

# Coaxial High Power Combiner

## ZA3CS-450-9W

3 Way-0° 50Ω 100 to 450 MHz

### Maximum Ratings

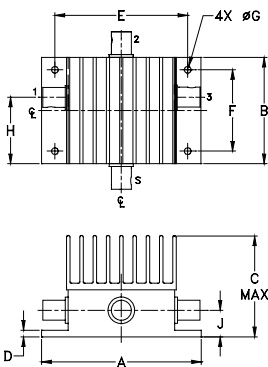
Operating Temperature	-55°C to 90°C
Storage Temperature	-55°C to 100°C

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

### Coaxial Connections

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

### Outline Drawing



### Outline Dimensions (inch/mm)

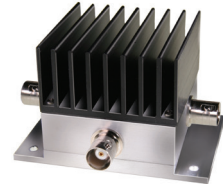
A	B	C	D	E	F	G	H	J	wt
3.00	2.00	1.92	.100	2.500	1.525	.125	1.25	.50	grams
76.20	50.80	48.77	2.54	63.50	38.74	3.18	31.75	12.70	343

### 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



BNC version shown  
CASE STYLE: AX255

Connectors	Model
BNC	ZA3CS-450-9W
N-TYPE	ZA3CS-450-9W-N
SMA	ZA3CS-450-9W-S

### High Power Combiner Electrical Specifications

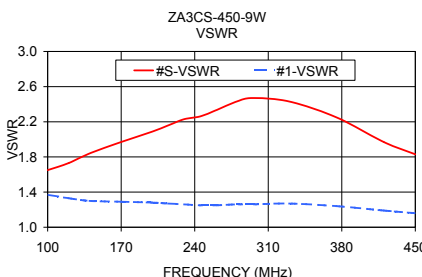
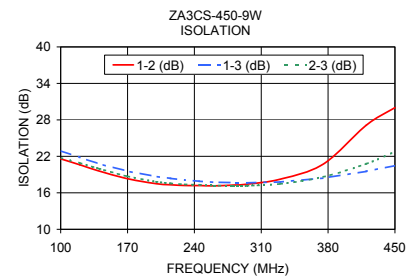
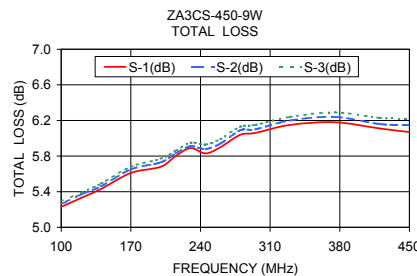
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 4.8 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		POWER INPUT <sup>1</sup> (W)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	as combiner <sup>2</sup> Max.	as splitter Max.
f <sub>L</sub> -f <sub>U</sub>	22	15	0.9	1.8	2.5	8.0	0.2	0.7	9	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 <sup>1</sup> (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

- 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.
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