

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



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Maximum Ratings

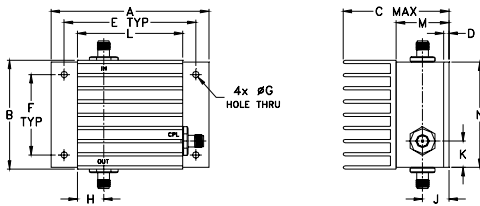
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	100W max.
DC Current (IN-OUT)	1.5A

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

Coaxial Connections

INPUT	1
OUTPUT	2
COUPLED	3

Outline Drawing

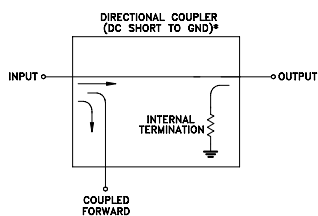


Outline Dimensions (inch mm)

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

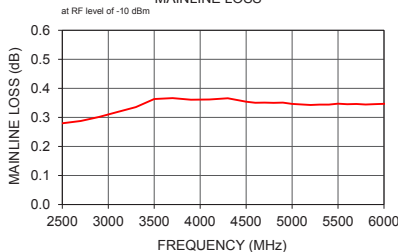
H	J	K	L	M	N	wt
.50	.50	.50	2.00	1.00	2.00	grams
12.70	12.70	12.70	50.80	25.40	50.80	230

Electrical Schematic

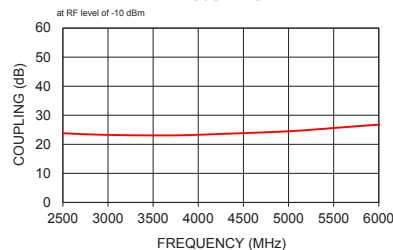


* ELECTRICAL SCHEMATIC IS FOR DIRECTIONAL COUPLER WITH INTERNAL TERMINATION THAT ROUTES DC FROM RF PORTS TO GROUND.

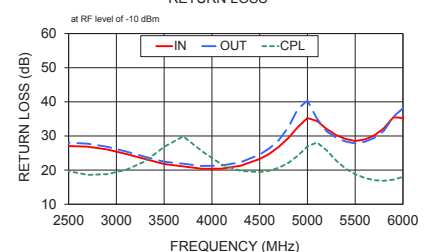
ZARC-25-63-S+ MAINLINE LOSS



ZARC-25-63-S+ COUPLING



ZARC-25-63-S+ RETURN LOSS



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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
Frequency Range		2500		6000	MHz
Mainline Loss (above theoretical 0.014 dB)	2500	—	0.28	0.4	dB
	5200	—	0.34	0.45	
	6000	—	0.35	0.5	
Coupling* (IN-CPL)	2500 - 6000	—	25.3	—	dB
	2500	22.2	23.2	24.2	
	5200	23.5	24.6	25.6	
	6000	25.5	26.5	27.5	
Coupling Flatness (±)	2500 - 5200	—	1.3	1.6	dB
	5200 - 6000	—	1.1	1.4	
Return Loss (Input)	2500	16	22	—	dB
	5200	16	24	—	
	6000	16	23	—	
Return Loss (Output)	2500	16	21	—	dB
	5200	16	20	—	
	6000	16	23	—	
Return Loss (Coupling)	2500	16	20	—	dB
	5200	16	20	—	
	6000	12	16	—	
Input Power	2500 - 6000	—	—	100	W

* Coupling can be used for forward direction only.

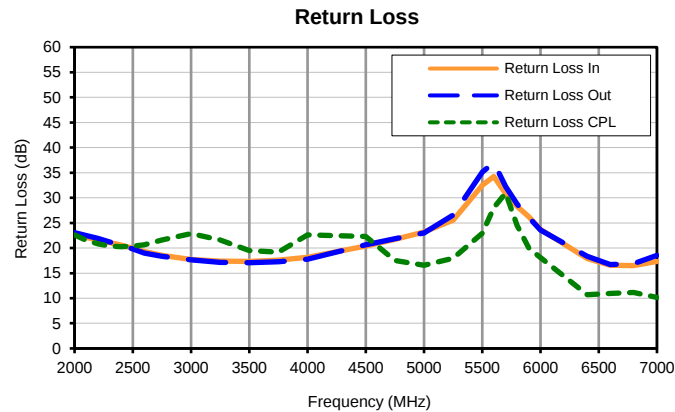
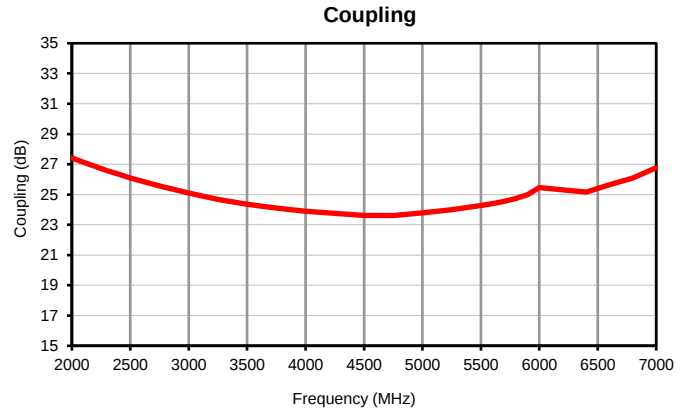
Typical Performance Data

