

20 dB

High Power Signal Tap

50Ω

DC to 500 MHz

ZFRDC-20-52-1+



CASE STYLE: CC51

Maximum Ratings

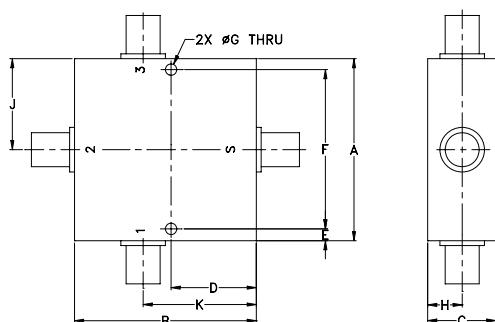
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Voltage Input*	40V(PK-PK)

*With max duty cycle 40 μsec.

Coaxial Connections

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

Outline Drawing

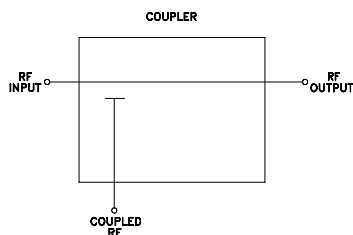


Outline Dimensions (inch/mm)

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



Features

- excellent mainline loss, 0.9 dB typ.
- excellent VSWR, 1.2 typ.

Applications

- instrumentation
- amateur radio

Connectors	Model	Price	Qty.
N-TYPE	ZFRDC-20-52-1+	\$79.95 ea. (10)	
		\$65.00 ea. (25)	
		\$50.00 ea. (50)	
		\$48.00 ea. (100)	

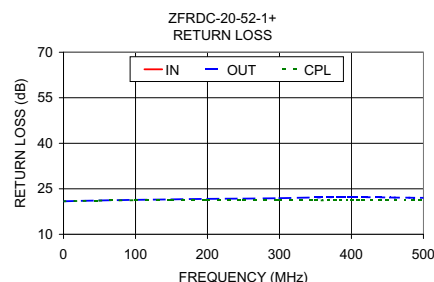
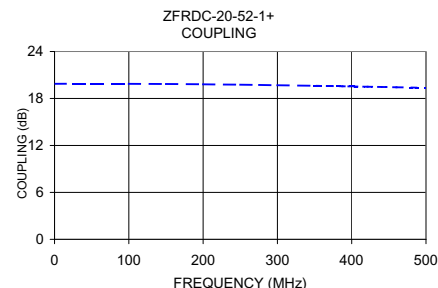
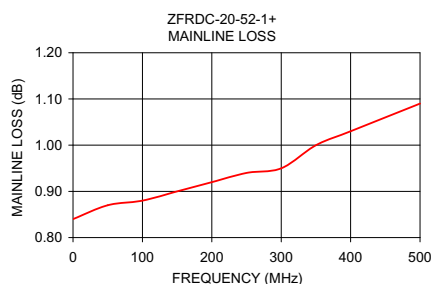
+ RoHS compliant in accordance
with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance.
See our web site for RoHS Compliance methodologies and qualifications.

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		500	MHz
Mainline Loss	DC-500	—	0.9	1.2	dB
Nom. Coupling	DC-500	19	20	21	dB
Return Loss (Input)	DC-500	17	—	—	dB
Return Loss (Output)	DC-500	17	—	—	dB
Return Loss (Coupling)	DC-500	17	—	—	dB

Typical Performance Data

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



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IF/RF MICROWAVE COMPONENTS

For detailed performance specs
& shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

