Plug-In

Power Splitter/Combiner

PSCQ-2-26+
PSCQ-2-26

2 Way-90° 50Ω 14 to 30 MHz

Generic photo used for illustration purposes only

CASE STYLE: A01

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Maximum Ratings

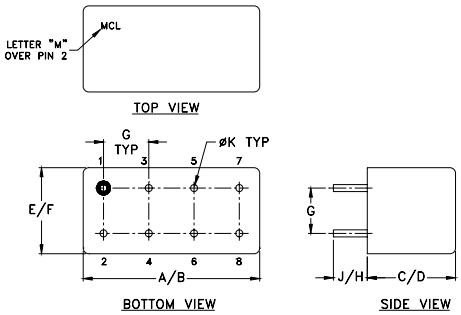
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	1
PORT 1 (+90°)	2
PORT 2 (0°)	5
GROUND	3,4,7,8
CASE GROUND	3,4,7,8
50 OHM TERM EXTERNAL	6

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F
.770	.800	.385	.400	.370	.400
19.56	20.32	9.78	10.16	9.40	10.16
G	**H**	**J**	**K**		**wt**
.200	.20	.14	.031		grams
5.08	5.08	3.56	0.79		5.2

Features
- low insertion loss, 0.4 dB typ.
- good isolation, 25 dB typ.
- excellent VSWR, 1.15:1 typ.
- rugged shielded case

Applications
- modulators
- balanced amplifiers

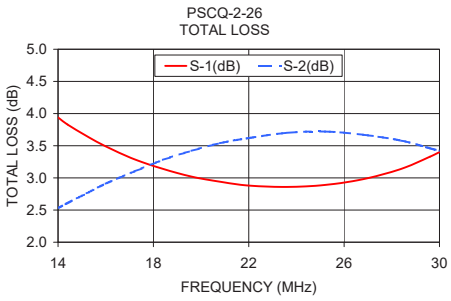
Electrical Specifications

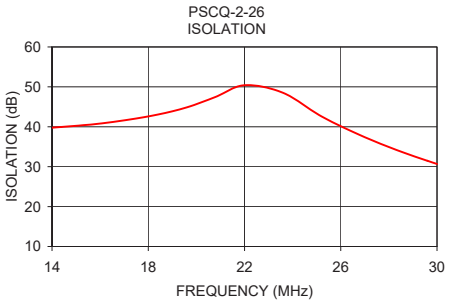
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.	Max.
14-30	25	20	0.4	0.7	3	1.5

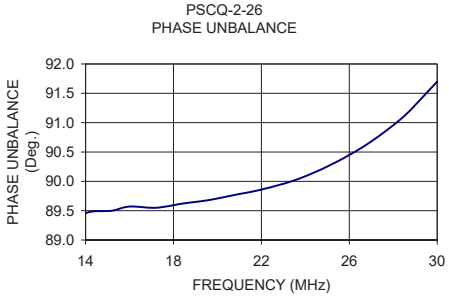
Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB) S-1	Total Loss[1] (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
14.00	3.94	2.53	1.41	39.77	89.46	1.03	1.04	1.02
14.40	3.83	2.61	1.22	39.95	89.49	1.03	1.05	1.02
15.20	3.65	2.76	0.89	40.33	89.50	1.03	1.05	1.02
16.00	3.49	2.91	0.58	40.81	89.57	1.04	1.05	1.02
17.20	3.29	3.10	0.19	41.79	89.55	1.04	1.05	1.02
18.40	3.14	3.28	0.14	43.06	89.62	1.04	1.05	1.02
19.60	3.02	3.42	0.40	44.86	89.68	1.04	1.06	1.02
20.80	2.94	3.54	0.60	47.48	89.77	1.05	1.06	1.02
22.00	2.88	3.62	0.74	50.42	89.86	1.05	1.06	1.03
23.60	2.86	3.70	0.84	48.51	90.03	1.06	1.07	1.03
25.20	2.89	3.72	0.83	42.61	90.29	1.07	1.08	1.04
26.80	2.98	3.67	0.69	37.92	90.63	1.08	1.09	1.05
28.40	3.14	3.58	0.43	34.01	91.08	1.10	1.10	1.06
29.60	3.33	3.46	0.13	31.47	91.54	1.12	1.11	1.07
30.00	3.40	3.42	0.02	30.67	91.70	1.13	1.12	1.07

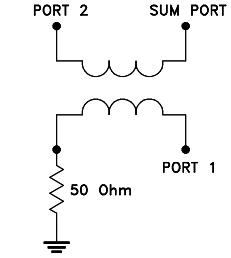
1. Total Loss = Insertion Loss + 3dB splitter loss.







electrical schematic



Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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2 Way-90° Power Splitter/Combiner PSCQ-2-26

