Engineering Development Model

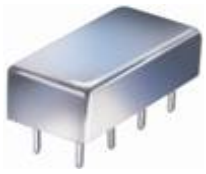
Power Splitter/Combiner PSCQ-ED11294A/1

2 Way-90°

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.



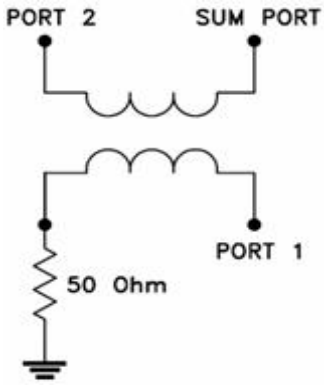
CASE STYLE : A06

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		5		50	MHz
Isolation	**5 - 50 MHz**		41		dB
Insertion Loss **Average of Coupled Outputs above 3.0 dB**	**5 - 50 MHz**		0.50		dB
Phase Unbalance	**5 - 50 MHz**		87.987		deg.
Amplitude Unbalance	**5 - 50 MHz**		0.104		dB
VSWR	**SUM Port**		1.40		(:1)
	OUT Ports		1.30		(:1)

MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS	
SUM PORT	1
PORT 1	5
PORT 2	6
GND EXT	2,3,4,7,8
CASE GND	2,3,4,7,8

Functional Diagram



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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS[1] (dB)			AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2	AVG.		1-2			S	1	2
0.3	3.33	3.13	3.23	0.20	20.07	14.95	0.3	1.14	1.51	1.35
0.5	3.33	3.10	3.22	0.22	23.23	24.18	0.5	1.16	1.49	1.24
0.7	3.35	3.10	3.23	0.25	25.45	32.81	0.7	1.19	1.51	1.19
0.9	3.37	3.11	3.24	0.27	27.17	40.66	0.9	1.21	1.54	1.16
1.0	3.38	3.11	3.25	0.27	27.89	44.28	1.0	1.22	1.55	1.15
2.0	3.39	3.15	3.27	0.24	32.62	70.14	2.0	1.25	1.52	1.10
3.0	3.35	3.17	3.26	0.18	35.49	82.38	3.0	1.23	1.42	1.07
4.0	3.33	3.18	3.26	0.15	37.82	87.47	4.0	1.20	1.35	1.05
5.0	3.32	3.19	3.26	0.13	40.09	89.18	5.0	1.18	1.31	1.03
6.0	3.32	3.20	3.26	0.12	42.54	89.37	6.0	1.17	1.28	1.02
7.0	3.32	3.21	3.27	0.11	45.39	88.98	7.0	1.16	1.25	1.03
8.0	3.33	3.22	3.28	0.11	49.03	88.44	8.0	1.15	1.24	1.04
9.0	3.35	3.24	3.30	0.11	54.51	87.94	9.0	1.15	1.22	1.06
10.0	3.36	3.26	3.31	0.10	57.75	87.49	10.0	1.15	1.21	1.08
15.0	3.42	3.32	3.37	0.10	45.05	87.36	15.0	1.17	1.17	1.15
20.0	3.47	3.37	3.42	0.10	41.67	88.47	20.0	1.20	1.16	1.21
25.0	3.52	3.42	3.47	0.10	40.64	89.30	25.0	1.23	1.18	1.25
30.0	3.57	3.47	3.52	0.10	40.43	89.51	30.0	1.26	1.21	1.28
35.0	3.62	3.52	3.57	0.10	40.57	89.16	35.0	1.29	1.25	1.29
40.0	3.67	3.56	3.62	0.10	40.61	88.38	40.0	1.32	1.28	1.28
41.0	3.68	3.57	3.63	0.10	40.75	88.19	41.0	1.32	1.29	1.28
42.0	3.68	3.58	3.63	0.10	40.77	87.98	42.0	1.33	1.29	1.28
43.0	3.69	3.59	3.64	0.10	40.75	87.78	43.0	1.33	1.30	1.28
44.0	3.70	3.60	3.65	0.10	40.81	87.57	44.0	1.33	1.31	1.28
45.0	3.71	3.60	3.66	0.10	40.75	87.34	45.0	1.34	1.31	1.27
46.0	3.72	3.61	3.67	0.10	40.77	87.12	46.0	1.34	1.32	1.27
47.0	3.72	3.62	3.67	0.10	40.71	86.89	47.0	1.35	1.32	1.27
48.0	3.73	3.63	3.68	0.10	40.70	86.65	48.0	1.35	1.33	1.26
49.0	3.74	3.63	3.69	0.10	40.71	86.42	49.0	1.35	1.34	1.26
50.0	3.75	3.64	3.70	0.10	40.65	86.19	50.0	1.36	1.34	1.26
52.0	3.76	3.66	3.71	0.10	40.43	85.68	52.0	1.36	1.35	1.25
54.0	3.78	3.67	3.73	0.10	40.32	85.20	54.0	1.37	1.36	1.24
56.0	3.79	3.69	3.74	0.10	40.14	84.71	56.0	1.38	1.37	1.24
58.0	3.80	3.71	3.76	0.10	39.90	84.24	58.0	1.39	1.38	1.23
60.0	3.81	3.72	3.77	0.10	39.57	83.76	60.0	1.40	1.39	1.23
62.0	3.83	3.74	3.79	0.09	39.39	83.29	62.0	1.40	1.40	1.23
64.0	3.84	3.75	3.80	0.09	39.02	82.84	64.0	1.41	1.41	1.22
66.0	3.85	3.77	3.81	0.09	38.74	82.40	66.0	1.42	1.42	1.22
68.0	3.87	3.78	3.83	0.08	38.52	81.98	68.0	1.43	1.42	1.23
70.0	3.88	3.80	3.84	0.08	38.25	81.57	70.0	1.44	1.43	1.23

