

Coaxial

# Power Splitter/Combiner

2 Way-0° 50Ω 10 to 2500 MHz

ZFSC-2-2500-S+



CASE STYLE: K18

Connectors Model  
**SMA** ZFSC-2-2500-S+  
**BRACKET (OPTION "B")**

**+RoHS Compliant**

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

## Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

## Coaxial Connections

SUM PORT	3
PORT 1	1
PORT 2	2

## Features

- very wideband, 10 to 2500 MHz
- low insertion loss, 0.4 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 1.0 deg. typ.
- rugged shielded case

## Applications

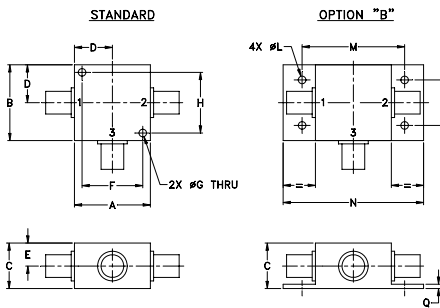
- cellular
- GPS
- PCS/DCS
- ISM
- satellite distribution

## Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 3.0 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
f <sub>L</sub> -f <sub>U</sub>	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
10-2500	16	11	17	14	17	14	0.5	0.8	0.6	1.4	0.8	1.5	1	4	8	0.2	0.3	0.4

L = low range [f<sub>L</sub> to 10 f<sub>L</sub>] M = mid range [10 f<sub>L</sub> to f<sub>U</sub>/2] U = upper range [f<sub>U</sub>/2 to f<sub>U</sub>]

## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40

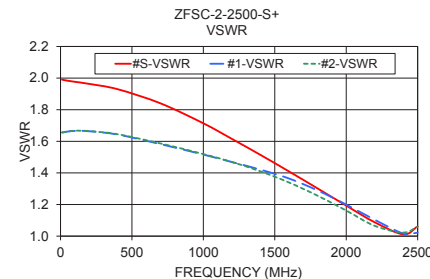
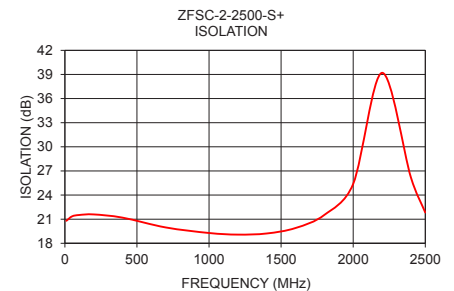
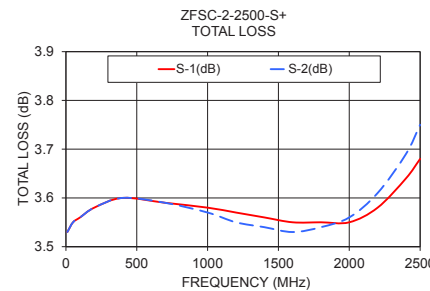
  

J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

## 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						
10.00	3.53	3.53	0.00	20.79	0.01	1.99	1.66	1.66
50.00	3.55	3.55	0.00	21.35	0.02	1.98	1.66	1.66
100.00	3.56	3.56	0.00	21.52	0.04	1.98	1.67	1.67
200.00	3.58	3.58	0.00	21.59	0.06	1.96	1.66	1.66
400.00	3.60	3.60	0.00	21.19	0.11	1.93	1.64	1.64
700.00	3.59	3.59	0.00	19.97	0.19	1.84	1.58	1.59
1000.00	3.58	3.57	0.01	19.28	0.30	1.71	1.52	1.52
1200.00	3.57	3.55	0.01	19.08	0.40	1.62	1.47	1.47
1400.00	3.56	3.54	0.01	19.22	0.54	1.51	1.42	1.41
1600.00	3.55	3.53	0.02	19.90	0.70	1.41	1.36	1.34
1800.00	3.55	3.54	0.01	21.53	0.87	1.30	1.29	1.26
2000.00	3.55	3.56	0.01	25.39	1.06	1.19	1.20	1.16
2200.00	3.58	3.61	0.03	39.20	1.20	1.09	1.10	1.07
2400.00	3.64	3.69	0.05	26.21	1.19	1.01	1.02	1.02

1. Total Loss = Insertion Loss + 3dB 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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# 2 Way-0° Power Splitter/Combiner

