

Coaxial High Power Combiner

ZA3CS-450-9W-N

3 Way-0° 50Ω 100 to 450 MHz

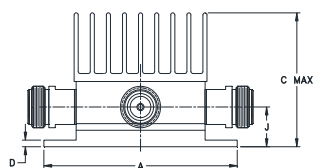
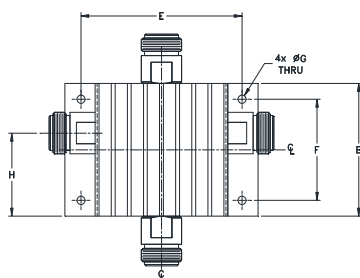
Maximum Ratings

Operating Temperature	-55°C to 90°C
Storage Temperature	-55°C to 100°C
Permanent damage may occur if any of these limits are	

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
3.00	2.00	2.020	.100	2.500	1.525
76.20	50.80	51.31	2.54	63.50	38.74

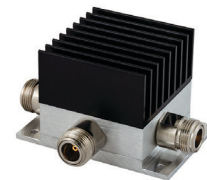
G	H	J	wt
.125	1.25	.600	grams
3.175	31.75	15.24	350

Features

- high power, up to 9W input power
- wideband, 100 to 450 MHz
- low insertion loss, 0.9 dB typ.

Applications

- VHF/UHF
- communication receivers & transmitters



Generic photo used for illustration purposes only

CASE STYLE: AX255-1

Connectors	Model
N-TYPE	ZA3CS-450-9W-N

High Power Combiner Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 4.8 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	POWER INPUT ¹ (W)
f_L - f_U	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	as combiner ² Max. as splitter Max.
100-450	22 15	0.9 1.8	2.5 8.0	0.2 0.7	9 12

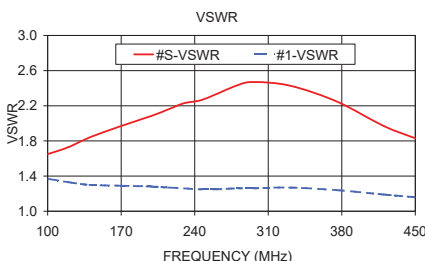
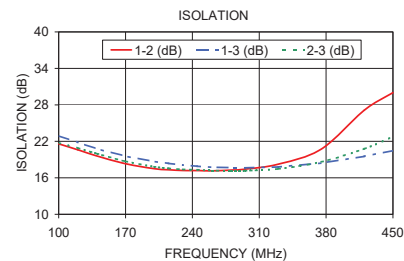
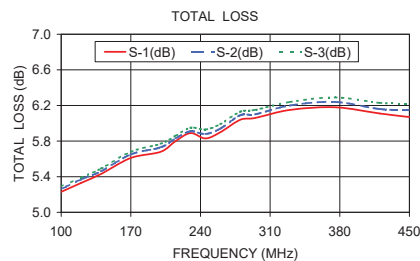
1. Over -55°C to +55°C. Derate linearly to 20% of rating at 90°C

2. As a combiner of non-coherent signals, max. power per port is power rating divided by number of ports.

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
100.00	5.23	5.26	5.29	0.07	21.59	22.92	21.77	0.48	1.65	1.37	1.34	1.36
120.00	5.33	5.37	5.39	0.05	20.61	21.81	20.89	0.69	1.73	1.33	1.29	1.30
140.00	5.43	5.46	5.49	0.07	19.60	20.78	19.99	0.79	1.84	1.30	1.26	1.28
170.00	5.61	5.65	5.68	0.07	18.32	19.56	18.71	0.93	1.97	1.29	1.24	1.26
200.00	5.68	5.73	5.77	0.08	17.50	18.69	17.82	1.03	2.09	1.28	1.25	1.25
215.00	5.80	5.83	5.86	0.06	17.32	18.38	17.56	1.07	2.16	1.27	1.25	1.25
230.00	5.89	5.91	5.95	0.06	17.21	18.10	17.39	1.16	2.23	1.26	1.26	1.26
245.00	5.83	5.88	5.93	0.10	17.19	17.91	17.32	1.44	2.26	1.25	1.27	1.27
260.00	5.90	5.94	5.99	0.09	17.15	17.74	17.19	1.48	2.33	1.25	1.28	1.29
280.00	6.04	6.09	6.13	0.09	17.27	17.68	17.16	1.47	2.43	1.26	1.31	1.33
295.00	6.06	6.10	6.15	0.09	17.42	17.65	17.17	1.71	2.47	1.26	1.32	1.36
330.00	6.15	6.20	6.24	0.10	18.25	17.79	17.48	1.89	2.43	1.27	1.36	1.41
375.00	6.18	6.24	6.29	0.11	20.73	18.43	18.62	2.20	2.25	1.24	1.36	1.37
420.00	6.11	6.16	6.23	0.12	27.12	19.54	20.78	2.79	1.97	1.19	1.31	1.29
450.00	6.07	6.15	6.22	0.14	30.02	20.48	22.77	3.26	1.83	1.16	1.25	1.25

1. Total Loss = Insertion Loss + 4.8dB splitter loss.



electrical schematic



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



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

REV. OR
ECO-008153
ZA3CS-450-9W-N
HY/CP/PS
210701
Page 1 of 1