

25 dB DC Pass

# High Power Directional Tap

ZARC-25-252+

50Ω 100W 550 to 2500 MHz

## The Big Deal

- High Power Handling, 100 W
- Excellent Mainline Loss, 0.25 dB typ.
- Very good VSWR, 1.15:1 typ.



CASE STYLE: AW1564

## Product Overview

The ZARC-25-252+ high power directional tap is ideal for signal monitoring up to 100W RF signals in UHF and wireless tele-communications applications. The heavy-duty microstrip module is housed in a rugged aluminum alloy case, with anodized aluminum heat sink and gold-plated SMA connectors. Overall dimensions are 3.00" x 2.81" x 2.03" high.

Feature	Advantages
0.25 dB typ. mainline loss	Extremely low internal power dissipation, reducing mainline loss and internal temperature for high reliability
VSWR 1.15:1 typ.	Very good 50Ω impedance matching minimizes interference with signal integrity
DC Pass up to 2A	Suitable for applications using remote antenna control or other remote motorized requirements
100 W input maximum	High power capacity, combined with excellent insertion loss, supports operation in transmitters and base stations for GSM, CDMA, UMTS, or LTE systems, UHF broadcasting, fixed microwave, and 2.4 GHz wireless LAN applications

### 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](http://www.minicircuits.com/MCLStore/terms.jsp)



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## ZARC-25-252+

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Connectors	Model	Price	Qty.
SMA	ZARC-25-252-S+	\$79.95	(1-9)

**+RoHS Compliant**

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

### Maximum Ratings

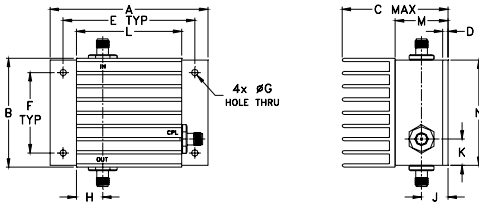
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	100W max.
DC Current (IN-OUT)	2A

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

### Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

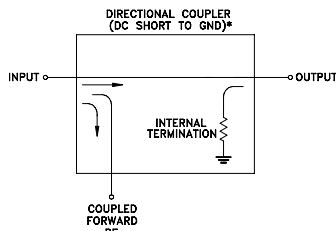
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
3.00	2.06	2.03	.10	2.500	1.525	.125
76.20	52.32	51.56	2.54	63.50	38.74	3.18
H	J	K	L	M	N	wt
.50	.50	.50	2.00	1.00	2.00	grams
12.70	12.70	12.70	50.80	25.40	50.80	230

### Electrical Schematic



\* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS THAT ROUTES DC FROM RF PORTS TO GROUND.

### Features

- excellent mainline loss, 0.25 dB typ.
- good VSWR, 1.15 typ.

### Applications

- cellular
- PCS
- ISM

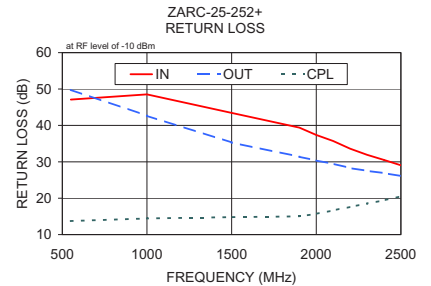
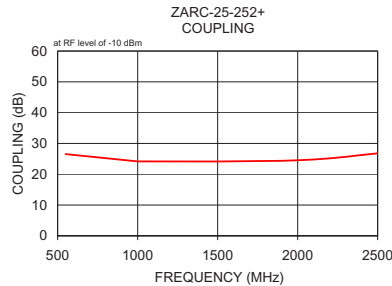
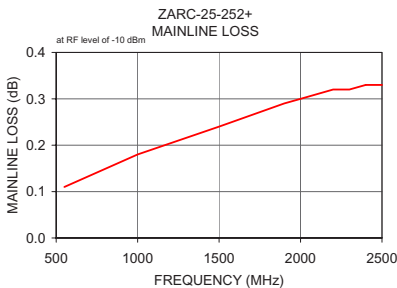
### Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		550		2500	MHz
<b>Mainline Loss</b> (above theoretical 0.014 dB)	550	—	0.11	0.25	dB
	900	—	0.15	0.30	
	2200	—	0.30	0.45	
	2500	—	0.30	0.50	
<b>Coupling*</b> (IN-CPL)	550 - 2500		25.0		dB
	550	25.8	26.5	27.3	
	900	23.5	24.3	25.1	
	2200	23.7	25.0	26.3	
<b>Coupling Flatness</b> (±)	550 - 900	—	1.1	1.6	dB
	900 - 2200	—	0.4	1.0	
	2200 - 2500	—	0.7	1.2	
<b>Return Loss</b> (Input)	550	24	30	—	dB
	900	22	27	—	
	2200	18	25	—	
	2500	18	24	—	
<b>Return Loss</b> (Output)	550	24	30	—	dB
	900	22	27	—	
	2200	18	23	—	
	2500	18	22	—	
<b>Return Loss</b> (Coupling)	550	12	14	—	dB
	900	11	13	—	
	2200	15	18	—	
	2500	16	23	—	
<b>Input Power</b>	550 - 1500	—	—	100	W
	1500-2500	—	—	80	

\* Coupling can be used for forward direction only.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB)		Directivity (dB) In-Cpl	Return Loss (dB)		Cpl
		In-Cpl	Out-Cpl		In	Out	
550.00	0.11	26.54	14.85	47.09	49.80	13.72	
1000.00	0.18	24.16	10.22	48.53	42.65	14.44	
1500.00	0.24	24.13	7.13	43.44	35.29	14.80	
1900.00	0.29	24.37	5.10	39.39	31.40	15.01	
2000.00	0.30	24.54	4.57	37.37	30.35	15.70	
2100.00	0.31	24.79	4.01	35.72	29.46	16.64	
2200.00	0.32	25.16	3.43	33.62	28.29	17.61	
2300.00	0.32	25.65	2.81	31.93	27.53	18.52	
2400.00	0.33	26.23	2.19	30.52	26.90	19.41	
2500.00	0.33	26.79	1.63	29.04	26.09	20.55	



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[www.minicircuits.com](http://www.minicircuits.com) P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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