

2 Way-90° Power Splitter/Combiner

EPQ-133+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10 dBm @Temperature = +25°C

FREQ. (GHz)	TOTAL LOSS ⁽¹⁾ (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB) 1-2	VSWR (:1)		
	S-1	S-2				S	1	2
3.0	1.25	7.30	6.05	90.51	25.98	1.09	1.08	1.02
3.5	1.54	6.37	4.83	90.61	24.21	1.10	1.06	1.04
4.0	1.84	5.65	3.80	90.69	22.53	1.13	1.02	1.09
4.5	2.14	5.08	2.93	90.73	21.57	1.16	1.05	1.13
5.0	2.43	4.64	2.21	90.72	20.92	1.20	1.09	1.16
5.5	2.71	4.29	1.59	90.80	20.18	1.24	1.10	1.19
6.0	2.96	4.01	1.05	90.86	19.89	1.26	1.16	1.20
6.5	3.18	3.81	0.63	90.91	19.90	1.27	1.18	1.21
7.0	3.38	3.63	0.25	90.99	19.62	1.27	1.17	1.23
7.5	3.53	3.50	0.04	91.08	19.75	1.24	1.19	1.24
8.0	3.64	3.38	0.26	91.35	20.31	1.17	1.17	1.22
8.5	3.73	3.29	0.44	91.67	20.32	1.13	1.16	1.20
9.0	3.81	3.23	0.58	91.98	20.02	1.13	1.16	1.16
9.5	3.86	3.17	0.70	92.43	19.91	1.12	1.12	1.10
10.0	3.92	3.15	0.77	92.54	19.17	1.18	1.12	1.02
10.5	4.00	3.17	0.83	92.57	17.85	1.31	1.11	1.09
11.0	4.10	3.33	0.78	92.80	16.48	1.46	1.19	1.19
11.5	4.17	3.49	0.68	92.61	15.80	1.58	1.29	1.23
12.0	4.24	3.72	0.52	92.45	15.04	1.72	1.40	1.24
12.5	4.26	4.00	0.26	92.30	14.45	1.86	1.58	1.18
13.0	4.08	4.15	0.06	92.48	14.41	1.81	1.56	1.08
13.5	3.75	4.19	0.44	92.68	15.86	1.52	1.53	1.17
14.0	3.54	4.45	0.91	93.75	16.08	1.49	1.46	1.31
14.5	3.32	4.66	1.34	94.49	17.23	1.35	1.39	1.47
15.0	3.12	5.01	1.88	95.38	17.68	1.30	1.29	1.55
15.5	2.95	5.38	2.43	96.32	18.54	1.22	1.26	1.57
16.0	2.76	5.80	3.04	96.73	18.98	1.17	1.19	1.50

¹Total Loss = Insertion Loss + 3dB Splitter Loss



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

REV. A
EPQ-133+
12/12/2017
Page 1 of 3

2 Way-90° Power Splitter/Combiner

EPQ-133+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10 dBm @Temperature = -45 °C

FREQ. (GHz)	TOTAL LOSS ⁽¹⁾ (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB) 1-2	VSWR (:1)		
	S-1	S-2				S	1	2
3.0	1.11	7.23	6.11	90.19	26.49	1.09	1.07	1.04
3.5	1.40	6.28	4.88	90.28	24.67	1.10	1.07	1.02
4.0	1.69	5.53	3.84	90.28	22.80	1.14	1.04	1.08
4.5	1.98	4.94	2.96	90.22	21.45	1.17	1.05	1.14
5.0	2.26	4.49	2.23	90.12	20.51	1.22	1.10	1.17
5.5	2.52	4.12	1.60	90.14	19.95	1.26	1.14	1.17
6.0	2.75	3.83	1.08	90.13	19.98	1.28	1.19	1.17
6.5	2.94	3.59	0.65	90.13	20.37	1.26	1.16	1.19
7.0	3.14	3.39	0.25	90.02	19.99	1.26	1.15	1.24
7.5	3.31	3.28	0.02	90.06	19.17	1.31	1.16	1.31
8.0	3.40	3.14	0.26	90.15	19.94	1.22	1.17	1.32
8.5	3.48	3.04	0.44	90.49	19.88	1.17	1.21	1.27
9.0	3.53	2.95	0.58	90.73	19.59	1.16	1.21	1.20
9.5	3.59	2.88	0.71	91.10	20.06	1.12	1.19	1.14
10.0	3.62	2.83	0.79	91.34	19.78	1.17	1.15	1.08
10.5	3.70	2.85	0.85	91.09	16.80	1.38	1.14	1.07
11.0	3.70	2.90	0.80	91.44	17.03	1.34	1.14	1.08
11.5	3.82	3.07	0.75	91.14	16.30	1.51	1.31	1.17
12.0	3.90	3.28	0.62	90.96	15.13	1.72	1.34	1.29
12.5	3.95	3.57	0.39	90.43	14.39	1.90	1.54	1.28
13.0	3.80	3.72	0.09	90.69	14.07	1.90	1.57	1.17
13.5	3.55	3.90	0.34	90.43	13.73	1.92	1.62	1.20
14.0	3.41	4.25	0.84	91.87	14.32	1.85	1.70	1.35
14.5	3.13	4.27	1.14	93.16	15.85	1.49	1.62	1.57
15.0	2.86	4.50	1.65	93.57	17.37	1.37	1.36	1.69
15.5	2.59	4.71	2.13	93.98	19.86	1.15	1.35	1.61
16.0	2.33	5.12	2.80	93.81	17.99	1.14	1.21	1.48

