

# Coaxial High Power Power Splitter/Combiner

## ZACS242-100W+

2 Way-0° 50Ω 500 to 2450 MHz DC PASS

### Maximum Ratings

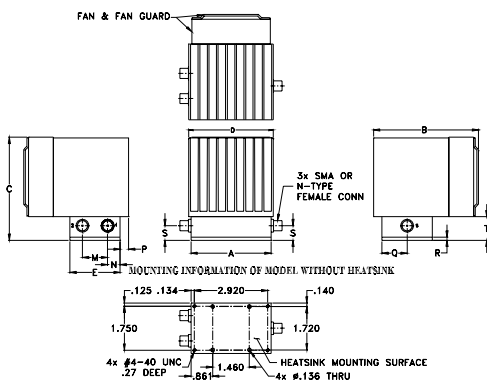
Operating Temperature	-55°C to 90°C
Storage Temperature	-55°C to 100°C
DC PASS	2A
FAN DC Supply	24V
FAN Current	0.15A

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

### Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2

### Outline Drawing

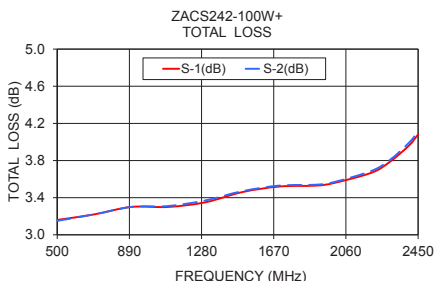


### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K
3.19	4.18	4.09	3.36	2.00	--	--	--	--	--
81.03	106.17	103.89	85.34	50.80	--	--	--	--	--
L	M	N	P	Q	R	S	T	wt	
--	1.00	.50	.34	1.00	.13	.58	.94	grams*	
--	25.40	12.70	8.64	25.40	3.30	14.73	23.88	710.0	

\*190 grams without heatsink

### Electrical Schematic



### Features

- high power, up to 100W as splitter
- high power, up to 40W as combiner
- low insertion loss, 0.8 dB typ.
- high isolation, 22 dB typ.
- excellent VSWR, 1.20 typ.

### Applications

- PCS
- UMTS
- DCS
- GPS
- GSM
- WCDMA
- communication transmitters & receivers
- L-Band



Model No.	ZACS242-100W+	▲ZACS242-100WX+
Case Style	CP1829	
Connectors	SMA	

### +RoHS Compliant

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

### Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		500		2450	MHz
<b>Insertion Loss Above 3.0 dB</b>	500-2450	—	0.8	1.3	dB
<b>Isolation</b>	500-2450	17	22	—	dB
<b>Phase Unbalance</b>	500-2450	—	2.0	6.0	Degree
<b>Amplitude Unbalance</b>	500-2450	—	0.1	0.3	dB
<b>VSWR (Port S)</b>	500-2450	—	1.3	—	:1
<b>VSWR (Port 1-2)</b>	500-2450	—	1.2	—	:1
<b>Power Input<sup>1</sup></b>	<b>as combiner<sup>2</sup></b>	500-2450	—	40	W
	<b>as splitter</b>	500-2450	—	100	W

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 20W.

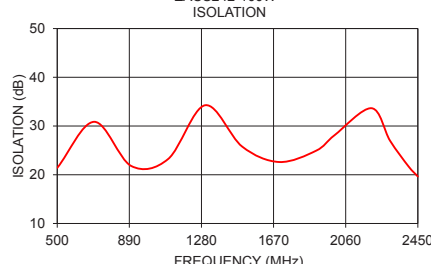
▲Heat sink and fan not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 55°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 1.3°C/W max.

### Typical Performance Data

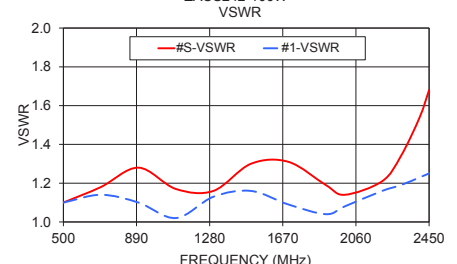
Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
500.00	3.16	3.15	0.01	21.40	0.07	1.10	1.10	1.11
700.00	3.22	3.22	0.00	30.86	0.16	1.18	1.14	1.15
900.00	3.30	3.30	0.00	21.80	0.26	1.28	1.10	1.10
1100.00	3.30	3.31	0.01	23.23	0.35	1.17	1.02	1.03
1300.00	3.35	3.37	0.02	34.26	0.37	1.16	1.13	1.15
1500.00	3.46	3.47	0.02	25.78	0.37	1.30	1.16	1.16
1700.00	3.52	3.53	0.01	22.61	0.41	1.31	1.09	1.07
1900.00	3.53	3.54	0.01	24.93	0.51	1.19	1.04	1.06
2000.00	3.56	3.57	0.01	28.12	0.60	1.14	1.08	1.11
2200.00	3.67	3.69	0.02	33.65	0.73	1.21	1.16	1.18
2300.00	3.79	3.81	0.02	26.97	0.75	1.34	1.19	1.21
2400.00	3.96	3.99	0.03	21.70	0.78	1.54	1.23	1.24
2450.00	4.08	4.11	0.03	19.65	0.78	1.68	1.25	1.25

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

ZACS242-100W+ ISOLATION



ZACS242-100W+ VSWR



### 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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](http://www.minicircuits.com/MCLStore/terms.jsp)

