Coaxial

High Power Splitter/Combiner ZACS2-32-70W-S+

2 Way-0° 50Ω 3 to 300 MHz 70 Watt

The Big Deal

- High power, up to 70W as a splitter
- Low insertion loss, 0.6 dB
- Low unbalance, 0.5˚/0.05 dB

CASE STYLE: AW254

Product Overview

Mini-Circuits' ZACS2-32-70W-S+ is a 2-way 0˚ splitter providing 70W power handling and very low insertion loss across the 3 to 300 MHz band, covering applications including AM/FM radio, VHF/UHF, instrumentation and more. Its low intrinsic losses provide excellent signal fidelity from input to output, even to high-power signals. This model also provides high isolation and very low amplitude and phase unbalance. It features rugged construction with your choice of SMA connectors and a heat sink for efficient cooling.

Key Features

Feature	Advantages
Feature 1 High power handling: • Up to 70W as a splitter • Up to 10W as a combiner	Suitable for many high power applications.
Very low insertion loss, 0.6 dB	Very low insertion loss minimizes intrinsic losses, making this model a suitable candidate for high power signal distribution applications where low loss is a requirement.
Very low unbalance: • 0.15 dB amplitude unbalance • 0.5˚ phase unbalance	Produces nearly equal output signals, ideal for parallel path / multichannel systems.

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Connectors	Model
SMA	ZACS2-32-70W-S+

Maximum Ratings

Operating Temperature	-55°C to 60°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

Features

- high power, up to 70W input power as splitter
- low insertion loss, 0.6 dB typ.
- excellent amplitude and phase unbalance

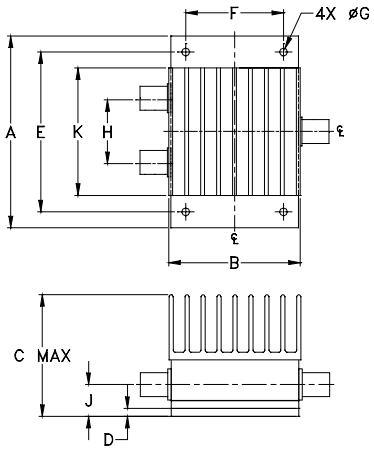
Applications

- instrumentation
- VHF/UHF
- AM/FM RADIO

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Outline Drawing

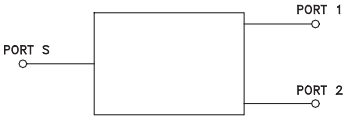


Outline Dimensions (inch / mm)

A	B	C	D	E	F
3.00	2.06	1.92	.100	2.500	1.525
76.20	52.32	48.77	2.54	63.50	38.74

G	H	J	K	wt
.125	1.000	.50	2.00	grams
3.18	25.40	12.70	50.80	330

Electrical Schematic



Electrical Specifications at 25°C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range			3		300	MHz
Insertion Loss Above 3.0 dB		3-100 100-300		0.25 0.6	0.5 1.1	dB
Isolation		3-100 100-300		22 15		dB
Phase Unbalance		3-300		0.5	2	Degree
Amplitude Unbalance		3-300		0.15	0.4	dB
VSWR (Port S)		3-300		1.5		:1
VSWR (Port 1-2)		3-300		1.10		:1
Power Input	**as combiner**[1]	3-100 100-300			5 5	W
	as splitter	3-100 100-300			70 35	