¹Total Loss = Insertion Loss + 3dB Splitter Loss



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

REV. A
EPQ-133+
12/12/2017
Page 2 of 3

2 Way-90° Power Splitter/Combiner

EPQ-133+

Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10 dBm @Temperature = +85 °C

FREQ. (GHz)	TOTAL LOSS ⁽¹⁾ (dB)		AMP. UNBAL. (dB)	PHASE UNBAL. (deg.)	ISOLATION (dB) 1-2	VSWR (:1)		
	S-1	S-2				S	1	2
3.0	1.35	7.34	5.99	90.42	25.47	1.09	1.08	1.01
3.5	1.67	6.43	4.77	90.46	23.39	1.10	1.04	1.08
4.0	1.98	5.74	3.76	90.50	22.18	1.14	1.03	1.13
4.5	2.29	5.19	2.90	90.59	21.47	1.17	1.07	1.15
5.0	2.59	4.77	2.18	90.61	21.00	1.20	1.10	1.17
5.5	2.88	4.44	1.56	90.76	20.33	1.23	1.11	1.19
6.0	3.14	4.17	1.03	90.81	20.03	1.24	1.14	1.19
6.5	3.37	3.97	0.60	90.89	19.92	1.25	1.17	1.18
7.0	3.58	3.81	0.23	91.04	19.50	1.25	1.14	1.18
7.5	3.75	3.69	0.06	91.06	19.77	1.21	1.19	1.18
8.0	3.86	3.58	0.29	91.37	20.56	1.13	1.15	1.14
8.5	3.98	3.51	0.48	91.64	20.51	1.12	1.13	1.12
9.0	4.08	3.47	0.60	91.90	20.19	1.14	1.15	1.09
9.5	4.14	3.42	0.71	92.23	20.08	1.13	1.10	1.04
10.0	4.20	3.43	0.78	92.31	19.16	1.21	1.14	1.04
10.5	4.28	3.46	0.82	92.35	18.43	1.32	1.09	1.15
11.0	4.40	3.65	0.75	92.44	16.46	1.49	1.20	1.22
11.5	4.47	3.84	0.63	92.35	15.58	1.61	1.27	1.25
12.0	4.54	4.10	0.44	92.16	14.96	1.74	1.44	1.19
12.5	4.56	4.39	0.16	92.26	14.53	1.85	1.60	1.10
13.0	4.40	4.55	0.15	92.44	14.65	1.79	1.57	1.04
13.5	4.14	4.66	0.51	93.22	16.75	1.53	1.46	1.23
14.0	3.81	4.75	0.94	93.88	17.41	1.29	1.36	1.24
14.5	3.62	5.04	1.42	94.50	17.98	1.27	1.27	1.37
15.0	3.47	5.46	1.99	95.45	17.84	1.28	1.28	1.40
15.5	3.34	5.90	2.56	96.51	18.38	1.26	1.29	1.45
16.0	3.20	6.41	3.21	97.26	19.16	1.26	1.22	1.48

¹Total Loss = Insertion Loss + 3dB Splitter Loss



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

REV. A
EPQ-133+
12/12/2017
Page 3 of 3