

# Surface Mount Power Splitter/Combiner

## JSPQ-80+ JSPQ-80

2 Way-90° 50Ω 10 to 80 MHz



CASE STYLE: BK276

### Maximum Ratings

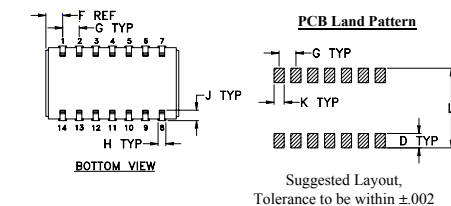
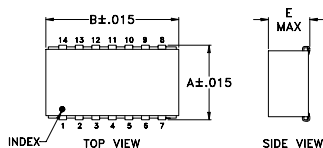
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

### Pin Connections

SUM PORT	1
PORT 1 (0°)	7
PORT 2 (+90°)	8
GROUND	2,3,4,5,6,9,10,11,12,13,14

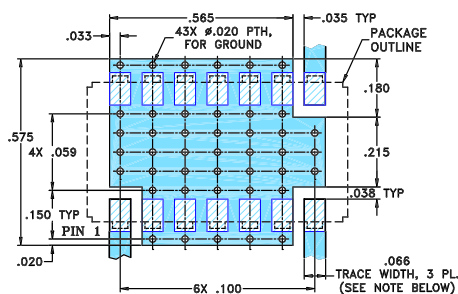
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	wt
.450	.803	--	.100	.250	.102	.100	.047	.065	.065	.470	grams
11.43	20.40	--	2.54	6.35	2.59	2.54	1.19	1.65	1.65	11.94	3.0

### Demo Board MCL P/N: TB-217 Suggested PCB Layout (PL-099)



NOTE: TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS 0.030" ± 0.002", COPPER: 1/2 OZ. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- low insertion loss, 0.45 dB typ.
- excellent isolation, 44 dB typ.
- aqueous washable

### Applications

- HF/VHF
- radio communications
- instrumentation

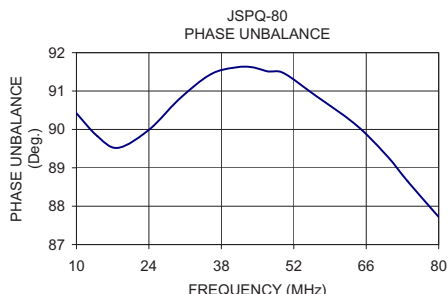
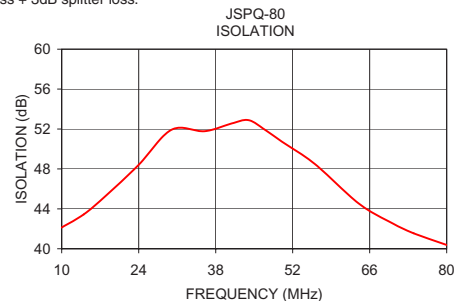
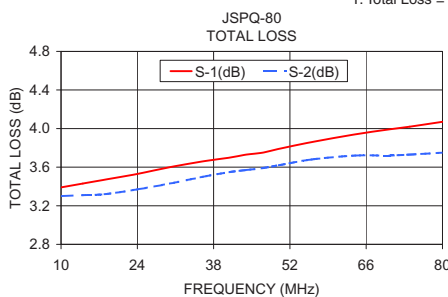
### Electrical Specifications

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.
10-80	44 30	0.45 1.4	6	0.6

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
10.00	3.39	3.30	0.09	42.13	90.42	1.10	1.17	1.20
14.00	3.43	3.31	0.12	43.44	89.83	1.08	1.10	1.12
18.00	3.47	3.32	0.14	45.30	89.52	1.07	1.06	1.03
24.00	3.53	3.37	0.16	48.41	89.99	1.09	1.09	1.09
30.00	3.60	3.43	0.17	51.93	90.81	1.12	1.15	1.21
36.00	3.66	3.50	0.16	51.78	91.44	1.15	1.22	1.31
41.00	3.70	3.55	0.15	52.57	91.62	1.19	1.27	1.38
44.00	3.73	3.57	0.16	52.89	91.62	1.21	1.29	1.41
47.00	3.75	3.59	0.16	51.91	91.51	1.22	1.32	1.45
50.00	3.79	3.62	0.17	50.75	91.47	1.24	1.35	1.47
56.00	3.86	3.68	0.18	48.51	90.90	1.26	1.40	1.51
64.00	3.94	3.72	0.22	44.54	90.12	1.29	1.48	1.52
70.00	3.99	3.72	0.27	42.59	89.31	1.32	1.53	1.52
74.00	4.02	3.73	0.29	41.55	88.65	1.34	1.57	1.51
80.00	4.07	3.75	0.32	40.38	87.72	1.36	1.62	1.49

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



### electrical schematic

