20 dB

Power Signal Tap

ZARC-20-52+

50Ω 16W DC to 500 MHz

CASE STYLE: CC51

Connectors	Model
N-TYPE	ZARC-20-52-N+

+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
Power Input	16 Watt Max

Coaxial Connections

INPUT	1
OUTPUT	3
COUPLED (FORWARD)	S
PLUG (NOT USED)	2

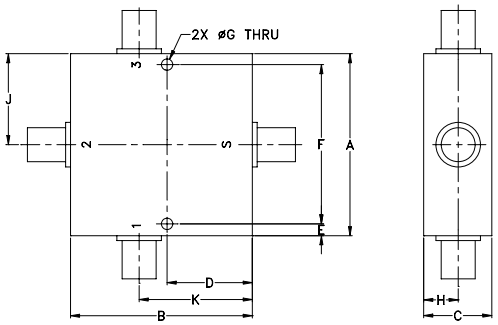
Features

- excellent mainline loss, 0.9 dB typ.
- excellent VSWR, 1.2 typ.
- input power up to 20 Watt at room temperature

Applications

- instrumentation
- amateur radio

Outline Drawing

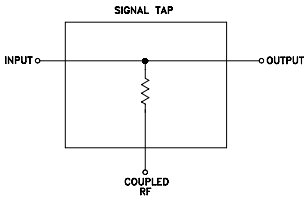


Outline Dimensions (inch / mm)

A	B	C	D	E	F
2.00	2.00	.75	.938	.13	1.750
50.80	50.80	19.05	23.83	3.30	44.45

G	H	J	K	wt
.125	.38	1.00	1.25	grams
3.18	9.65	25.40	31.75	200.0

Electrical Schematic



Electrical Specifications at 25°C

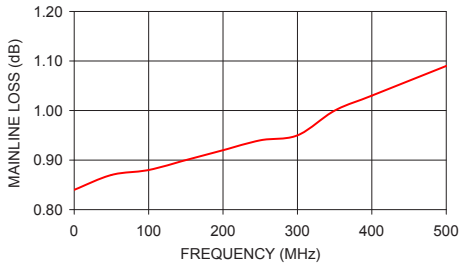
Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		500	MHz
Mainline Loss (above theoretical 0.044 dB)	DC-500	—	0.9	1.3	dB
Coupling* (IN-CPL, OUT-CPL)	DC-500	19	20	21	dB
Coupling Flatness(±)	DC-500	—	±0.3	±0.6	dB
Return Loss (Input)	DC-500	17	—	—	dB
Return Loss (Output)	DC-500	17	—	—	dB
Return Loss (Coupling)	DC-500	17	—	—	dB
Input Power	DC-500	—	—	16	W

* Coupling can be used for both forward and reversed direction.

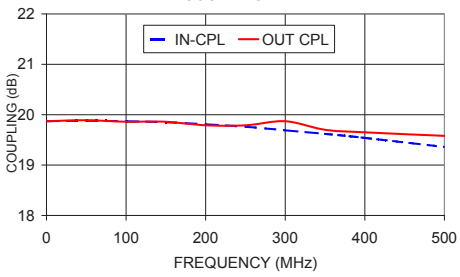
Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Coupling (dB) Out-Cpl	Directivity (dB)	Return Loss (dB) In	Return Loss (dB) Out	Return Loss (dB) Cpl
0.01	0.84	19.87	19.87	0.00	20.88	20.88	60.74
50.00	0.87	19.88	19.89	0.01	21.15	21.11	53.52
100.00	0.88	19.87	19.86	0.02	21.34	21.22	51.25
150.00	0.90	19.85	19.86	0.01	21.51	21.31	42.42
200.00	0.92	19.81	19.79	0.01	21.67	21.32	36.80
250.00	0.94	19.76	19.79	0.02	21.75	21.27	32.68
300.00	0.95	19.69	19.87	0.18	21.90	21.21	29.31
350.00	1.00	19.62	19.70	0.08	22.13	21.17	26.54
400.00	1.03	19.54	19.65	0.11	22.26	21.25	24.11
500.00	1.09	19.36	19.58	0.22	22.00	21.15	19.81

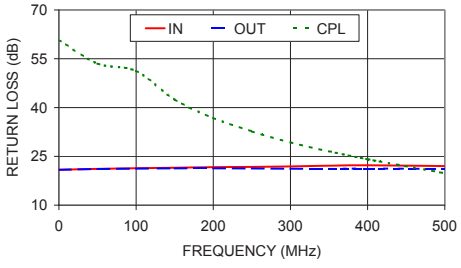
ZARC-20-52+
MAINLINE LOSS



ZARC-20-52+
COUPLING



ZARC-20-52+
RETURN LOSS



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.
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.
C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

