

Three-Way Isolated Power Dividers Tapered, Ultra-Broadband

Rev. V3

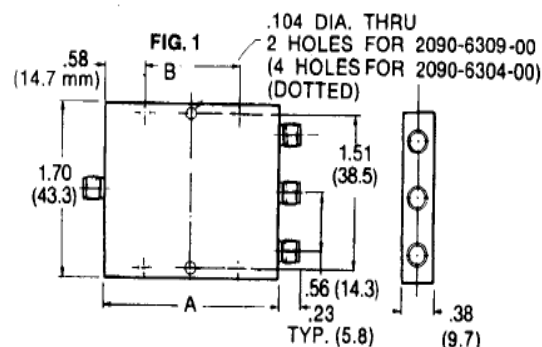
Features

- Good Amplitude and Phase Balance
- High Isolation Between Output Ports
- Low VSWR, Small Size and Light Weight
- Octave, Multi-Octave and Decade Frequency Coverage
- Low Insertion Loss
- Power: 80 Watts Maximum
- Meets MIL-E-5400 Environments

Description

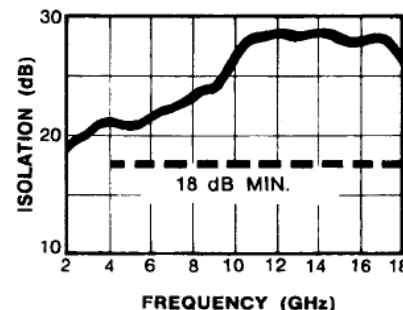
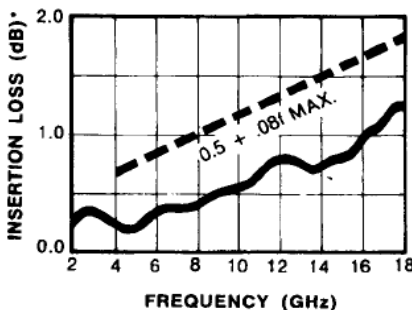
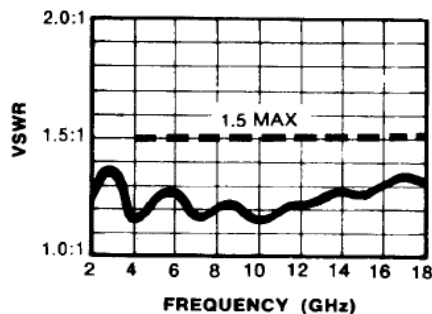
Power Dividers are compact stripline units with wide bandwidth and multiple outputs. Tapered line transformers and internal terminations provide low VSWR at all ports and high isolation between all output ports. Phase and amplitude tracking of all outputs is excellent due to the symmetrical designs. Combinations of three-way and two-way power dividers in one package are available for custom applications.

Outline Drawing



Note: All dimensions are ± 0.20 , except mounting hole diameters (± 0.005) and mounting hole location (± 0.10). Height dimension excludes rivet protrusion.

Typical Performance Part No. 2090-6309-00



Specifications

Part Number	Freq. Range (GHz)	Insertion Loss Max (dB)	Isolation dB (min)	VSWR (max)	Output Unbalanced Amp. (dB)	Output Unbalance Phase (deg.)	Max Input Power* (watts)	Fig	Size, Inch (mm) A	Size, Inch (mm) B	Weight Oz.	Weight g
2090-6304-00	0.5-18.0	0.4 + .24f	18	1.6	0.5†	**	80	1	11.0 (280)	9.84 (250.0)	11.4	322
2090-6309-00	4.0-18.0	0.5 + 0.08f	18	1.5	0.5	**	40	1	2.02 (51.3)	—	2.1	60

* Maximum input power with output loads of VSWR $\leq 2.0:1$. Derate to 10% of listed value when arbitrarily terminated.

Features

- Octave, Multi-Octave and Decade Frequency Coverage
- Low Insertion Loss
- Excellent Amplitude and Phase Balance
- High Isolation Between Output Ports
- Low VSWR
- Power: 80 Watts Maximum
- Meets MIL-E-5400 Environments

Description

New designs include operation through 26 GHz and retain the performance of lower frequency units. These units are ideal for multioctave ECM systems, and function as either dividers or combiners to facilitate system performance.

Outline Drawing

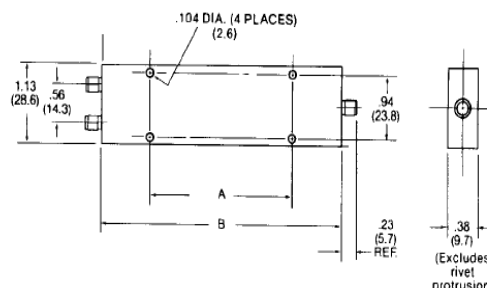


Figure 1

Note: All dimensions are ± 0.020 except mounting hole diameters (± 0.005) and mounting hole location (± 0.010).