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

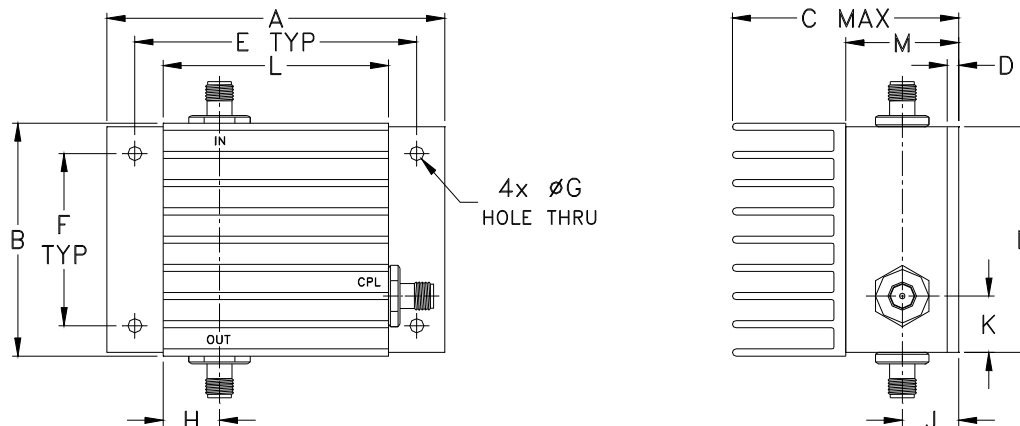
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	COUPLING (dB)	DIRECTIVITY (dB)	RETURN LOSS		
				IN	OUT	CPL
2000	0.18	27.42	20.50	22.73	23.08	22.61
2100	0.19	27.12	21.05	22.08	22.50	21.55
2200	0.20	26.85	21.64	21.60	21.89	20.82
2300	0.20	26.58	22.36	21.11	21.22	20.37
2400	0.21	26.34	23.07	20.60	20.49	20.27
2500	0.22	26.10	23.96	19.97	19.79	20.36
2600	0.23	25.87	24.58	19.29	19.00	20.64
2750	0.25	25.57	25.95	18.56	18.32	21.61
3000	0.28	25.09	26.62	17.69	17.65	22.87
3250	0.28	24.67	23.60	17.37	17.11	21.62
3500	0.29	24.35	20.14	17.33	17.06	19.52
3750	0.30	24.10	17.81	17.59	17.24	19.20
4000	0.29	23.90	15.99	18.17	17.80	22.65
4500	0.28	23.62	13.83	20.41	20.67	22.28
4750	0.27	23.61	12.99	21.74	21.85	17.50
5000	0.28	23.78	12.17	23.17	23.00	16.57
5250	0.26	24.00	11.90	25.53	26.57	17.97
5500	0.25	24.28	11.96	32.48	35.10	22.94
5600	0.24	24.40	12.05	34.25	37.03	28.03
5700	0.24	24.54	12.13	30.81	32.27	30.94
5800	0.24	24.73	12.33	28.31	28.74	24.44
5900	0.24	24.99	12.90	26.18	26.08	19.92
6000	0.25	25.45	14.63	23.71	23.58	18.07
6400	0.31	25.17	10.14	17.92	18.34	10.73
6600	0.36	25.64	11.09	16.59	16.71	10.94
6800	0.37	26.09	11.86	16.50	16.91	11.17
7000	0.37	26.77	12.65	17.36	18.57	10.16

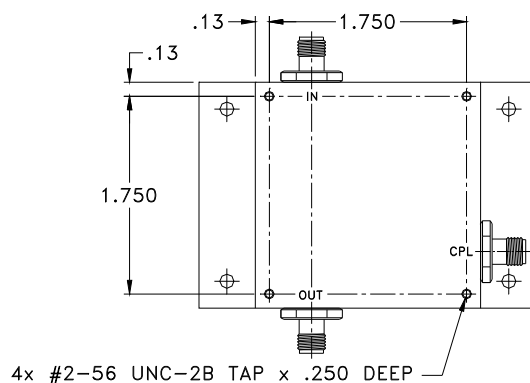
Typical Performance Curves



Outline Dimensions



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



CASE #	A	B	C	D	E	F	G	H	J	K	L
AW1564	3.00 (76.20)	2.06 (52.32)	2.03 (51.56)	.10 (2.54)	2.500 (63.50)	1.525 (38.74)	.125 (3.18)	.50 (12.70)	.50 (12.70)	.50 (12.70)	2.00 (50.80)

CASE #	M	N	WT, GRAMS	WT WITHOUT HEATSINK, GRAMS
AW1564	1.00 (25.40)	2.00 (50.80)	230	165

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 3Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Heat sink finish: Black anodize.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

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