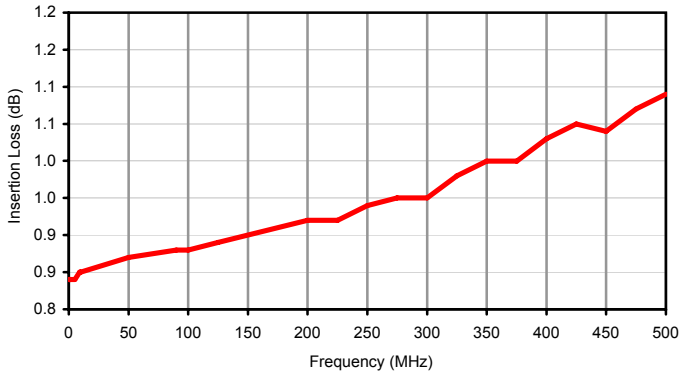
Power Signal Tap ZARC-20-52+

Typical Performance Data

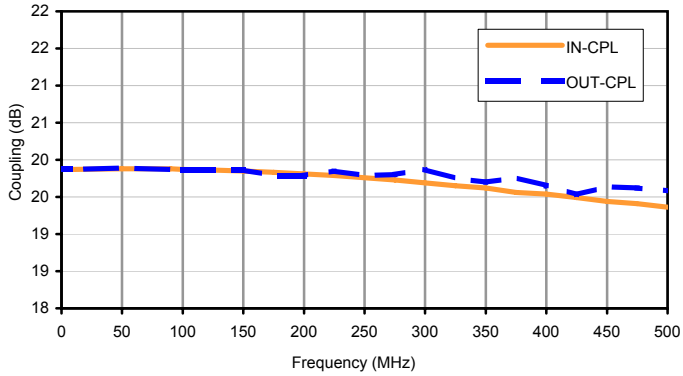
FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING (dB)		DIRECTIVITY (dB)	RETURN LOSS (dB)		
		IN-CPL	OUT-CPL		IN	OUT	CPL
0.01	0.84	19.87	19.87	0.00	20.88	20.88	60.74
0.05	0.84	19.87	19.87	0.00	20.87	20.88	60.23
0.09	0.84	19.87	19.87	0.00	20.86	20.88	60.36
0.10	0.84	19.87	19.87	0.00	20.86	20.88	60.24
0.15	0.84	19.87	19.87	0.00	20.86	20.88	60.70
0.20	0.84	19.87	19.87	0.00	20.87	20.87	60.90
0.25	0.84	19.87	19.87	0.00	20.86	20.88	60.60
0.30	0.84	19.87	19.87	0.00	20.86	20.88	59.91
0.35	0.84	19.87	19.87	0.00	20.87	20.88	60.90
0.40	0.84	19.87	19.87	0.00	20.86	20.88	60.77
0.45	0.84	19.87	19.86	0.00	20.87	20.88	60.26
0.50	0.84	19.87	19.87	0.00	20.86	20.88	60.69
0.70	0.84	19.87	19.87	0.00	20.87	20.89	60.68
0.90	0.84	19.87	19.87	0.00	20.87	20.88	60.11
1.0	0.84	19.87	19.87	0.00	20.87	20.88	60.20
5.0	0.84	19.87	19.87	0.00	20.90	20.91	58.91
9.0	0.85	19.87	19.87	0.00	20.93	20.94	57.69
10.0	0.85	19.87	19.87	0.00	20.94	20.95	57.51
50.0	0.87	19.88	19.89	0.01	21.15	21.11	53.52
90.0	0.88	19.88	19.87	0.00	21.29	21.20	52.55
100.0	0.88	19.87	19.86	0.02	21.34	21.22	51.25
125.0	0.89	19.86	19.86	0.00	21.43	21.27	46.65
150.0	0.90	19.85	19.86	0.01	21.51	21.31	42.42
175.0	0.91	19.83	19.79	0.04	21.63	21.31	39.24
200.0	0.92	19.81	19.79	0.01	21.67	21.32	36.80
225.0	0.92	19.79	19.85	0.06	21.70	21.30	34.63
250.0	0.94	19.76	19.79	0.02	21.75	21.27	32.68
275.0	0.95	19.73	19.80	0.07	21.82	21.22	30.87
300.0	0.95	19.69	19.87	0.18	21.90	21.21	29.31
325.0	0.98	19.65	19.75	0.11	22.00	21.19	27.86
350.0	1.00	19.62	19.70	0.08	22.13	21.17	26.54
375.0	1.00	19.56	19.76	0.19	22.21	21.24	25.35
400.0	1.03	19.54	19.65	0.11	22.26	21.25	24.11
425.0	1.05	19.49	19.53	0.04	22.23	21.28	22.89
450.0	1.04	19.44	19.64	0.20	22.12	21.30	21.79
475.0	1.07	19.41	19.62	0.21	22.07	21.23	20.73
500.0	1.09	19.36	19.58	0.22	22.00	21.15	19.81