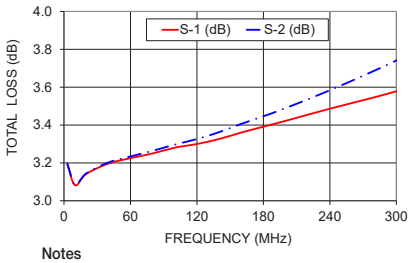
1. Maximum Power Input for each

Typical Performance Data

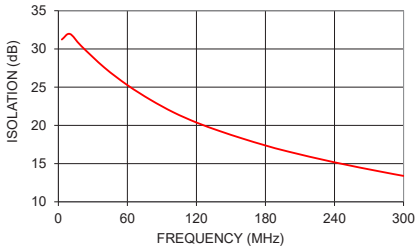
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
3	3.19	3.20	0.00	31.23	0.00	1.46	1.49	1.49
10	3.08	3.08	0.00	31.96	0.00	1.18	1.14	1.14
20	3.14	3.14	0.00	30.36	0.00	1.15	1.09	1.09
40	3.20	3.20	0.01	27.56	0.00	1.16	1.08	1.08
60	3.22	3.23	0.01	25.27	0.01	1.19	1.08	1.08
80	3.25	3.26	0.01	23.35	0.01	1.22	1.08	1.08
100	3.28	3.30	0.02	21.71	0.01	1.26	1.08	1.08
120	3.30	3.33	0.03	20.37	0.01	1.29	1.08	1.08
140	3.33	3.36	0.04	19.27	0.05	1.33	1.08	1.08
160	3.36	3.41	0.05	18.28	0.08	1.37	1.09	1.08
180	3.39	3.45	0.06	17.37	0.09	1.41	1.09	1.08
200	3.42	3.49	0.07	16.57	0.12	1.45	1.09	1.09
240	3.49	3.58	0.10	15.17	0.21	1.52	1.09	1.09
280	3.55	3.69	0.14	13.95	0.36	1.58	1.08	1.09
300	3.58	3.74	0.16	13.39	0.44	1.62	1.08	1.09

1. Total Loss = Insertion Loss + 3dB splitter theoretical loss.

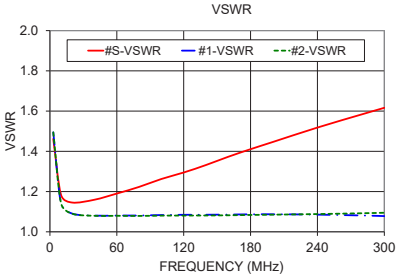
ZASC2-32-70W-S+
TOTAL LOSS



ZASC2-32-70W-S+
ISOLATION



ZASC2-32-70W-S+
VSWR



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

2 Way-0° Power Splitter/Combiner ZACS2-32-70W-S+

Typical Performance Data

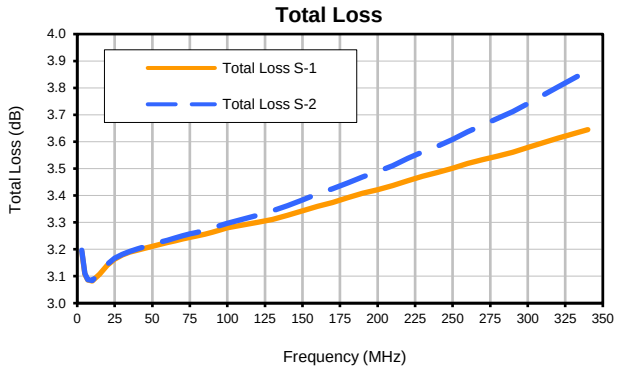
FREQUENCY (MHz)	TOTAL LOSS[1] (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (deg.)
	S-1	S-2		1-2	
3	3.19	3.20	0.00	31.23	0.00
5	3.11	3.11	0.00	31.72	0.01
7	3.09	3.09	0.00	31.96	0.01
10	3.08	3.08	0.00	31.96	0.00
15	3.11	3.11	0.00	31.40	0.01
20	3.14	3.14	0.00	30.36	0.00
25	3.16	3.17	0.00	29.52	0.00
30	3.18	3.18	0.00	28.80	0.01
35	3.19	3.19	0.00	28.15	0.01
40	3.20	3.20	0.01	27.56	0.00
45	3.20	3.21	0.01	26.96	0.00
50	3.21	3.22	0.01	26.38	0.00
55	3.22	3.23	0.01	25.79	0.00
60	3.22	3.23	0.01	25.27	0.01
65	3.23	3.24	0.01	24.75	0.00
70	3.24	3.25	0.01	24.25	0.00
75	3.24	3.26	0.01	23.79	0.01
80	3.25	3.26	0.01	23.35	0.01
85	3.26	3.27	0.01	22.92	0.01
90	3.26	3.28	0.02	22.50	0.01
95	3.27	3.29	0.02	22.10	0.01
100	3.28	3.30	0.02	21.71	0.01
120	3.30	3.33	0.03	20.37	0.01
130	3.31	3.34	0.03	19.80	0.01
140	3.33	3.36	0.04	19.27	0.05
150	3.34	3.38	0.04	18.77	0.07
160	3.36	3.41	0.05	18.28	0.08
170	3.37	3.42	0.05	17.81	0.08
180	3.39	3.45	0.06	17.37	0.09
190	3.41	3.47	0.06	16.96	0.10
200	3.42	3.49	0.07	16.57	0.12
210	3.44	3.51	0.07	16.19	0.13
220	3.46	3.54	0.08	15.84	0.17
230	3.47	3.56	0.09	15.50	0.19
240	3.49	3.58	0.10	15.17	0.21
250	3.50	3.61	0.11	14.85	0.24
260	3.52	3.64	0.12	14.54	0.29
270	3.53	3.66	0.13	14.25	0.33
280	3.55	3.69	0.14	13.95	0.36
290	3.56	3.71	0.15	13.67	0.39
300	3.58	3.74	0.16	13.39	0.44
320	3.61	3.80	0.19	12.86	0.56
340	3.64	3.86	0.22	12.34	0.68

