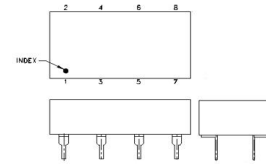


Power Splitter/Combiner 2 Way-90°

CSCQ-ED12553/1

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.

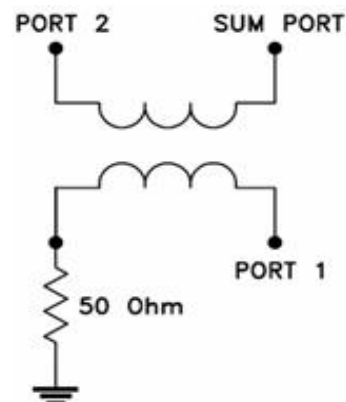
CASE STYLE : PPP83

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		70		160 MHz
Isolation	70 - 160 MHz		22	
Insertion Loss				
Average of Coupled Outputs	70 - 160 MHz		0.30	
less 3.0 dB				
Phase Unbalance	70 - 160 MHz		90.099	
				deg.
Amplitude Unbalance	70 - 160 MHz		0.467	
				dB
VSWR	SUM Port		1.15	
	OUT Ports		1.15	
				(:1)
				(:1)

MAXIMUM RATINGS	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS	
SUM PORT	1
PORT 1 (+90)	2
PORT 2 (0)	5
50Ω TERMINATION	6
GND	3, 4, 7, 8

Functional Diagram



2 Way-90° Power Splitter/Combiner

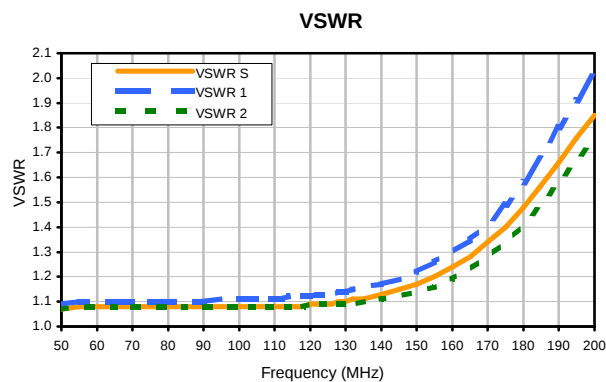
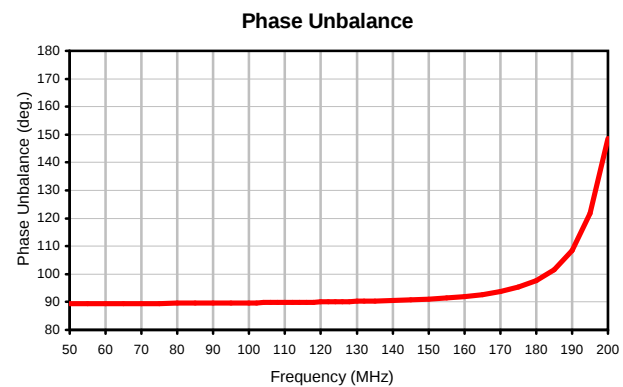
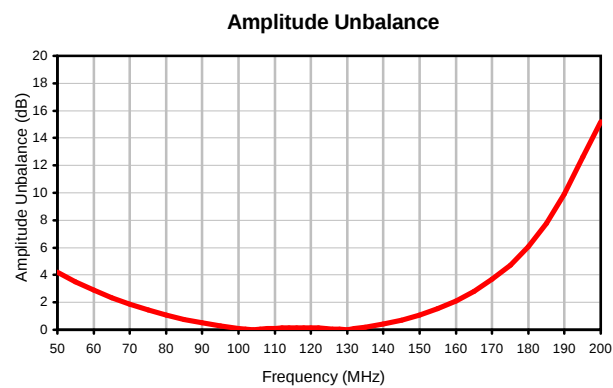
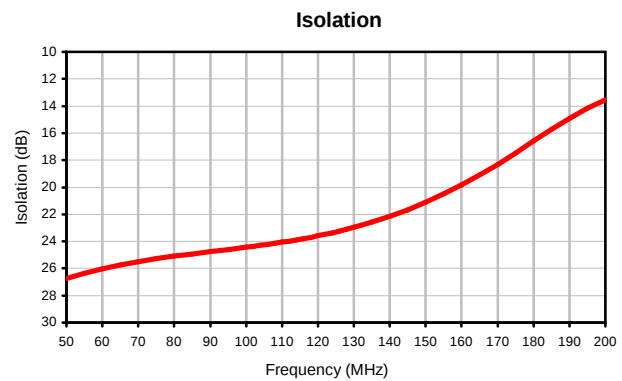
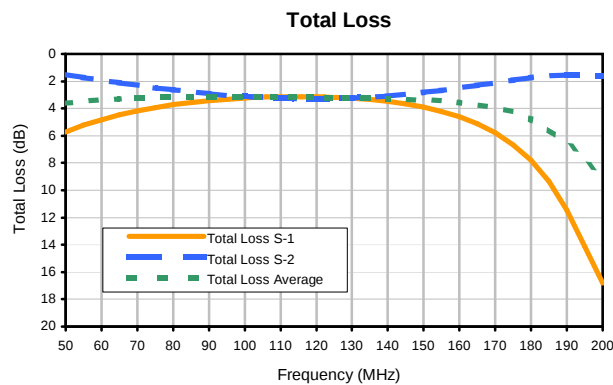
CSCQ-ED12553/1

