

# Surface Mount Directional Coupler

## SEDC-10-63+

50Ω 10 dB Coupling 50 to 6000 MHz



Generic photo used for illustration purposes only

CASE STYLE: BL301-1

**+RoHS Compliant**

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

### Maximum Ratings

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

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

### Pad Connections

INPUT	10
OUTPUT	24
COUPLED	15
GROUND	ALL OTHERS

### Features

- wideband, 50-6000 MHz
- flat coupling, ±0.5 dB typ.
- high directivity, 28 dB typ.

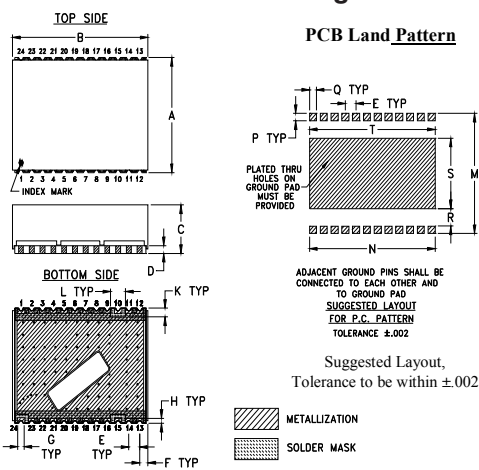
### Applications

- military defense
- signal monitoring

### Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		50		6000	MHz
Mainline Loss (above theoretical loss, 0.4 dB)	50-6000	—	4.0	5.5	dB
Coupling	50-6000	9.0	10.0	11.0	dB
Coupling Flatness(±)	50-6000	—	0.5	1.0	dB
Directivity	50	22.5	24	—	
	700	26.0	29	—	
	2750	23.0	27	—	dB
6000	23.0	24	—		
Return Loss (Input)	50-6000	—	18	—	dB
Return Loss (Output)	50-6000	—	14	—	dB
Return Loss (Coupling)	50-6000	—	14	—	dB
Input Power	50-6000	—	—	1.0	W

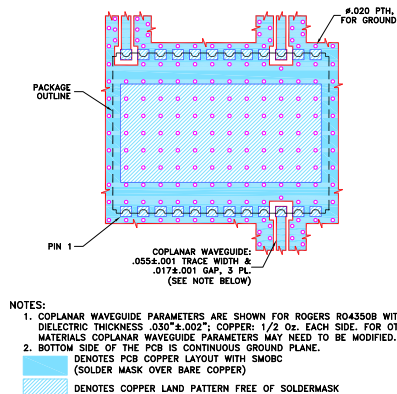
### Outline Drawing



### Outline Dimensions (inch/mm)

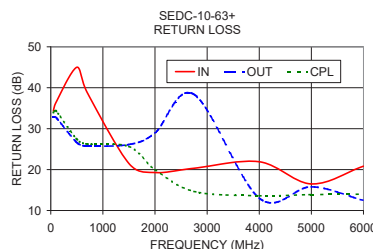
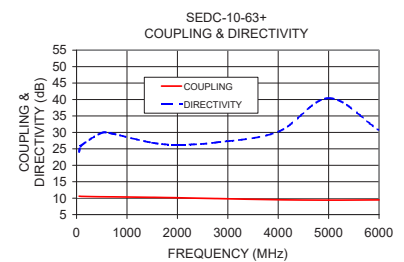
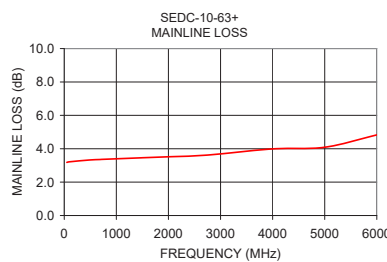
A	B	C	D	E	F	G	H	K
.93	1.26	.39	.062	.100	.078	0.06	.040	.070
23.62	32.00	9.91	1.57	2.54	1.98	1.52	1.02	1.78
L	M	N	P	Q	R	S	T	wt
.140	.970	1.165	.060	.065	0.140	0.570	1.165	grams
3.56	24.64	29.59	1.52	1.65	3.56	14.48	29.59	7.3

### Demo Board MCL P/N: TB-605+ Suggested PCB Layout (PL-437)

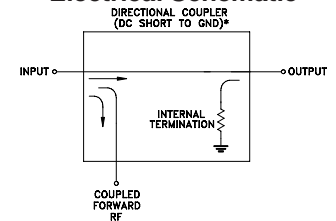


### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
50.00	3.18	10.59	24.05	34.33	32.85	33.95
100.00	3.22	10.53	26.08	36.42	32.73	34.33
500.00	3.33	10.42	29.85	45.01	26.62	27.42
700.00	3.36	10.39	29.64	38.81	25.78	26.25
1500.00	3.46	10.25	26.85	21.47	26.12	25.64
2000.00	3.52	10.11	26.30	19.27	28.93	19.99
2750.00	3.62	9.89	26.90	20.32	38.36	14.66
4000.00	3.99	9.52	30.19	21.92	13.01	13.61
5000.00	4.09	9.40	40.39	16.49	15.79	13.89
6000.00	4.83	9.47	30.65	20.83	12.48	13.99



### Electrical Schematic



\* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

### 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.
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