# ZFSC-2-2500+

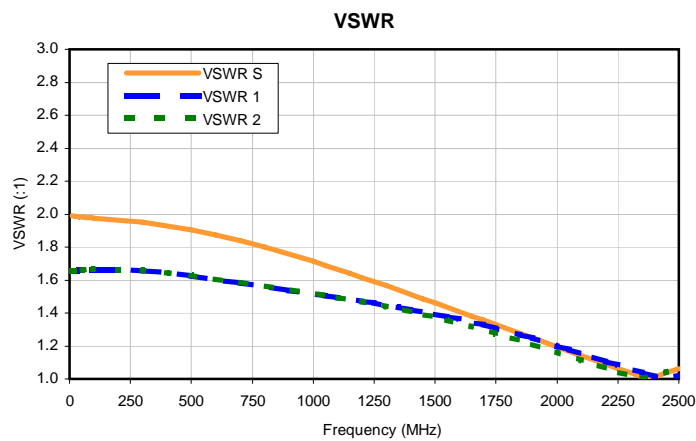
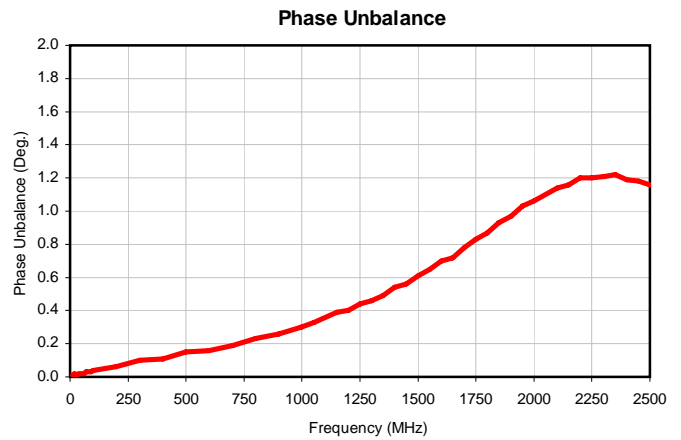
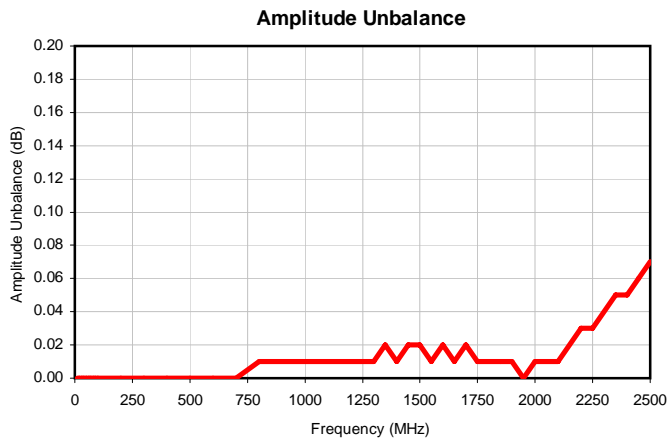
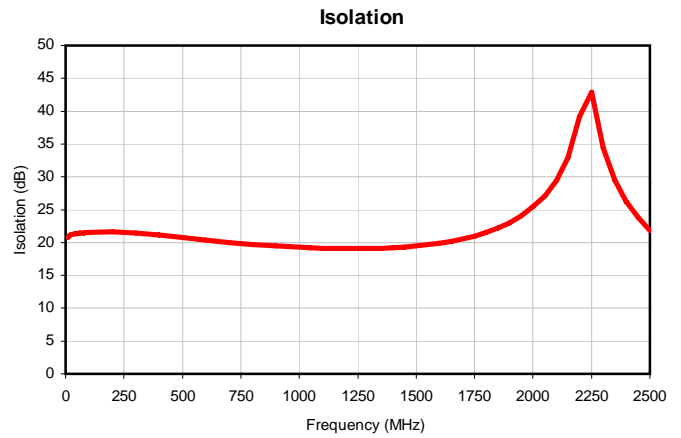
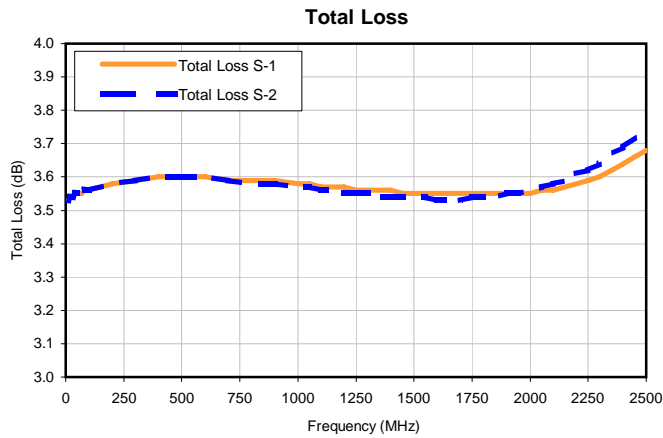
## Typical Performance Data

