

Coaxial Directional Coupler

50Ω Up to 2W 1 to 200 MHz

Maximum Ratings

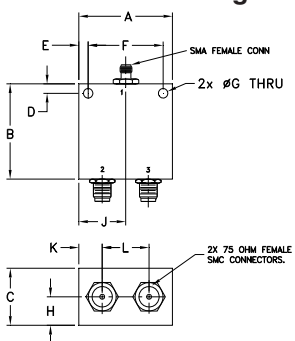
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

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

Coaxial Connections

INPUT (75 Ω) SMC	2
OUTPUT (75 Ω) SMC	3
COUPLED (50 Ω) SMA	1

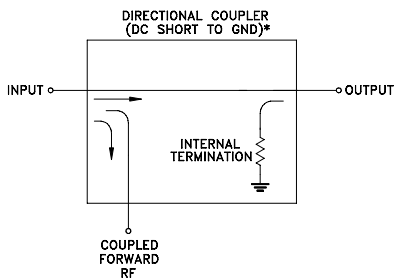
Outline Drawing



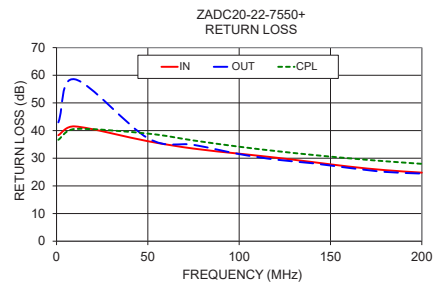
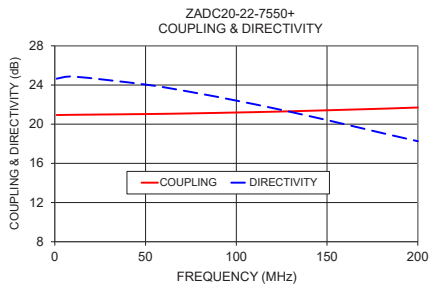
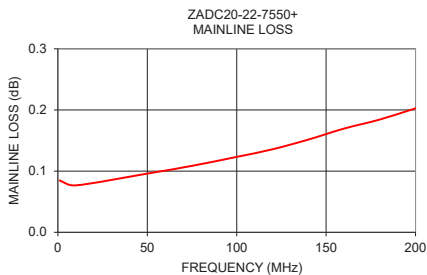
Outline Dimensions (inch)

A	B	C	D	E	F	G
1.25	1.25	.75	.13	.13	1.000	.125
31.75	31.75	19.05	3.30	3.30	25.40	3.18
H	J	K	L			wt
.38	.63	.31	.625			grams
9.65	16.00	7.87	15.88			32.0

Electrical Schematic



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



Features

- wideband, 1 to 200 MHz
- low insertion loss, 0.15 typ.
- good directivity, 22 dB typ.
- 75 ohm for IN and OUT ports, 50 ohm for coupled port

Applications

- Instrumentation
- CATV
- VHF/HF



Generic photo used for illustration purposes only

CASE STYLE: F2424

Connectors	Model
SMC 75Ω - SMA 50Ω	ZADC20-22-7550+

+RoHS Compliant

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

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		1	—	200	MHz
Mainline Loss (above theoretical 0.044 dB)	1 - 100	—	0.1	0.25	dB
	100 - 200	—	0.2	0.4	
Coupling	1 - 100	—	20.5	—	dB
	100 - 200	—	21	—	
Coupling Flatness(±)	1 - 100	—	0.3	0.6	dB
	100 - 200	—	0.6	0.9	
Directivity	1	20	23	—	dB
	100	20	25	—	
	200	12	18	—	
Return Loss (Input)	1	20	30	—	dB
	100	22	33	—	
	200	20	25	—	
Return Loss (Output)	1	20	35	—	dB
	100	22	32	—	
	200	20	25	—	
Return Loss (Coupling)	1	20	30	—	dB
	100	22	33	—	
	200	20	25	—	
Input Power	1 - 200	—	—	2	W

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB)	Coupling (dB)	Directivity (dB)	Return Loss (dB)		
	In-Out	In-Cpl		In	Out	Cpl
1	0.08	20.93	24.64	38.34	42.97	36.66
10	0.08	20.96	24.86	41.51	58.55	40.58
50	0.10	21.03	24.04	36.15	37.26	38.91
75	0.11	21.10	23.29	33.49	34.85	36.43
100	0.12	21.19	22.41	31.65	31.51	34.17
120	0.14	21.27	21.65	30.22	29.51	32.60
140	0.15	21.37	20.84	28.63	28.20	31.22
160	0.17	21.47	19.98	26.99	26.51	29.98
180	0.18	21.58	19.11	25.69	25.06	28.91
200	0.20	21.70	18.26	24.79	24.46	27.97

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

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