

# Power Splitter/Combiner

## SEPS-3-33+

3 Way-0° 50Ω 700 to 3000 MHz

### Maximum Ratings

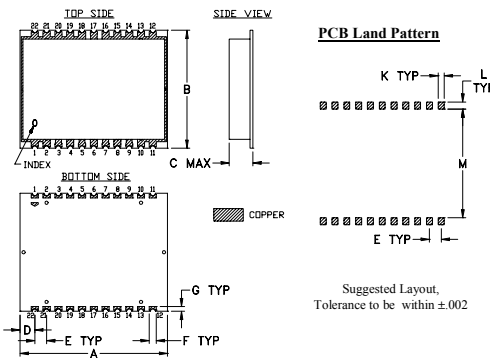
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	4W max.
Internal Dissipation	0.5W max.
DC Current	2.25 A(750mA for each port)

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

### Pin Connections

SUM PORT	17
PORT 1	4
PORT 2	6
PORT 3	8
GROUND	all others

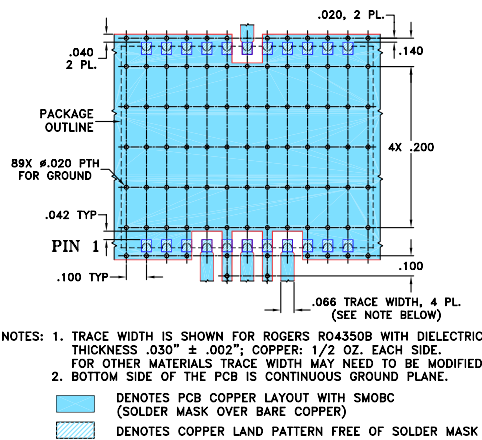
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
1.250	1.000	.200	.125	.100	.060	.040
31.75	25.40	5.08	3.18	2.54	1.52	1.02
H	J	K	L	M	wt	
--	--	.050	.060	.920	grams	
--	--	1.27	1.52	23.37	4.4	

### Demo Board MCL P/N: TB-513+ Suggested PCB Layout (PL-309)



### Features

- wide frequency band, 700-3000 MHz
- good isolation, 18 dB typ.
- good output matching, VSWR 1.1 typ.
- good coplanarity
- low unbalance
- shielded case
- aqueous washable

### Applications

- cellular
- GPS
- PCS
- L Band



Generic photo used for illustration purposes only  
CASE STYLE: JF1258

### +RoHS Compliant

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



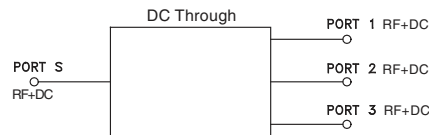
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
13"	125

### Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		700		3000	MHz
<b>Insertion Loss Above 4.8 dB</b>	700 - 800	—	0.5	1.0	
	800 - 2200	—	0.9	1.5	dB
	2200 - 2700	—	1.1	1.6	
	2700 - 3000	—	1.2	1.7	
<b>Isolation</b>	700 - 800	14	17	—	
	800 - 2200	16	20	—	dB
	2200 - 2700	14	18	—	
	2700 - 3000	14	18	—	
<b>Phase Unbalance</b>	700 - 800	—	1.0	3.0	
	800 - 2200	—	2.0	5.0	Degree
	2200 - 2700	—	2.5	7.0	
	2700 - 3000	—	4.0	9.0	
<b>Amplitude Unbalance</b>	700 - 800	—	0.2	0.5	
	800 - 2200	—	0.2	0.5	dB
	2200 - 2700	—	0.1	0.5	
	2700 - 3000	—	0.3	0.8	
<b>VSWR (Port S)</b>	700 - 800	—	1.5	1.8	
	800 - 2200	—	1.2	1.8	:1
	2200 - 2700	—	1.6	2.0	
<b>VSWR (Port 1-3)</b>	700 - 800	—	1.3	1.5	
	800 - 2200	—	1.3	1.5	:1
	2200 - 2700	—	1.4	1.65	
	2700 - 3000	—	1.4	1.65	