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS[1] (dB) S-1	S-2	AVG.	AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)
14.0	3.94	2.53	3.24	1.41	39.77	89.46
14.4	3.83	2.61	3.22	1.22	39.95	89.49
14.8	3.74	2.69	3.22	1.05	40.13	89.50
15.2	3.65	2.76	3.21	0.89	40.33	89.50
15.6	3.57	2.84	3.21	0.73	40.56	89.53
16.0	3.49	2.91	3.20	0.58	40.81	89.57
16.4	3.42	2.98	3.20	0.44	41.07	89.56
16.8	3.35	3.04	3.20	0.32	41.44	89.52
17.2	3.29	3.10	3.20	0.19	41.79	89.55
17.6	3.24	3.17	3.21	0.07	42.18	89.59
18.0	3.19	3.22	3.21	0.04	42.60	89.60
18.4	3.14	3.28	3.21	0.14	43.06	89.62
18.8	3.10	3.32	3.21	0.22	43.53	89.62
19.2	3.06	3.37	3.22	0.31	44.25	89.66
19.6	3.02	3.42	3.22	0.40	44.86	89.68
20.0	2.99	3.46	3.23	0.47	45.64	89.69
20.4	2.96	3.50	3.23	0.54	46.51	89.75
20.8	2.94	3.54	3.24	0.60	47.48	89.77
21.2	2.92	3.57	3.25	0.65	48.48	89.77
21.6	2.90	3.60	3.25	0.70	49.51	89.85
22.0	2.88	3.62	3.25	0.74	50.42	89.86
22.4	2.88	3.65	3.27	0.77	51.00	89.88
22.8	2.87	3.67	3.27	0.80	50.86	89.91
23.2	2.86	3.68	3.27	0.82	49.90	90.00
23.6	2.86	3.70	3.28	0.84	48.51	90.03
24.0	2.86	3.71	3.29	0.85	46.99	90.10
24.4	2.87	3.71	3.29	0.84	45.49	90.11
24.8	2.88	3.71	3.30	0.84	43.96	90.21
25.2	2.89	3.72	3.31	0.83	42.61	90.29
25.6	2.91	3.70	3.31	0.80	41.35	90.37
26.0	2.93	3.71	3.32	0.77	40.08	90.42
26.4	2.95	3.69	3.32	0.74	38.96	90.51
26.8	2.98	3.67	3.33	0.69	37.92	90.63
27.2	3.01	3.65	3.33	0.64	36.86	90.72
27.6	3.05	3.63	3.34	0.58	35.86	90.85
28.0	3.10	3.61	3.36	0.51	34.91	90.96
28.4	3.14	3.58	3.36	0.43	34.01	91.08
28.8	3.20	3.54	3.37	0.34	33.13	91.23
29.2	3.26	3.50	3.38	0.24	32.30	91.39
29.6	3.33	3.46	3.40	0.13	31.47	91.54
30.0	3.40	3.42	3.41	0.02	30.67	91.70

FREQ. (MHz)	VSWR (:1) S	1	2
14.0	1.03	1.04	1.02
14.4	1.03	1.05	1.02
14.8	1.03	1.05	1.02
15.2	1.03	1.05	1.02
15.6	1.03	1.05	1.02
16.0	1.04	1.05	1.02
16.4	1.04	1.05	1.02
16.8	1.04	1.05	1.02
17.2	1.04	1.05	1.02
17.6	1.04	1.05	1.02
18.0	1.04	1.05	1.02
18.4	1.04	1.05	1.02
18.8	1.04	1.05	1.02
19.2	1.04	1.06	1.02
19.6	1.04	1.06	1.02
20.0	1.04	1.06	1.02
20.4	1.05	1.06	1.02
20.8	1.05	1.06	1.02
21.2	1.05	1.06	1.03
21.6	1.05	1.06	1.03
22.0	1.05	1.06	1.03
22.4	1.05	1.07	1.03
22.8	1.06	1.07	1.03
23.2	1.06	1.07	1.03
23.6	1.06	1.07	1.03
24.0	1.06	1.07	1.03
24.4	1.07	1.07	1.04
24.8	1.07	1.08	1.04
25.2	1.07	1.08	1.04
25.6	1.07	1.08	1.04
26.0	1.08	1.08	1.04
26.4	1.08	1.09	1.04
26.8	1.08	1.09	1.05
27.2	1.09	1.09	1.05
27.6	1.09	1.09	1.05
28.0	1.10	1.10	1.06
28.4	1.10	1.10	1.06
28.8	1.11	1.11	1.06
29.2	1.11	1.11	1.07
29.6	1.12	1.11	1.07
30.0	1.13	1.12	1.07