[1] Total Loss = Insertion Loss + 3dB Splitter Loss

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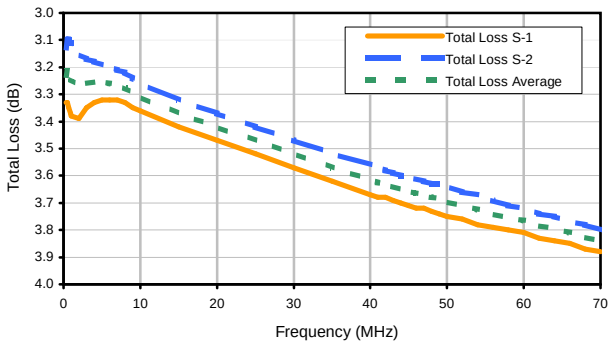
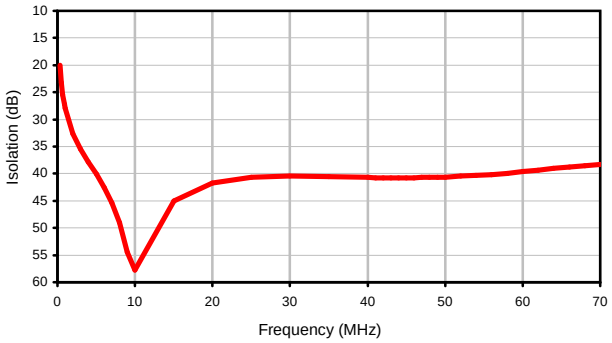
Typical Performance Curves