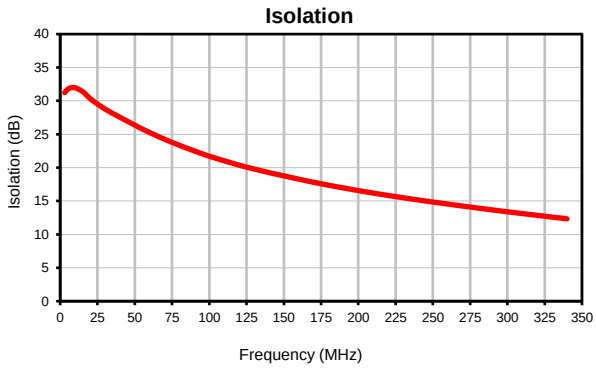
FREQUENCY (MHz)	VSWR (:1)		
	S	1	2
3	1.46	1.49	1.49
5	1.29	1.28	1.28
7	1.22	1.20	1.20
10	1.18	1.14	1.14
15	1.16	1.10	1.10
20	1.15	1.09	1.09
25	1.14	1.09	1.08
30	1.15	1.08	1.08
35	1.15	1.08	1.08
40	1.16	1.08	1.08
45	1.17	1.08	1.08
50	1.17	1.08	1.08
55	1.18	1.08	1.08
60	1.19	1.08	1.08
65	1.20	1.08	1.08
70	1.21	1.08	1.08
75	1.21	1.08	1.08
80	1.22	1.08	1.08
85	1.23	1.08	1.08
90	1.24	1.08	1.08
95	1.25	1.08	1.08
100	1.26	1.08	1.08
120	1.29	1.08	1.08
130	1.31	1.08	1.08
140	1.33	1.08	1.08
150	1.35	1.08	1.08
160	1.37	1.09	1.08
170	1.39	1.09	1.08
180	1.41	1.09	1.08
190	1.43	1.09	1.08
200	1.45	1.09	1.09
210	1.46	1.09	1.09
220	1.48	1.09	1.09
230	1.50	1.09	1.09
240	1.52	1.09	1.09
250	1.54	1.08	1.09
260	1.55	1.08	1.09
270	1.57	1.08	1.09
280	1.58	1.08	1.09
290	1.60	1.08	1.09
300	1.62	1.08	1.09
320	1.65	1.07	1.10
340	1.68	1.07	1.10

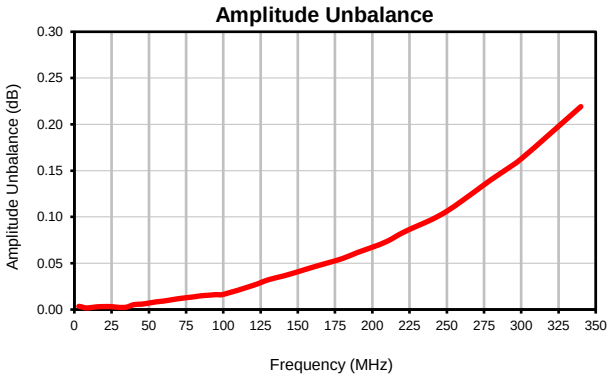
[1]Total Loss = Insertion Loss + 3dB Splitter Loss

