THE DATASHEET OF

SEDC-10-63+

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

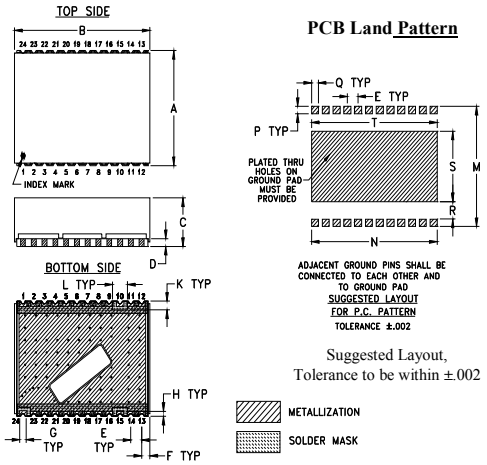
Features

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

Applications

- military defense
- signal monitoring

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

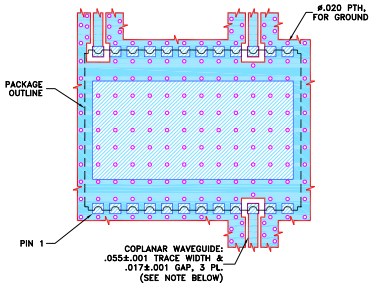
Electrical Specifications at 25°C

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	—	dB
	700	26.0	29	—	
	2750	23.0	27	—	
	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

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In	Return Loss (dB) Out	Return Loss (dB) 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

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

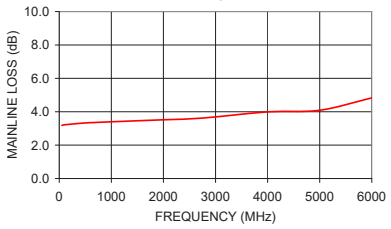


NOTES:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030"±.002"; COPPER: 1/2 Oz. EACH SIDE. FOR OTHER MATERIALS COPLANAR WAVEGUIDE PARAMETERS MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

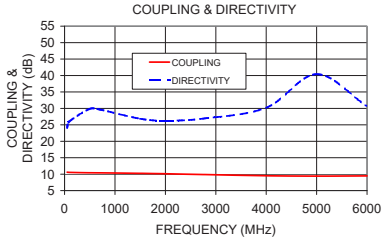
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

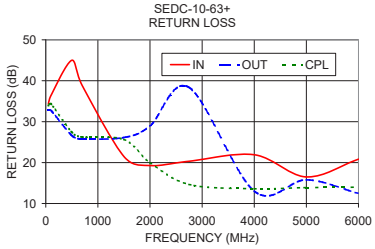
SEDC-10-63+
MAINLINE LOSS



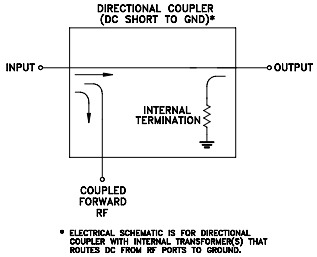
SEDC-10-63+
COUPLING & DIRECTIVITY



SEDC-10-63+
RETURN 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.
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