

Coaxial High Power Combiner

ZB4CS-440-12W

4 Way-0° 50Ω 100 to 440 MHz

Maximum Ratings

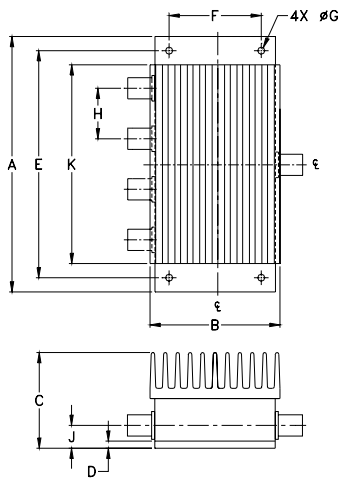
Operating Temperature	-55°C to 90°C
Storage Temperature	-55°C to 100°C

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
PORT 4	4

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
4.50	2.25	1.69	.125	4.000	1.625
114.30	57.15	42.93	3.18	101.60	41.28
G	H	J	K	wt	
.144	.890	.44	3.50	grams	
3.66	22.61	11.18	88.90	500	

Features

- high power, up to 12W input power
- wideband, 100 to 440 MHz
- low insertion loss, 0.6 dB typ.
- high isolation, 27 dB typ.

Applications

- VHF/UHF
- communication receivers & transmitters



BNC version shown
CASE STYLE: AW256

Connectors	Model	Price	Qty.
BNC	ZB4CS-440-12W	\$134.95	(1-9)
N-TYPE	ZB4CS-440-12W-N	\$149.95	(1-9)
SMA	ZB4CS-440-12W-S	\$149.95	(1-9)

High Power Combiner Electrical Specifications

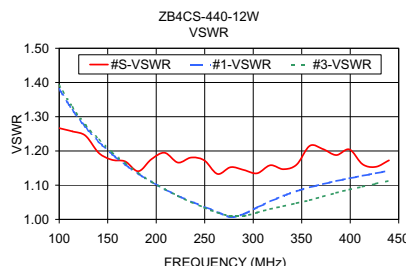
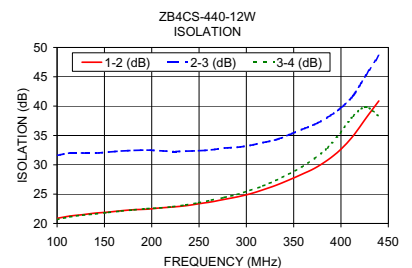
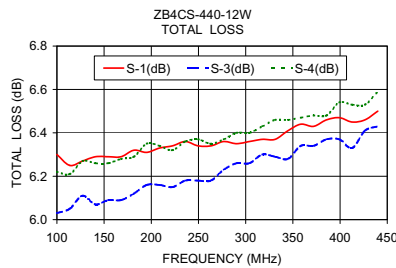
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		POWER INPUT ¹ (W)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	as combiner ² Max.	as splitter Max.
f _L -f _H										
100-440	27	17	0.6	1.2	0.8	4.0	0.15	0.5	12	10

- Over -55°C to +55°C. Derate linearly to 20% of rating at 90°C
- As a combiner of non-coherent signals, max. power per port is power rating divided by number of ports.

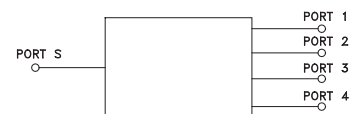
Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
100.00	6.30	6.20	6.03	6.22	0.26	20.88	31.60	20.67	0.56	1.27	1.38	1.38	1.39	1.38
113.60	6.25	6.26	6.05	6.21	0.21	21.27	32.00	21.12	0.47	1.26	1.32	1.32	1.33	1.31
127.20	6.27	6.28	6.11	6.27	0.16	21.50	32.01	21.42	0.52	1.24	1.27	1.27	1.28	1.26
154.40	6.29	6.26	6.09	6.26	0.19	21.94	32.17	21.88	0.55	1.17	1.19	1.19	1.20	1.18
181.60	6.32	6.30	6.12	6.29	0.20	22.35	32.45	22.31	0.55	1.14	1.13	1.13	1.14	1.12
208.80	6.33	6.31	6.16	6.34	0.18	22.65	32.39	22.65	0.76	1.19	1.09	1.08	1.09	1.08
236.00	6.36	6.31	6.18	6.36	0.18	23.03	32.32	23.16	0.91	1.18	1.05	1.04	1.05	1.05
263.20	6.34	6.32	6.18	6.35	0.17	23.69	32.55	23.97	0.92	1.13	1.02	1.01	1.02	1.03
290.40	6.35	6.35	6.26	6.40	0.14	24.53	32.99	24.94	0.91	1.14	1.02	1.03	1.01	1.00
317.60	6.37	6.39	6.30	6.43	0.14	25.74	33.79	26.40	0.85	1.16	1.05	1.06	1.03	1.04
344.80	6.41	6.39	6.28	6.46	0.18	27.40	35.10	28.40	1.01	1.16	1.08	1.08	1.05	1.06
372.00	6.43	6.43	6.34	6.48	0.14	29.39	36.86	31.06	1.23	1.21	1.10	1.11	1.07	1.08
399.20	6.47	6.44	6.37	6.54	0.18	32.55	39.61	35.43	1.18	1.20	1.12	1.14	1.09	1.10
426.40	6.46	6.49	6.41	6.53	0.12	37.95	45.29	39.84	1.79	1.15	1.13	1.15	1.10	1.12
440.00	6.50	6.50	6.43	6.59	0.16	40.88	48.60	38.28	1.63	1.17	1.14	1.16	1.11	1.13

- Total Loss = Insertion Loss + 6dB splitter loss.



electrical schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED
The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com
IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

REV. A
M127604
ZB4CS-440-12W
HY/TD/CP
100617