### Electrical Schematic



### Notes

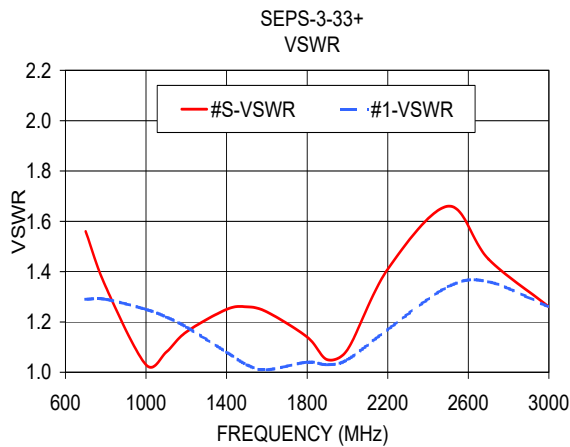
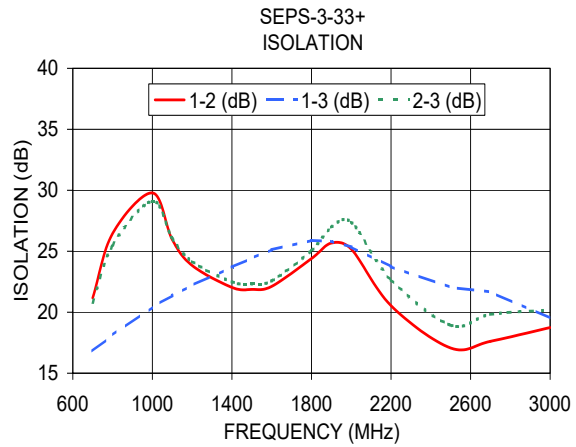
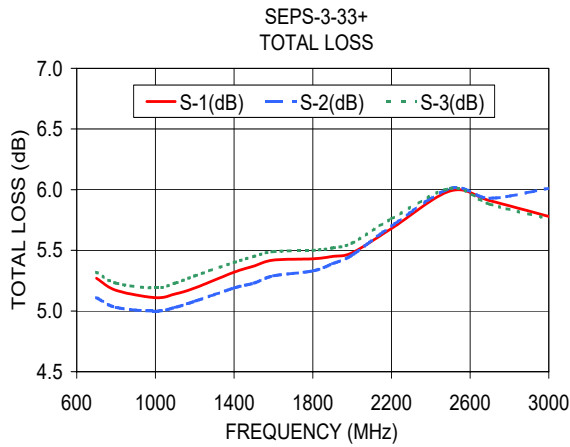
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- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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## Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
700.00	5.27	5.11	5.32	0.22	21.17	16.82	20.80	0.61	1.56	1.29	1.18	1.28
800.00	5.17	5.03	5.23	0.20	26.47	18.13	25.50	0.76	1.34	1.29	1.16	1.28
1000.00	5.11	5.00	5.19	0.19	29.79	20.42	29.11	1.11	1.03	1.25	1.09	1.26
1100.00	5.14	5.03	5.23	0.20	25.96	21.37	26.05	1.24	1.08	1.22	1.08	1.24
1200.00	5.19	5.08	5.29	0.21	23.83	22.20	24.15	1.36	1.16	1.18	1.09	1.20
1400.00	5.32	5.19	5.40	0.22	22.04	23.70	22.49	1.40	1.25	1.08	1.13	1.11
1500.00	5.37	5.23	5.45	0.22	21.87	24.43	22.32	1.37	1.26	1.03	1.13	1.06
1600.00	5.42	5.29	5.49	0.21	22.12	25.13	22.58	1.29	1.24	1.01	1.13	1.02
1800.00	5.43	5.33	5.50	0.16	24.40	25.89	25.06	1.20	1.14	1.04	1.11	1.00
1900.00	5.45	5.39	5.52	0.13	25.68	25.82	26.98	1.19	1.05	1.03	1.10	1.01
2000.00	5.48	5.46	5.56	0.11	25.17	25.35	27.38	1.21	1.09	1.05	1.10	1.05
2200.00	5.68	5.70	5.76	0.08	20.54	23.74	22.65	1.21	1.41	1.17	1.13	1.15
2500.00	5.99	6.01	6.01	0.02	17.07	22.04	18.94	0.92	1.66	1.34	1.09	1.30
2700.00	5.91	5.93	5.88	0.06	17.62	21.67	19.83	1.16	1.45	1.36	1.06	1.33
3000.00	5.78	6.01	5.76	0.25	18.75	19.52	20.18	3.61	1.26	1.26	1.36	1.26

1. Total Loss = Insertion Loss + 4.8dB splitter theoretical loss.



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