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)			AMP. UNBAL. (dB)	ISOLATION (dB) 1-2	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2	AVG.					S	1	2
50.0	5.72	1.51	3.62	4.21	26.74	89.42	50.0	1.07	1.09	1.07
55.0	5.23	1.72	3.48	3.51	26.35	89.43	55.0	1.08	1.10	1.08
60.0	4.82	1.92	3.37	2.89	26.02	89.44	60.0	1.08	1.10	1.08
65.0	4.47	2.12	3.30	2.35	25.74	89.46	65.0	1.08	1.10	1.08
70.0	4.18	2.31	3.25	1.87	25.50	89.48	70.0	1.08	1.10	1.08
75.0	3.93	2.48	3.21	1.45	25.28	89.51	75.0	1.08	1.10	1.08
80.0	3.73	2.64	3.19	1.09	25.10	89.55	80.0	1.08	1.10	1.08
85.0	3.56	2.79	3.18	0.77	24.92	89.58	85.0	1.08	1.10	1.08
90.0	3.42	2.92	3.17	0.51	24.76	89.62	90.0	1.08	1.10	1.08
95.0	3.31	3.03	3.17	0.29	24.61	89.67	95.0	1.08	1.11	1.08
100.0	3.23	3.12	3.18	0.11	24.43	89.71	100.0	1.08	1.11	1.08
102.0	3.20	3.15	3.18	0.05	24.37	89.74	102.0	1.08	1.11	1.08
104.0	3.18	3.18	3.18	0.00	24.30	89.76	104.0	1.08	1.11	1.08
106.0	3.16	3.20	3.18	0.04	24.22	89.78	106.0	1.08	1.11	1.08
108.0	3.15	3.22	3.19	0.08	24.14	89.81	108.0	1.08	1.11	1.08
110.0	3.14	3.24	3.19	0.11	24.06	89.83	110.0	1.08	1.11	1.08
112.0	3.13	3.26	3.20	0.13	23.98	89.87	112.0	1.08	1.11	1.08
114.0	3.13	3.27	3.20	0.14	23.89	89.90	114.0	1.08	1.12	1.08
116.0	3.13	3.28	3.21	0.15	23.80	89.93	116.0	1.08	1.12	1.08
118.0	3.13	3.28	3.21	0.15	23.70	89.96	118.0	1.08	1.12	1.08
120.0	3.14	3.28	3.21	0.14	23.59	90.00	120.0	1.09	1.12	1.09
122.0	3.16	3.28	3.22	0.12	23.48	90.04	122.0	1.09	1.13	1.09
124.0	3.17	3.27	3.22	0.10	23.36	90.08	124.0	1.09	1.13	1.09
126.0	3.19	3.26	3.23	0.07	23.24	90.13	126.0	1.09	1.13	1.09
128.0	3.22	3.25	3.24	0.03	23.11	90.17	128.0	1.10	1.14	1.09
130.0	3.25	3.23	3.24	0.02	22.97	90.22	130.0	1.10	1.14	1.09
132.0	3.29	3.21	3.25	0.08	22.82	90.28	132.0	1.11	1.15	1.09
135.0	3.35	3.17	3.26	0.19	22.58	90.37	135.0	1.11	1.16	1.10
140.0	3.49	3.08	3.29	0.41	22.15	90.54	140.0	1.13	1.17	1.11
145.0	3.67	2.97	3.32	0.71	21.66	90.79	145.0	1.15	1.19	1.12
150.0	3.91	2.83	3.37	1.08	21.11	91.08	150.0	1.17	1.22	1.14
155.0	4.22	2.68	3.45	1.54	20.50	91.47	155.0	1.20	1.26	1.16
160.0	4.61	2.50	3.56	2.11	19.82	91.99	160.0	1.24	1.30	1.19
165.0	5.12	2.31	3.72	2.81	19.09	92.72	165.0	1.28	1.35	1.23
170.0	5.78	2.11	3.95	3.67	18.30	93.75	170.0	1.34	1.41	1.28
175.0	6.65	1.92	4.29	4.74	17.45	95.30	175.0	1.40	1.49	1.34
180.0	7.81	1.75	4.78	6.07	16.59	97.68	180.0	1.48	1.58	1.41
185.0	9.36	1.61	5.49	7.75	15.73	101.59	185.0	1.57	1.68	1.49
190.0	11.44	1.53	6.49	9.91	14.91	108.46	190.0	1.66	1.80	1.58
195.0	14.13	1.53	7.83	12.60	14.16	121.75	195.0	1.76	1.91	1.67
200.0	16.80	1.61	9.21	15.19	13.54	148.48	200.0	1.85	2.02	1.76