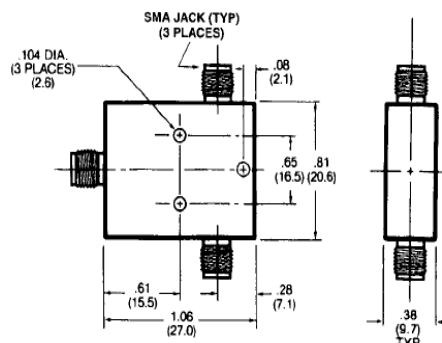


Figure 2

Specifications

Part Number	Freq. Range (GHz)	Insertion Loss Max (dB)	Isolation dB (min)	VSWR (max)	Output Un-balanced Amp. (dB)	Output Un-balance Phase (deg.)	Max Input Power** (watts)	Size, Inch (mm) A	Size, Inch (mm) B	Weight Fig.	Weight oz. g
2090-6204-00	0.5 - 18.0	0.2 + 0.17f	20 (0.5 to 3) GHz 23 (3 to 18) GHz	1.35 (0.5 to 11) GHz 1.50 (11 to 18) GHz	0.3	5	80	9.40 (239)	11.02 (291)	1	8.0 226
2090-6205-00	2.0 - 18.0	0.2 + 0.07f	18 (2 to 3) GHz 23 (3 to 18) GHz	1.35 (2 to 11) GHz 1.50 (11 to 18) GHz	0.3	5	40	2.40 (61.1)	4.02 (102)	1	2.9 83
2090-6210-00*	8.0 - 18.0	0.2 + 0.03f	18	1.50	0.3	5	20	—	—	2	1.1 30

* To 18GHz

** Maximum input power with output loads of VSWR ≤ 2.01 derate to 10% of listed value when arbitrarily terminated.

Note: f is frequency in GHz

Three-Way to Eight-Way Stripline Divider Type Dividers Tapered Ultra-Broadband

Rev. V3

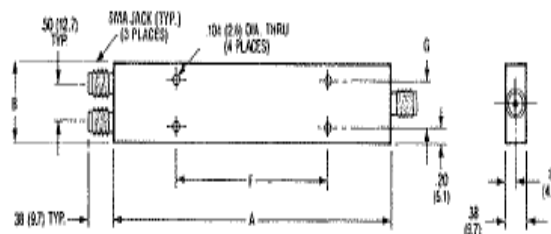
Features

- Broadband Performance 1.0 -18.0 GHz
- Low Insertion Loss
- Excellent Amplitude and Phase Balance
- Power: 50 Watts Maximum
- Meets MIL-E-5400 Environments

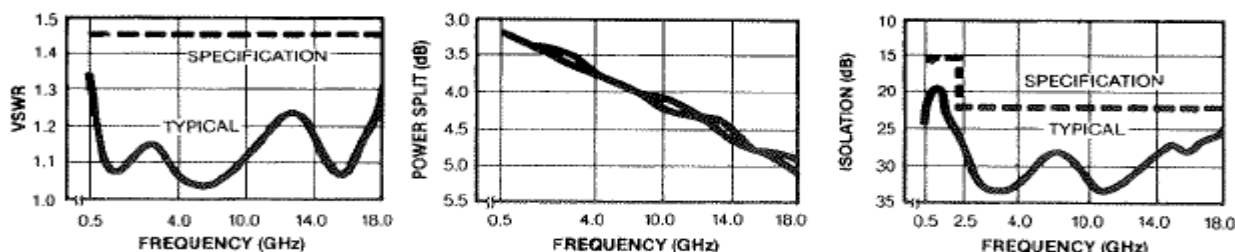
Description

These are the smallest in-phase isolation 1.0 -18.0 GHz power dividers available. Rugged stripline construction, housed in sealed lightweight packages insure reliable operation in the roughest environments. SMA stainless steel connectors are standard. Contact the factory for other connector designs.

Outline Drawing



Typical Performance Part No. 2090-6214-00



Specifications

Part Number	NO. of Outputs	Frequency Range (GHz)	VSWR (max.) Input/Output	Isolation (dB min.) Frequency (GHz) 1.0-2.5/2.5-18.0	Insertion Loss dB (max.)	Output Unbalance Phase (deg.) 1.0-2.5/2.5-18.0 GHz	Output Unbalance Amp (dB.) 1.0-2.5/2.5-18.0 GHz	Max. Input Power * (watts)
2090-6214-00	2	1.0 - 18.0	1.40/1.35	15/22	0.25 + 0.11f	5/5	0.4/0.4	50
2090-6414-00	4	1.0 - 18.0	1.6/1.4	14/18	0.6 + 0.20f	8/12	0.6/1.0	50
2090-6814-00	8	1.0 - 18.0	1.7/1.5	14/17	1.0 + 0.25f	10/16	0.8/1.4	50

* 50 Watts with 1.2:1 max. load VSWR.
25 Watts with 2:1 max. load VSWR.

Mechanical Specifications

Part Number	Size, Inch(mm) A	Size, Inch(mm) B	Size, Inch(mm) F	Size, Inch(mm) G	Weight Oz.	Weight g
2090-6214-00	5.0 (139.7)	1.00 (25.4)	4.00 (101.5)	0.60 (15.2)	3.4	96.6
2090-6414-00	5.20 (132.1)	2.00 (50.8)	3.20 (81.3)	1.60 (45.7)	16	448
2090-6814-00	5.20 (132.1)	4.00 (101.5)	3.20 (81.3)	3.60 (91.4)	30	840

M/A-COM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.