

Surface Mount Directional Coupler

50Ω 1420 to 1660 MHz

D19G



Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-65°C to 150°C

Pin Connections

INPUT	4
OUTPUT	6
COUPLED	3
GROUND	1,2,5

Features

- low mainline loss, 0.3 dB typ.
- excellent VSWR, 1.2:1 typ.
- excellent repeatability
- miniature low profile package
- tape & reel package
- aqueous washable

Applications

- GPS

CASE STYLE: CA531-1
PRICE: \$ 0.99 ea. QTY (25)

Directional Coupler Electrical Specifications

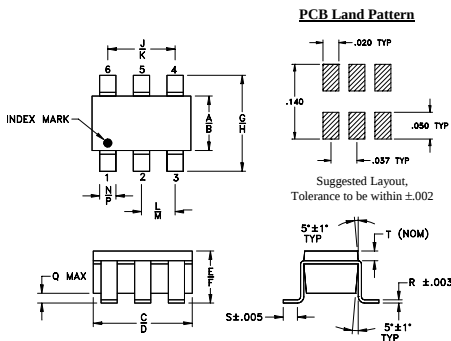
FREQ. RANGE (MHz)	COUPLING (dB)	MAINLINE LOSS ¹ (dB)		DIRECTIVITY (dB)		VSWR (:1)	POWER INPUT ²
		Typ.	Max.	Typ.	Min.		
1420-1660	18.8±1.4	0.3	0.5	15	10	1.2	1.0

1. Mainline loss includes theoretical power loss at coupled port.
2. 4W CW when operating with a 2.0:1 maximum VSWR on all ports.

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
1420.00	0.28	20.02	16.30	32.66	32.00	36.15
1440.00	0.29	19.91	16.38	32.66	32.00	36.47
1460.00	0.29	19.80	16.49	32.66	32.17	36.81
1500.00	0.29	19.58	16.67	32.92	32.32	37.65
1520.00	0.30	19.48	16.78	32.92	32.30	38.00
1540.00	0.30	19.38	16.87	32.87	32.26	38.31
1560.00	0.30	19.28	16.97	32.87	32.33	38.76
1600.00	0.31	19.08	17.17	32.79	32.38	39.93
1640.00	0.31	18.88	17.39	32.45	32.09	40.96
1660.00	0.32	18.79	17.51	32.22	31.87	41.50

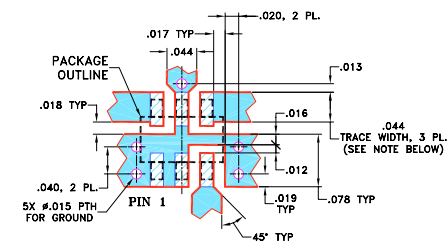
Outline Drawing



Outline Dimensions (inch mm)

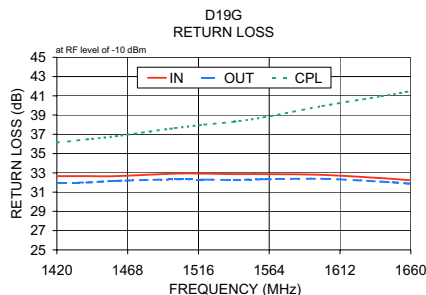
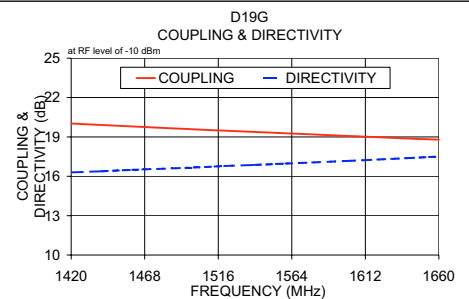
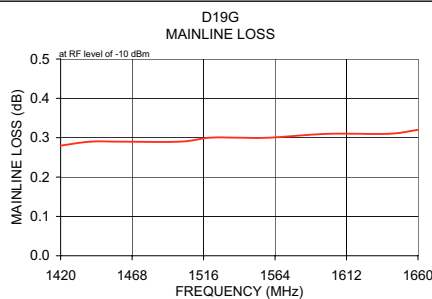
A	B	C	D	E	F	G	H	J
.052	.067	.106	.122	.035	.064	.087	.118	.067
1.32	1.70	2.69	3.10	0.89	1.63	2.21	3.00	1.70
K	L	M	N	P	Q	R	S	wt
.083	.033	.042	.012	.020	.012	.006	.018	grams
2.11	0.84	1.07	0.30	0.51	0.30	0.15	0.46	0.020

Demo Board MCL P/N: TB-396+ Suggested PCB Layout (PL-270)

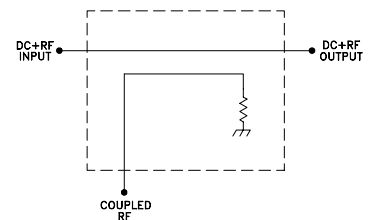


NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
-



electrical schematic



ESD Rating

Human Body Model (HBM): Class 1A (250 v to <500 v) in accordance with ANSI/ESD STM 5.1 - 2001
Machine Model (MM): Class M1 (< 100 v) in accordance with ANSI/ESD STM 5.2 - 1999 (pass 50V)

Mini-Circuits®
ISO 9001 ISO 14001 CERTIFIED

ALL NEW
minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS

REV. C
M117218
D19G
JS/TD/CP/AM
080618