¹ Total Loss = Insertion Loss + 3dB Splitter Loss

Typical Performance Curves



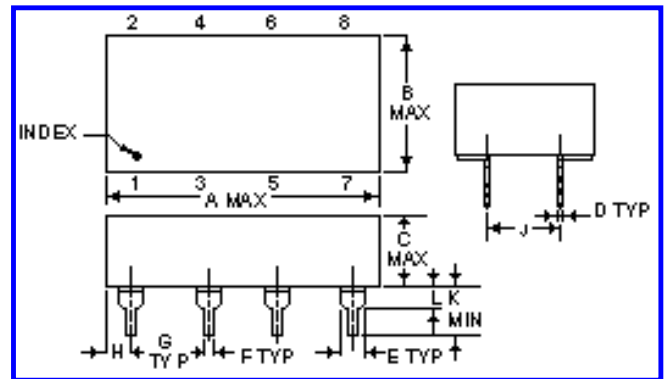
PPP83^(inch mm)

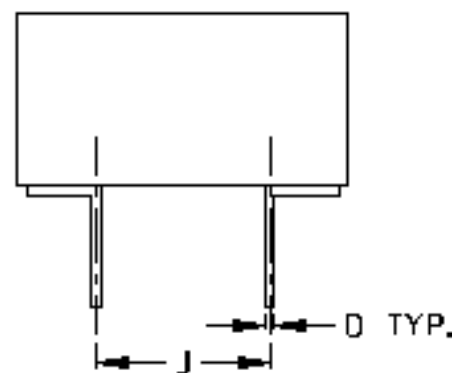
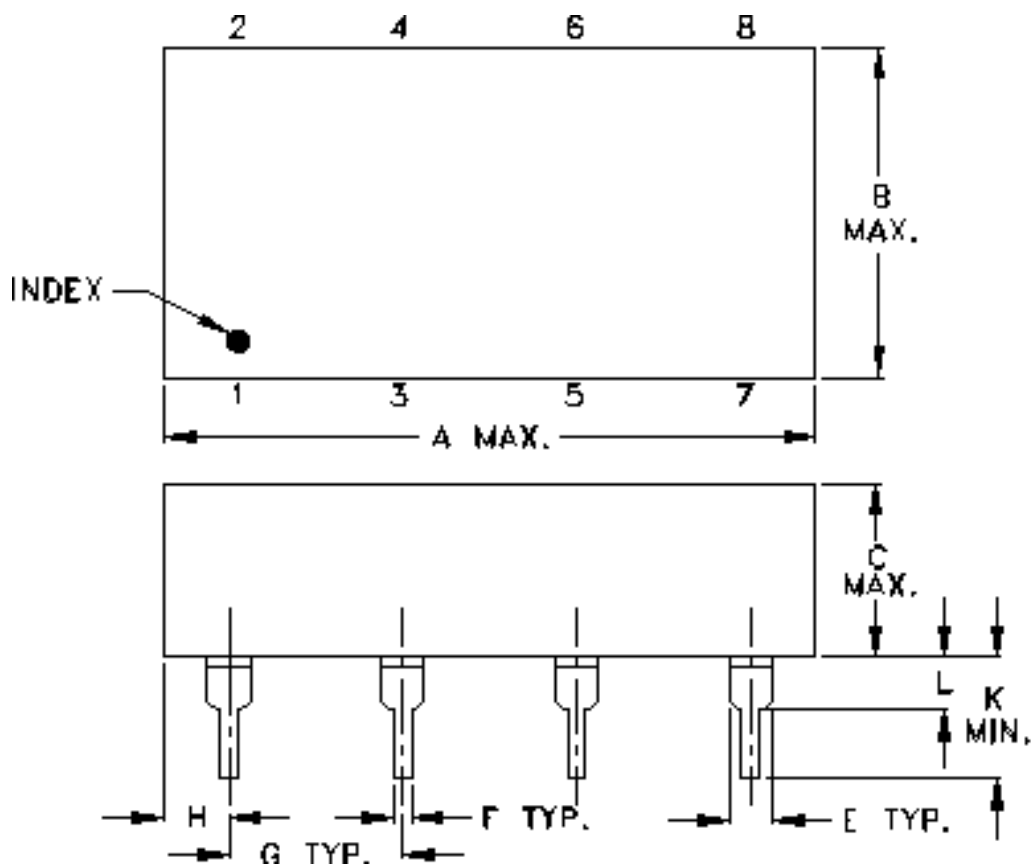
A	B	C	D	E	F	G	H	J	
.75 19.050	.38 9.652	.20 5.080	.010 0.254	.05 1.270	.020 0.508	.200 5.080	.075 1.905	.200 5.080	
K	L	M	N	P	Q	R	S	T	wt. grams.
.14 3.556	.060 1.524								1.600

Tolerance: .x ± .1 .xx ± .03 .xxx ± .015 inch.

Notes:

- Material and Finish:
 - Case material: plastic.
 - Lead Finish: For RoHS Models: - Tin Plate over Nickel or Tin-Silver-Nickel plate
For Non-RoHS Models: - Tin-Lead Plate or Tin Plate or Tin-Silver-Nickel plate.
- Special Tolerances:
 - Lead width ±.010 inch; lead thickness ±.003 inch.







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	-40° to 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, 95% Coverage
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
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