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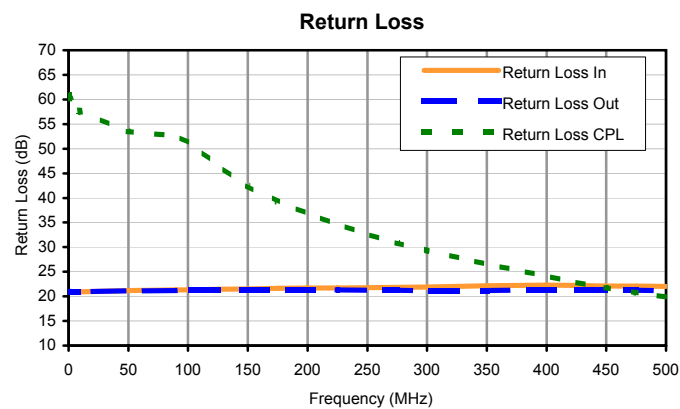
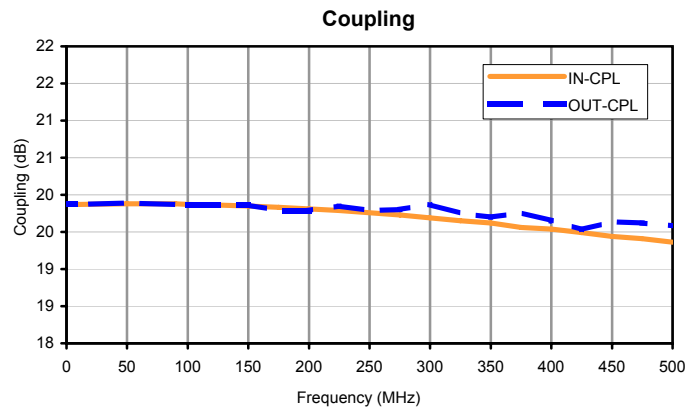
Typical Performance Data

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

High Power Signal Tap

ZFRDC-20-52-1+

Typical Performance Curves



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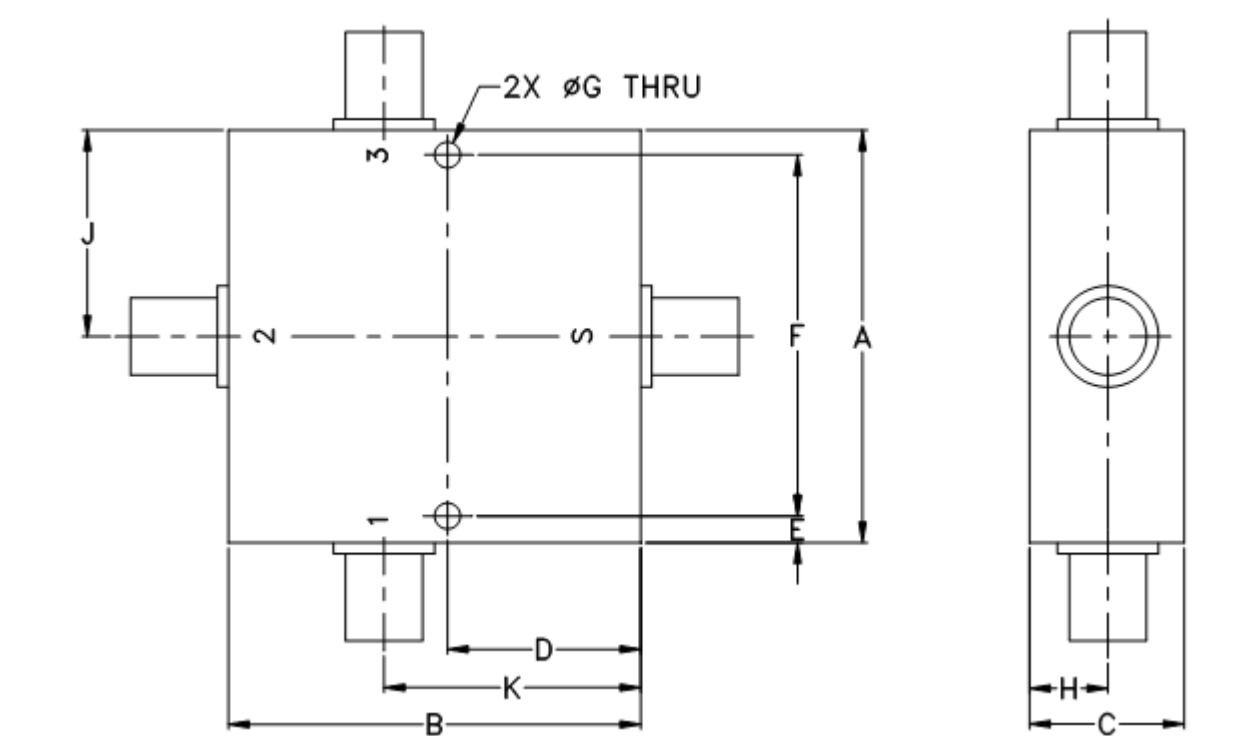
IF/RF MICROWAVE COMPONENTS



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ZFRDC-20-52-1+
9/8/2011
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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. $\pm .03$; 3 Pl. $\pm .015$

Notes:

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



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RF/IF MICROWAVE COMPONENTS



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	-40° to 85°C	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