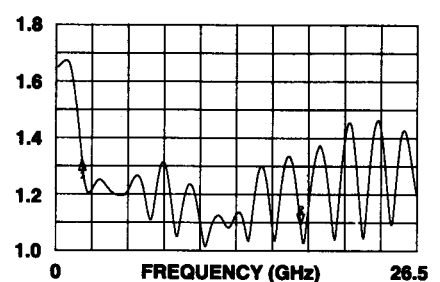validate and manufacture electronic products. Agilent
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Revised: October 24, 2007

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document subject to change without notice.

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Printed in USA, October 29, 2007
5091-6190E

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