Typical Performance Curves

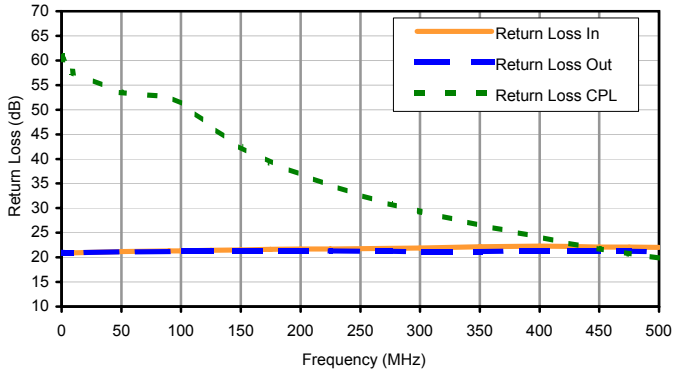
Insertion Loss



Coupling



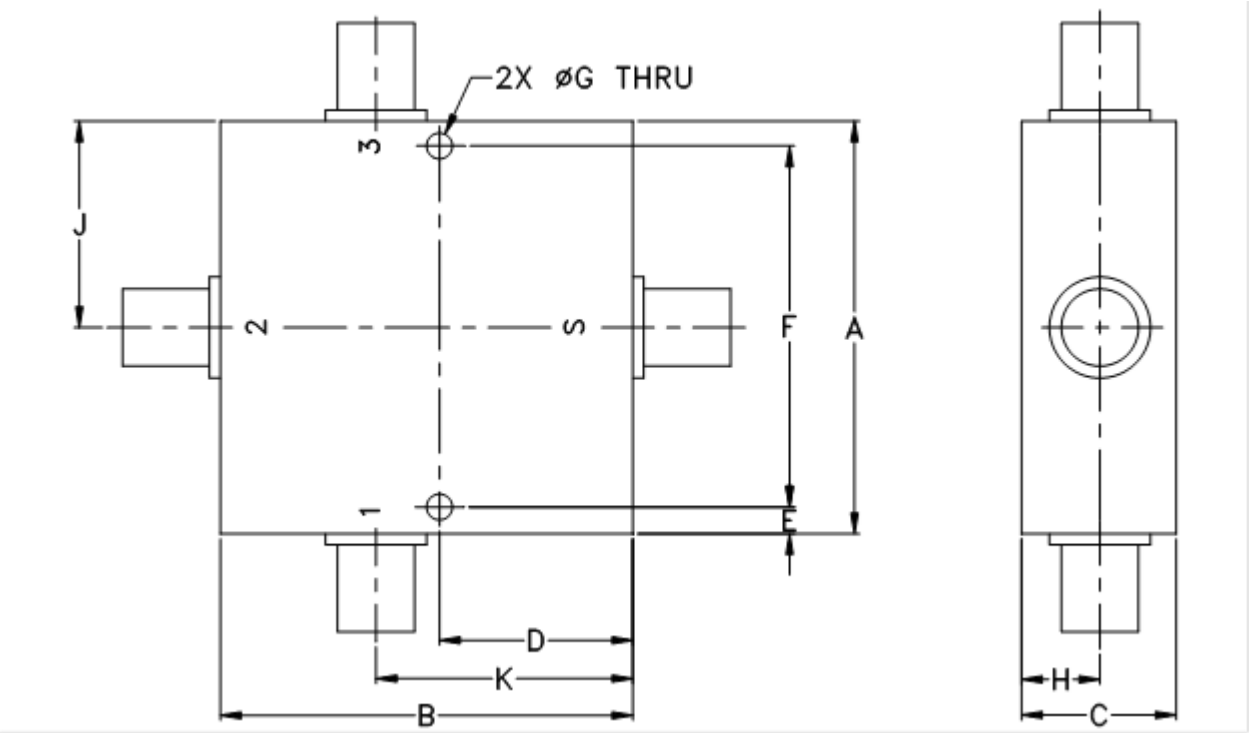
Return Loss



Case Style CC

Outline Dimensions

CC51



CASE#	A	B	C	D	E	F	G	H	J	K	WT. GRAMS
CC51	2.00 (50.80)	2.00 (50.80)	.75 (19.05)	.938 (23.83)	.13 (3.30)	1.750 (44.45)	.125 (3.17)	.38 (9.65)	1.00 (25.40)	1.25 (31.75)	200

Dimensions are in inches (mm). Tolerances: 2 Pl. ± .03; 3 Pl. ± .015

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
   For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Refer to the individual model data sheet for the type of connectors available.

Mini-Circuits

Environmental Specifications ENV28

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I