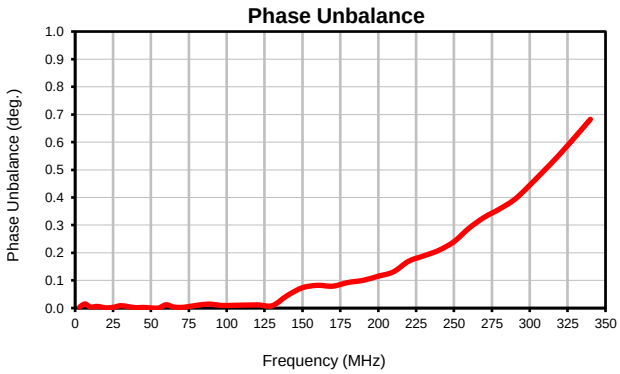
2 Way-0° Power Splitter/Combiner ZACS2-32-70W-S+

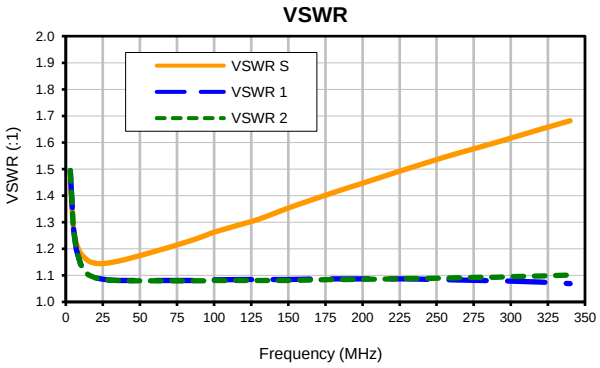
Typical Performance Curves







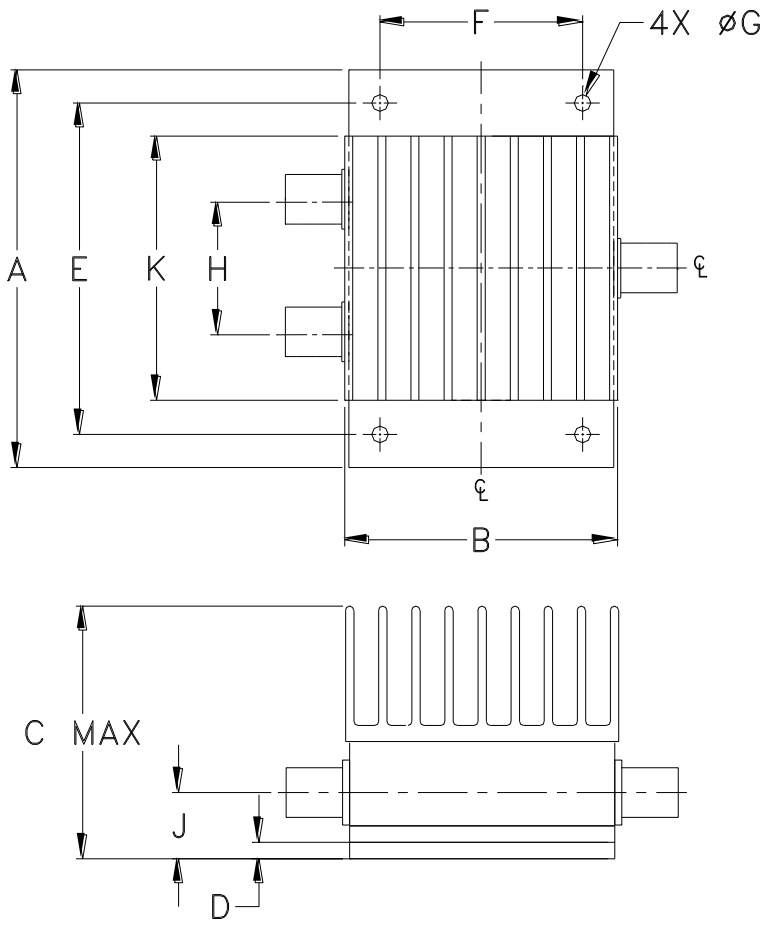




Case Style AW

Outline Dimensions

AW254



CASE #	A	B	C	D	E	F	G	H	J	K	WT. GRAM
AW254	3.00 (76.20)	2.06 (52.32)	1.92 (48.77)	.100 (2.54)	2.500 (63.50)	1.525 (38.74)	.125 (3.18)	1.000 (25.40)	.50 (12.70)	2.00 (50.80)	330

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

Notes:

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