FREQ. (MHz)	TOTAL LOSS <sup>1</sup>		AMP. UNBAL. (dB)	ISOLATION (dB) 1-2	PHASE UNBAL. (Deg.)	FREQ. (MHz)	VSWR (:1)		
	(dB)						S	1	2
	S-1	S-2							
10.0	3.53	3.53	0.00	20.79	0.01	10.0	1.99	1.66	1.66
20.0	3.54	3.54	0.00	21.16	0.02	20.0	1.99	1.66	1.66
30.0	3.54	3.54	0.00	21.24	0.01	30.0	1.99	1.66	1.66
40.0	3.55	3.55	0.00	21.32	0.02	40.0	1.98	1.66	1.66
50.0	3.55	3.55	0.00	21.35	0.02	50.0	1.98	1.66	1.66
60.0	3.55	3.55	0.00	21.40	0.02	60.0	1.98	1.66	1.66
70.0	3.55	3.55	0.00	21.44	0.03	70.0	1.98	1.66	1.66
80.0	3.56	3.56	0.00	21.48	0.03	80.0	1.98	1.66	1.66
90.0	3.56	3.56	0.00	21.50	0.03	90.0	1.98	1.67	1.67
100.0	3.56	3.56	0.00	21.52	0.04	100.0	1.98	1.67	1.67
200.0	3.58	3.58	0.00	21.59	0.06	200.0	1.96	1.66	1.66
300.0	3.59	3.59	0.00	21.48	0.10	300.0	1.95	1.66	1.66
400.0	3.60	3.60	0.00	21.19	0.11	400.0	1.93	1.64	1.64
500.0	3.60	3.60	0.00	20.78	0.15	500.0	1.90	1.62	1.63
600.0	3.60	3.60	0.00	20.35	0.16	600.0	1.87	1.60	1.61
700.0	3.59	3.59	0.00	19.97	0.19	700.0	1.84	1.58	1.59
800.0	3.59	3.58	0.01	19.69	0.23	800.0	1.80	1.56	1.56
900.0	3.59	3.58	0.01	19.46	0.26	900.0	1.76	1.54	1.54
1000.0	3.58	3.57	0.01	19.28	0.30	1000.0	1.71	1.52	1.52
1050.0	3.58	3.57	0.01	19.21	0.33	1050.0	1.69	1.51	1.51
1100.0	3.57	3.56	0.01	19.14	0.36	1100.0	1.66	1.49	1.49
1150.0	3.57	3.56	0.01	19.11	0.39	1150.0	1.64	1.48	1.48
1200.0	3.57	3.55	0.01	19.08	0.40	1200.0	1.62	1.47	1.47
1250.0	3.56	3.55	0.01	19.08	0.44	1250.0	1.59	1.46	1.46
1300.0	3.56	3.55	0.01	19.10	0.46	1300.0	1.57	1.44	1.44
1350.0	3.56	3.54	0.02	19.12	0.49	1350.0	1.54	1.44	1.43
1400.0	3.56	3.54	0.01	19.22	0.54	1400.0	1.51	1.42	1.41
1450.0	3.55	3.54	0.02	19.32	0.56	1450.0	1.49	1.41	1.39
1500.0	3.55	3.54	0.02	19.48	0.61	1500.0	1.46	1.39	1.38
1550.0	3.55	3.54	0.01	19.66	0.65	1550.0	1.43	1.38	1.36
1600.0	3.55	3.53	0.02	19.90	0.70	1600.0	1.41	1.36	1.34
1650.0	3.55	3.53	0.01	20.18	0.72	1650.0	1.38	1.34	1.32
1700.0	3.55	3.53	0.02	20.55	0.78	1700.0	1.36	1.33	1.30
1750.0	3.55	3.54	0.01	20.98	0.83	1750.0	1.33	1.31	1.28
1800.0	3.55	3.54	0.01	21.53	0.87	1800.0	1.30	1.29	1.26
1850.0	3.55	3.54	0.01	22.20	0.93	1850.0	1.28	1.27	1.23
1900.0	3.55	3.55	0.01	23.02	0.97	1900.0	1.25	1.25	1.21
1950.0	3.55	3.55	0.00	24.05	1.03	1950.0	1.22	1.22	1.19
2000.0	3.55	3.56	0.01	25.39	1.06	2000.0	1.19	1.20	1.16
2050.0	3.56	3.57	0.01	27.08	1.10	2050.0	1.17	1.18	1.14
2100.0	3.56	3.58	0.01	29.40	1.14	2100.0	1.14	1.15	1.11
2150.0	3.57	3.59	0.02	32.99	1.16	2150.0	1.11	1.13	1.09
2200.0	3.58	3.61	0.03	39.20	1.20	2200.0	1.09	1.10	1.07
2250.0	3.59	3.62	0.03	42.92	1.20	2250.0	1.06	1.08	1.04
2300.0	3.60	3.64	0.04	34.36	1.21	2300.0	1.04	1.06	1.02
2350.0	3.62	3.67	0.05	29.55	1.22	2350.0	1.01	1.04	1.00
2400.0	3.64	3.69	0.05	26.21	1.19	2400.0	1.01	1.02	1.02
2450.0	3.66	3.72	0.06	23.82	1.18	2450.0	1.04	1.01	1.04
2500.0	3.68	3.75	0.07	21.83	1.16	2500.0	1.06	1.02	1.06

