Coaxial
Directional Coupler

ZADC20-22-7550+

50Ω Up to 2W 1 to 200 MHz

CASE STYLE: F2424

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

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

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

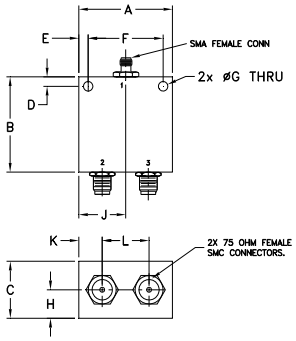
Applications

- Instrumentation
- CATV
- VHF/HF

+RoHS Compliant

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

Outline Drawing

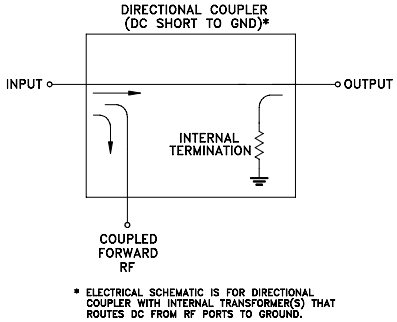


Outline Dimensions (inch / mm)

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



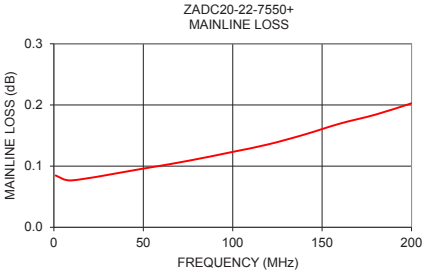
* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMER(S) THAT ROUTES DC FROM RF PORTS TO GROUND.

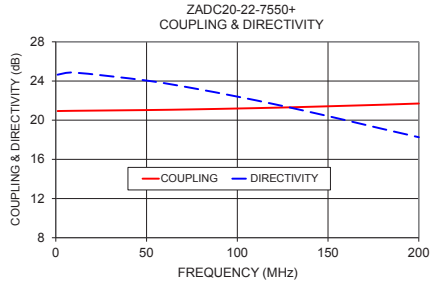
Electrical Specifications at 25°C

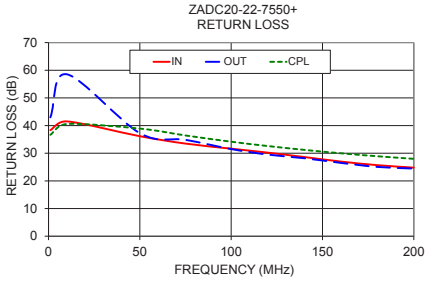
Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		1	—	200	MHz
Mainline Loss (above theoretical 0.044 dB)	1 - 100	—	0.1	0.25	dB
	100 - 200	—	0.2	0.4	
Coupling	1 - 100	—	20.5	—	dB
	100 - 200	—	21	—	
Coupling Flatness(±)	1 - 100	—	0.3	0.6	dB
	100 - 200	—	0.6	0.9	
Directivity	1	20	23	—	dB
	100	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) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB) In	Return Loss (dB) Out	Return Loss (dB) 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.
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