Two-, Four-, & Eight-Way Isolated Power Dividers Wilkinson

2089 Series

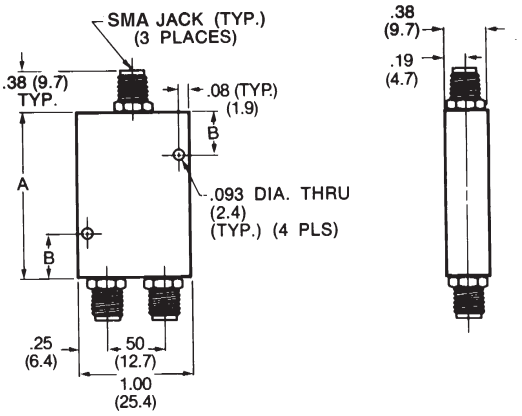
V3.00

Features

- Excellent Amplitude and Phase Balance
- High Isolation between Output Ports
- Low VSWR, Small Size and Light Weight
- Octave and Multi-Octave Frequency Coverage
- Power: 10 Watts Input Maximum with Matched Terminations
- Meets MIL-E-5400 Environments

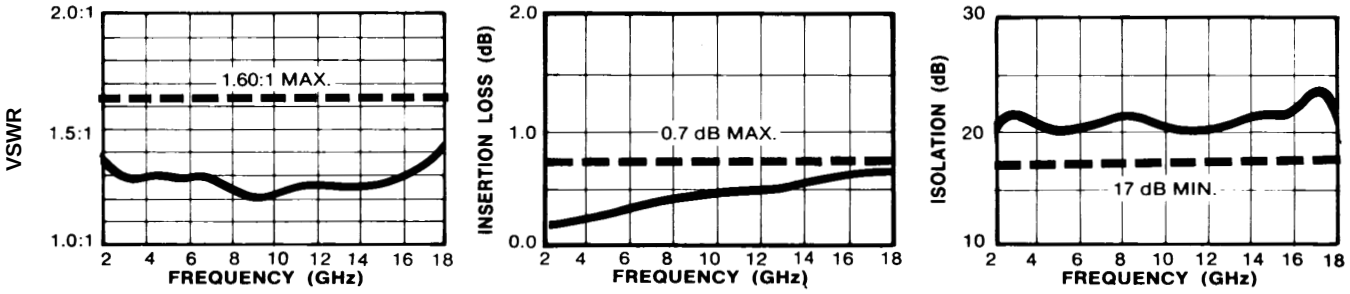
Description

This series of two-way, in-phase stripline power dividers demonstrates excellent performance as well as small size and light weight. These octave and multi-octave power dividers have high isolation, low VSWR and excellent amplitude and phase balance. Their rugged construction meets MIL-E-5400 environmental conditions, making them ideal for high performance microwave systems.



All dimensions are ± .020, except mounting hole diameters (± .005) and mounting hole location (± .010).

Typical Performance Part No. 2089-6208-00



Two-Way Isolated Power Divider Specifications

Part No.	Frequency Range (GHz)	VSWR (max.)	Isolation dB (min.)	Insertion Loss dB (max.)	Output Unbalance		Maximum Input Power* (watts)	Size, Inches (mm)		Weight	
					Amp. (dB)	Phase (deg.)		A	B	oz.	g
2089-6201-00	1.0-2.0	1.25	20	0.25	0.2	4.0	2.0	2.0 (50.8)	0.5 (12.7)	1.5	43
2089-6202-00	2.0-4.0	1.35	20	0.25	0.2	4.0	2.0	2.0 (50.8)	0.5 (12.7)	1.5	43
2089-6203-00	4.0-8.0	1.35	20	0.3	0.2	6.0	2.0	1.38 (35)	0.4 (10.2)	1.2	35
2089-6204-00	8.0-12.4	1.60	20	0.4	0.25	6.0	2.0	1.38 (35)	0.4 (10.2)	1.2	35
2089-6205-00	12.4-18.0	1.70	17	0.6	0.25	6.0	3.0	1.38 (35)	0.4 (10.2)	1.2	35
2089-6206-00	0.5-2.0	1.30	20	0.4	0.2	4.0	4.0	2.8 (71.2)	1.4 (35.6)	2.0	57
2089-6207-00	2.0-8.0	1.50	18	0.4	0.25	8.0	4.0	2.25 (57.2)	0.5 (12.7)	1.3	37
2089-6208-00	2.0-18.0	1.60	17	1.0	0.25	8.0	10.0	2.25 (57.2)	0.5 (12.7)	1.3	37
2089-6209-00	4.0-18.0	1.60	17	0.6	0.25	8.0	4.0	1.63 (41.4)	0.5 (12.7)	1.3	37
2089-6210-00	7.0-18.0	1.70	17	0.6	0.25	8.0	3.0	1.38 (35)	0.4 (10.2)	1.2	35