<sup>1</sup>Total Loss = Insertion Loss + 3dB Splitter Loss



## Typical Performance Curves

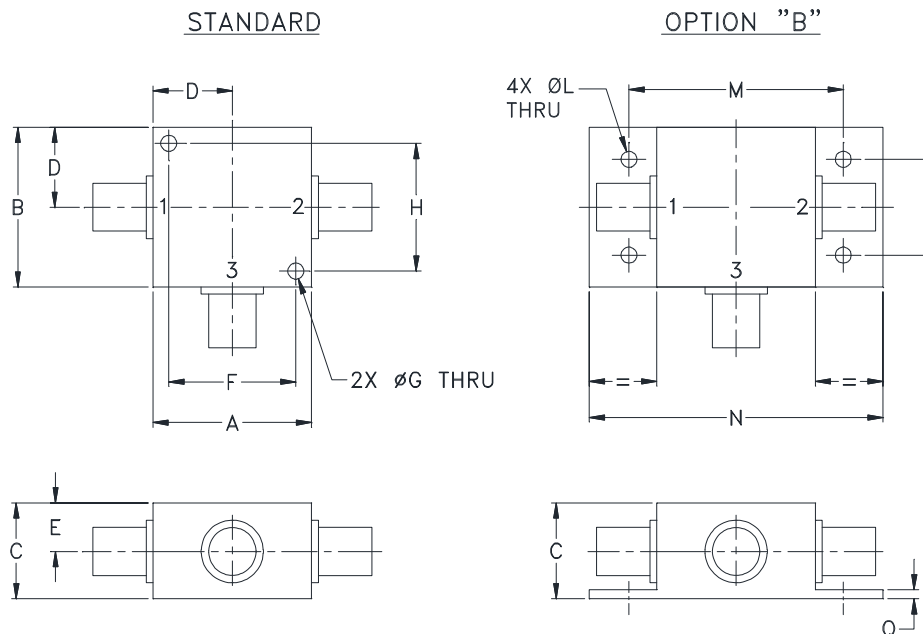


# Case Style

# K

## K18

### Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
K18	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.00)	.38 (9.65)	1.000 (25.40)	.125 (3.18)	1.000 (25.40)	--	--	.125 (3.18)	1.688 (42.88)	2.18 (55.37)

CASE#	P	Q	WT. GRAMS
K18	.75 (19.05)	.07 (1.78)	70.0

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

#### Notes:

- Case material: Aluminum alloy.
- Case finish:  
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Mounting bracket available on request. Add suffix B to part number.
- For port marking 1, 2, and 3 see specifications data sheet.
- For bracket version, option B, dimension "C" changes from .75 to .94 inches when connectors are type N.
- Refer to the individual model data sheet for the type of connectors available.

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<b>Specification</b>	<b>Test/Inspection Condition</b>	<b>Reference/Spec</b>
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I