

25 dB DC Pass

# High Power Directional Tap

ZARC-25-63-S+

50Ω 100W 2500 to 6000 MHz

## The Big Deal

- High Power Handling, 100 W
- Excellent Mainline Loss, 0.34 dB typ.
- Very good VSWR, 1.2:1 typ.



CASE STYLE: AW1564

## Product Overview

The ZARC-25-63+ high power directional tap is ideal for signal monitoring up to 100 W RF signals in microwave S- and C-band applications. The heavy-duty stripline 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
0.34 dB typ. Mainline Loss	Extremely low internal power dissipation, reducing mainline loss and internal temperature for high reliability
VSWR 1.2:1 typ	Very good 50Ω impedance matching minimizes interference with signal integrity
DC Pass up to 1.5A	Suitable for applications using remote antenna control or other remote motorized requirements
100 W Input Power max.	High power capacity, combined with excellent insertion loss, supports operation in transmitters and base stations for radar, satellite, ISM, maritime, PMR, and line-of-sight communications

### 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-25-63-S+

50Ω 100W 2500 to 6000 MHz

### Maximum Ratings

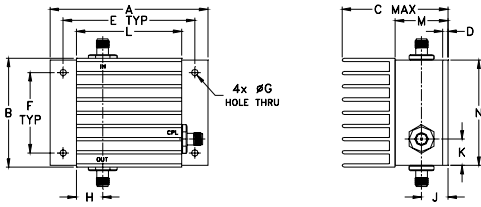
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	100W max.
DC Current (IN-OUT)	1.5A

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

### Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

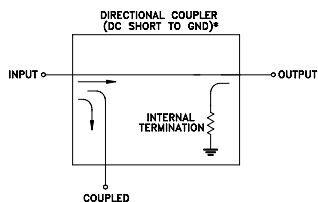
### Outline Drawing



### Outline Dimensions (inch mm)

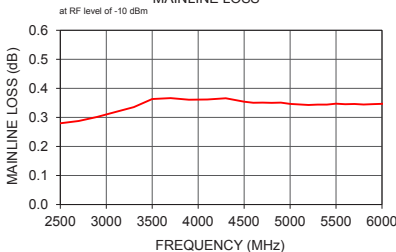
A	B	C	D	E	F	G
3.00	2.06	2.03	.10	2.500	1.525	.125
76.20	52.32	51.56	2.54	63.50	38.74	3.18
H	J	K	L	M	N	wt
.50	.50	.50	2.00	1.00	2.00	grams
12.70	12.70	12.70	50.80	25.40	50.80	230

### Electrical Schematic

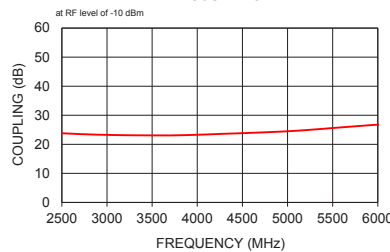


\* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TRANSFORMERS THAT ROUTES DC FROM RF PORTS TO GROUND.

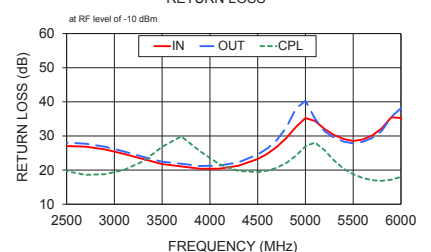
ZARC-25-63-S+ MAINLINE LOSS



ZARC-25-63-S+ COUPLING



ZARC-25-63-S+ RETURN LOSS



### Features

- excellent mainline loss, 0.34 dB typ.
- good VSWR, 1.2 typ.

### Applications

- cellular
- PCS
- ISM
- instrumentation



CASE STYLE: AW1564

Connectors	Model
SMA	ZARC-25-63-S+

**+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
<b>Frequency Range</b>		2500		6000	MHz
<b>Mainline Loss</b> (above theoretical 0.014 dB)	2500	—	0.28	0.4	dB
	5200	—	0.34	0.45	
	6000	—	0.35	0.5	
<b>Coupling*</b> (IN-CPL)	2500 - 6000	—	25.3	—	dB
	2500	22.2	23.2	24.2	
	5200	23.5	24.6	25.6	
<b>Coupling Flatness</b> (±)	2500 - 5200	—	1.3	1.6	dB
	5200 - 6000	—	1.1	1.4	
<b>Return Loss (Input)</b>	2500	16	22	—	dB
	5200	16	24	—	
	6000	16	23	—	
<b>Return Loss (Output)</b>	2500	16	21	—	dB
	5200	16	20	—	
	6000	16	23	—	
<b>Return Loss (Coupling)</b>	2500	16	20	—	dB
	5200	16	20	—	
	6000	12	16	—	
<b>Input Power</b>	2500 - 6000	—	—	100	W

\* Coupling can be used for forward direction only.

### Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)		Return Loss (dB)		Cpl
			Out-Cpl	In	Out		
2500	0.28	23.80	19.18	27.05	28.03	19.70	
3100	0.32	23.18	17.00	24.74	25.47	20.05	
3500	0.36	23.08	14.98	21.77	22.44	26.82	
4100	0.36	23.39	12.66	20.42	21.33	21.69	
4500	0.35	23.84	11.87	23.26	24.54	19.41	
5000	0.35	24.49	11.87	35.24	40.33	26.93	
5200	0.34	24.87	12.23	32.06	31.39	25.82	
5600	0.35	25.85	13.32	28.97	28.30	17.70	
5800	0.34	26.33	14.00	32.26	31.52	16.88	
6000	0.35	26.75	14.72	35.25	38.16	18.03	

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