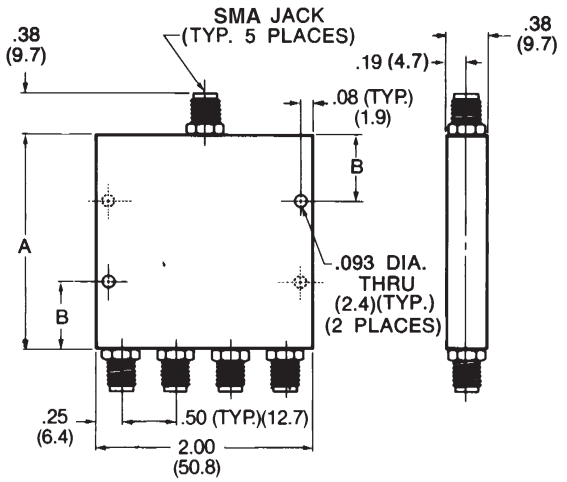
* Maximum input power with output loads of VSWR ≤ 2.0:1. Derate to 10% of listed value when arbitrarily terminated.

Features

- Octave and Multi-Octave Frequency Coverage
- Low Insertion Loss
- Excellent Phase Balance
- High Isolation between Output Ports
- Low VSWR
- Power: 20 Watts Maximum
- Meets MIL-E-5400 Environments

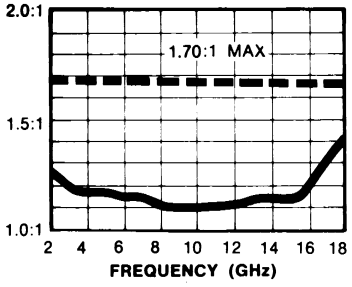
Description

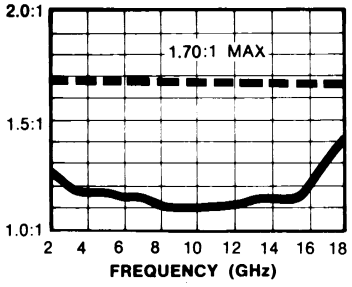
These four-way in-phase power dividers combine excellent strip transmission line design techniques with small size and light weight and still achieve superb performance over wide multi-octave frequency ranges as well as over single octave bandwidths. These units may be used in reverse to combine in-phase signals applied to them. They are also available in a variety of "n" way output ports as well as custom designed to your particular application.

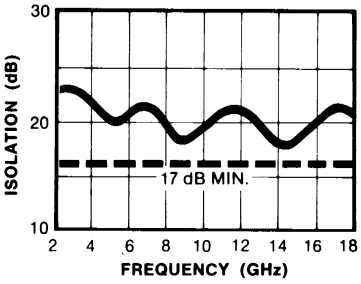


Note: All dimensions are ± .020 except mounting hole diameters (± .005) and mounting hole location (± .010).

Typical Performance Part No. 2089-6408-00







Four-Way Isolated Power Divider Specifications

Part No.	Frequency Range (GHz)	VSWR (max.)	Isolation dB (min.)	Insertion Loss dB (max.)	Output Unbalance		Maximum Input Power* (watts)	Size, Inches (mm)		Weight	
					Amp. (dB)	Phase (deg.)		A	B	oz.	g
2089-6401-00**	1.0-2.0	1.35	20	0.50	0.40	6	4.0	3.0 (76.2)	0.63 (15.9)	4.0	115
2089-6402-00	2.0-4.0	1.35	20	0.50	0.40	6	4.0	2.0 (50.8)		2.8	80
2089-6403-00	4.0-8.0	1.50	20	0.50	0.40	8	4.0	2.0 (50.8)		2.8	80
2089-6404-00	8.0-12.4	1.70	18	0.75	0.50	8	4.0	2.0 (50.8)		2.8	80
2089-6405-00	12.4-18.0	1.70	15	1.20	0.50	8	6.0	2.0 (50.8)		2.8	80
2089-6406-00**	0.5-2.0	1.45	20	0.70	0.40	6	4.0	2.92 (74.2)		4.0	115
2089-6407-00**	2.0-8.0	1.60	18	0.80	0.50	12	8.0	4.0 (102)		5.2	149
2089-6408-00	2.0-18.0	1.70	17	1.80	0.50	12	20.0	3.0 (76.2)		4.0	115
2089-6409-00	4.0-18.0	1.70	15	1.20	0.50	12	8.0	2.0 (50.8)		2.8	80
2089-6410-00	7.0-18.0	1.60	15	1.20	0.50	12	6.0	2.0 (50.8)		2.8	80