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

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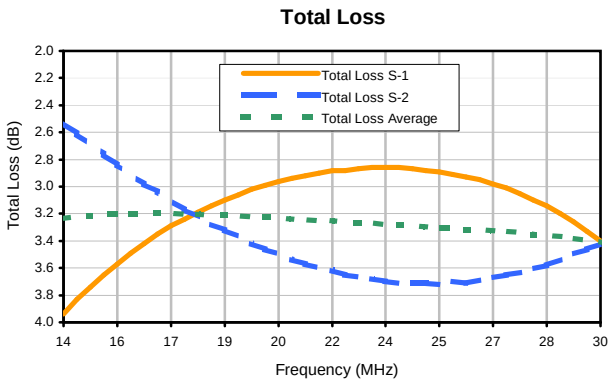
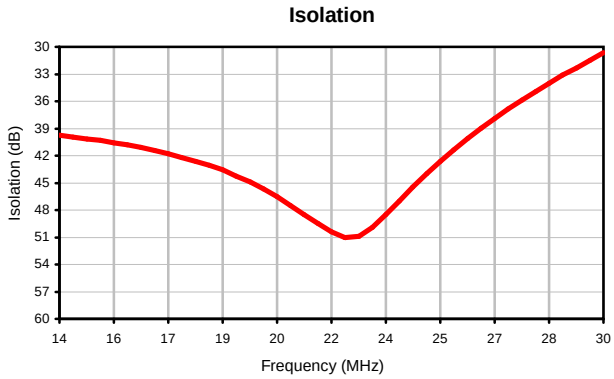
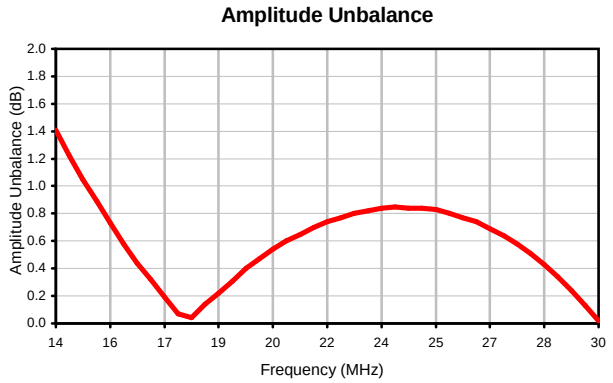
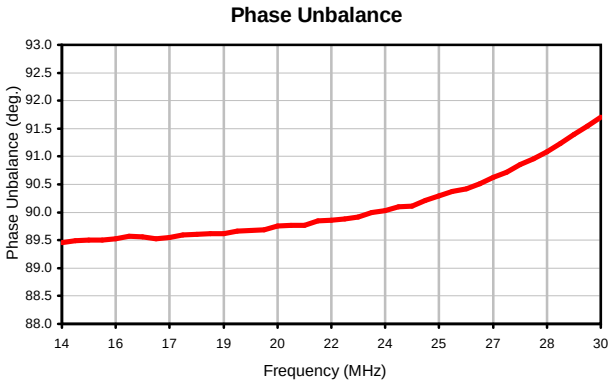
2 Way-90° Power Splitter/Combiner PSCQ-2-26

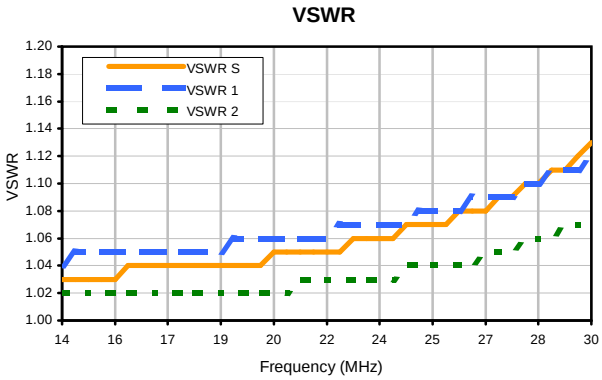
Typical Performance Curves











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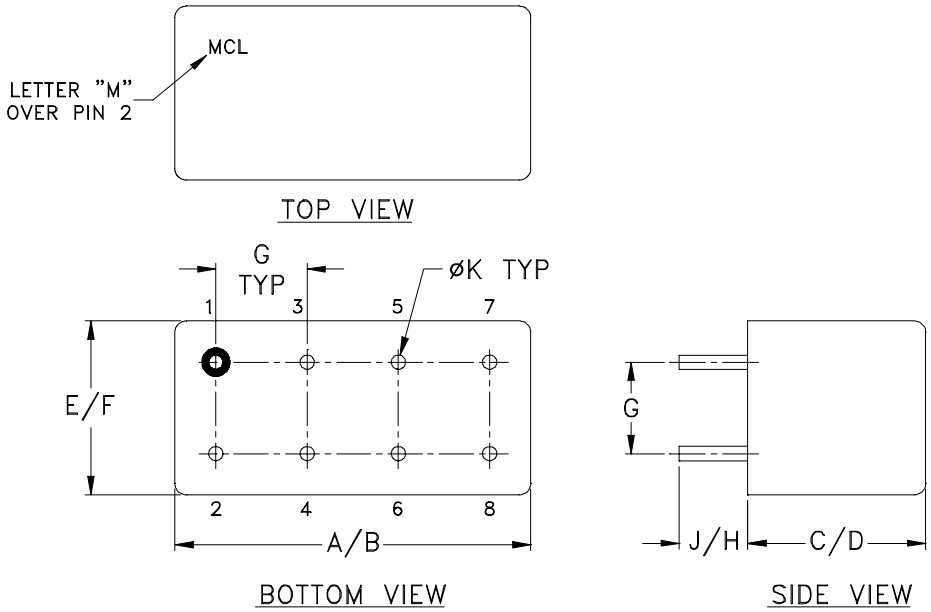
Case Style A

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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