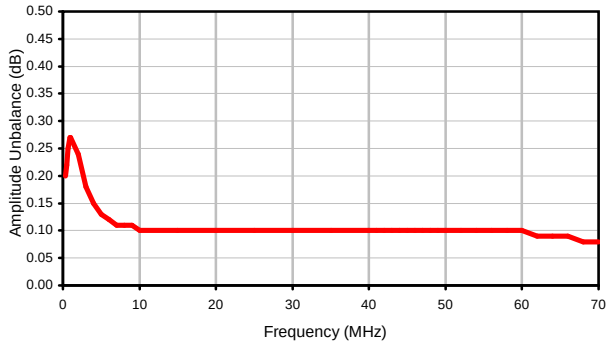
Total Loss



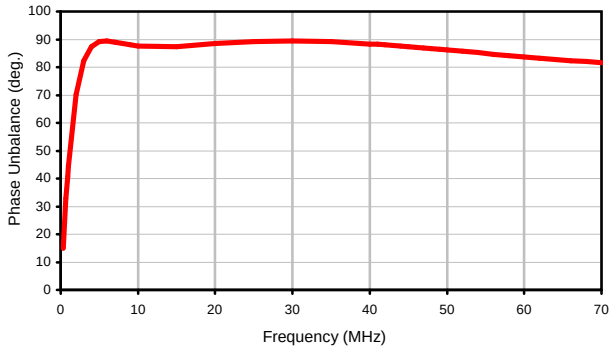
Isolation



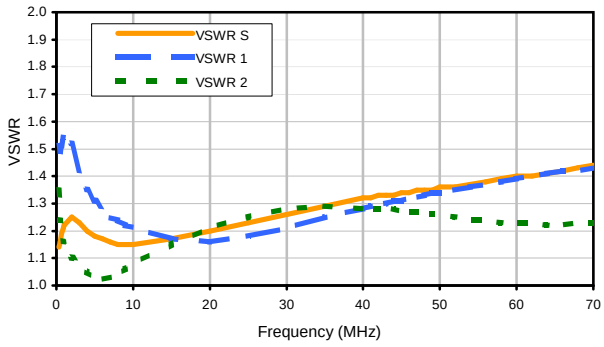
Amplitude Unbalance



Phase Unbalance



VSWR



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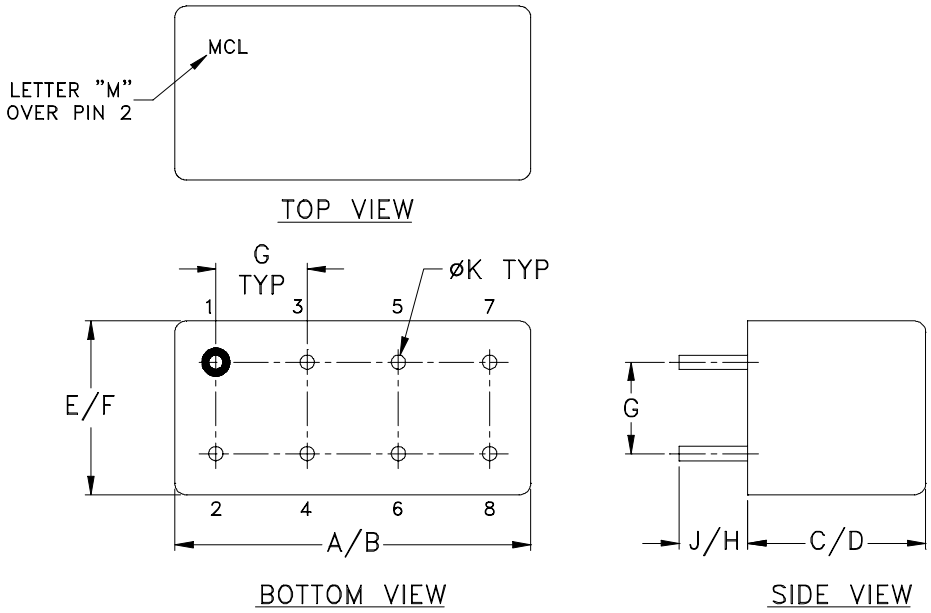
Case Style A

A01
A04
A05
A06

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	WT, GRAM
A01	.770 (19.56)	.800 (20.32)	.385 (9.78)	.400 (10.16)	.370 (9.40)	.400 (10.16)	.200 (5.08)	.20 (5.08)	.14 (3.56)	.031 (.79)	5.2
A04			.200 (5.08)	.210 (5.33)							3.7
A05			.240 (6.10)	.250 (6.35)							3.7
A06			.285 (7.24)	.310 (7.87)							5.2

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .03; 3 Pl. ± .015

Notes:

1. Header material: C.R.S.
   Pin material: #52 alloy.
   Cover material: Cupro-Nickel.
2. Pin finish: Electro Tin-Silver.
3. Insulated spacer available. Request P/N B14-045-01.
4. Tolerance on pin diameter +/-.005 inch.
5. Glass meniscus 0.015 inch max.
6. Blue bead indicates Pin 1. Pin numbers do not appear on unit, for reference only.

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Environmental Specifications ENV01

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Moisture Resistance	10 cycles, 24 hours per cycle	MIL-STD-202, Method 106, Condition A, except 50°C and end point electrical test done within 12 hours
Solderability	10X Magnification	J-STD-002, 95% Coverage
Resistance to Solder Heat	260°C for 10 seconds	MIL-STD-202, Method 210, Condition B
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215
Terminal Strength	4 1/2 Pound Pull	MIL-STD-202, Method 211, Condition A

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Specification	Test/Inspection Condition	Reference/Spec
Gross Leak	125°C Bubble Test	MIL-STD-202, Method 112, Condition D
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D

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