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

** These units have four mounting holes symmetrically located as shown.

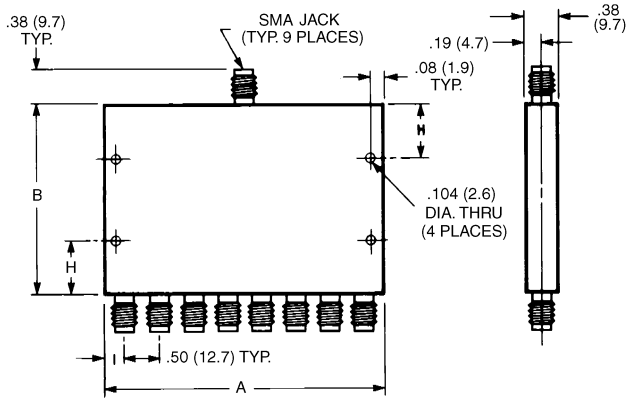
V3.00

Features

- Octave and Multi-Octave Frequency Coverage
- Excellent Amplitude & Phase Balance
- Low Insertion Loss
- Low VSWR
- Meets MIL-E-5400 Environments

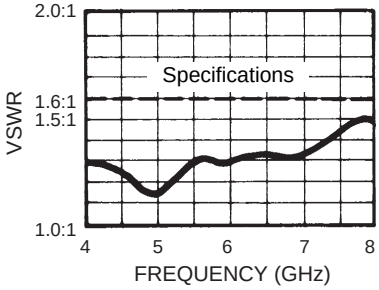
Description

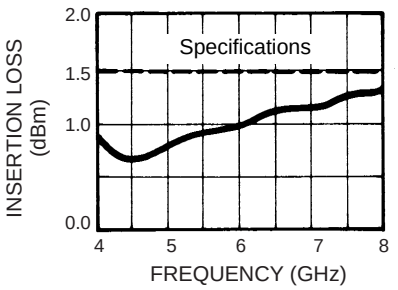
These new eight-way in-phase power dividers combine reliable strip transmission line design techniques with small size and light weight to achieve excellent performance over octave and multi-octave frequency ranges. They may also be used to combine in-phase signals applied at the outputs. Their rugged construction meets stringent MIL-E-5400 environmental conditions. SMA female connectors are standard while other common connectors are available upon request.

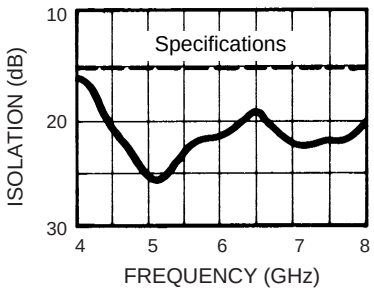


Note: All dimensions are ± .020 except mounting hole diameters (± .005) and mounting hole location (± .010).

Typical Performance Part No. 2089-6803-00







Eight-Way Isolated Power Divider Specifications

Part No.	Frequency Range (GHz)	VSWR (max.)	Isolation dB (min.)	Insertion Loss dB (max.)	Output Unbalance		Maximum Input Power* (watts)	Size, Inches				Weight (NOM.) oz.
					Amp (dB)	Phase (deg.)		A	B	H	I	
2089-6801-00	1.0-2.0	1.5:1	20	1.0	0.8	8	6.0	4.5	5.0	1.0	0.50	15
2089-6802-00	2.0-4.0	1.5:1	18	1.0	0.8	10	6.0	4.0	2.0	0.5	0.25	12
2089-6803-00	4.0-8.0	1.6:1	15	1.5	0.8	16	6.0	4.0	2.0	0.5	0.25	12
2089-6804-00	8.0-12.4	1.7:1	15	1.7	0.8	16	6.0	4.0	2.0	0.5	0.25	12
2089-6805-00	12.4-18.0	1.7:1	15	2.2	0.8	24	10.0	4.0	2.0	0.5	0.25	12
2089-6806-00	0.5-2.0	1.5:1	20	1.5	0.8	8	12.0	4.5	5.0	1.0	0.50	15
2089-6807-00	2.0-8.0	1.6:1	15	2.0	1.2	16	12.0	4.0	2.0	0.5	0.25	12
2089-6808-00	2.0-18.0	1.8:1	15	3.3	1.8	24	30.0	4.5	5.0	1.0	0.50	15
2089-6810-00	7.0-18.0	1.8:1	15	2.5	1.5	24	10.0	4.0	2.0	0.5	0.25	12

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