

Coaxial

Power Splitter/Combiner

2 Way-0° 50Ω 10 to 2000 MHz

ZFSC-2-11+



Generic photo used for illustration purposes only
CASE STYLE: K18

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

SUMPORT	3
PORT 1	1
PORT 2	2

Features

- very wideband, 10 to 2000 MHz
- low insertion loss, 0.6 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 1 deg. typ.
- rugged shielded case

Applications

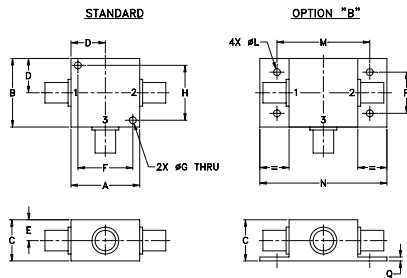
- cellular
- GPS
- satellite distribution

Connectors	Model
BNC	ZFSC-2-11+
SMA	ZFSC-2-11-S+
N-TYPE	ZFSC-2-11-N+
BRACKET (OPTION "B")	

+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	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

For option B with N-type connectors, dimension "C" increases to 0.94 inches.

Electrical Specifications

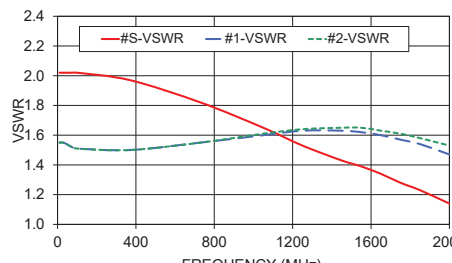
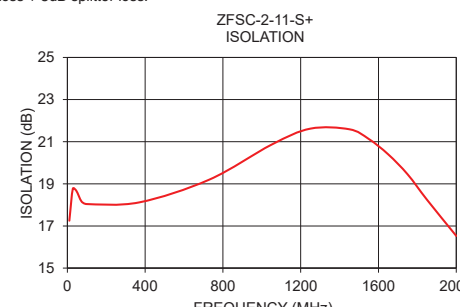
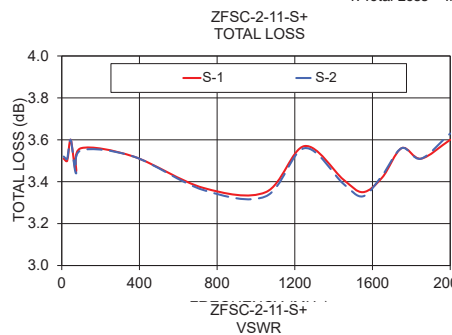
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L		M		U	
f_L - f_U	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
10-2000	14	10	16	14	20	15	0.6	1.5	0.5	1.5	0.6	2.0	1	2	4	0.20	0.30	0.50

L = low range [f_L to $10 f_L$] M = mid range [$10 f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

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						
10.00	3.51	3.52	0.00	17.25	0.02	2.02	1.55	1.55
28.00	3.50	3.51	0.00	18.77	0.02	2.02	1.55	1.55
46.00	3.60	3.60	0.00	18.67	0.01	2.02	1.54	1.54
73.00	3.45	3.44	0.00	18.16	0.01	2.02	1.52	1.52
100.00	3.56	3.55	0.00	18.04	0.02	2.02	1.51	1.51
370.00	3.52	3.52	0.00	18.12	0.00	1.97	1.50	1.50
730.00	3.37	3.36	0.01	19.20	0.10	1.82	1.55	1.55
1050.00	3.35	3.33	0.02	20.86	0.14	1.65	1.60	1.61
1250.00	3.57	3.56	0.01	21.62	0.17	1.53	1.63	1.64
1450.00	3.41	3.39	0.01	21.59	0.20	1.43	1.63	1.65
1550.00	3.35	3.33	0.01	21.13	0.10	1.39	1.62	1.65
1650.00	3.42	3.43	0.00	20.40	0.12	1.34	1.60	1.63
1750.00	3.56	3.56	0.01	19.45	0.06	1.28	1.57	1.61
1850.00	3.51	3.51	0.00	18.24	0.03	1.23	1.54	1.58
2000.00	3.60	3.63	0.02	16.53	0.19	1.14	1.47	1.53

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



electrical schematic



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.
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2 Way-0° Power Splitter/Combiner

ZFSC-2-11+

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB) 1-2	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
10.0	3.51	3.52	0.00	17.25	0.02	10.0	2.02	1.55	1.55
19.0	3.47	3.47	0.00	18.56	0.02	19.0	2.02	1.56	1.55
28.0	3.50	3.51	0.00	18.77	0.02	28.0	2.02	1.55	1.55
37.0	3.56	3.56	0.00	18.76	0.02	37.0	2.02	1.55	1.55
46.0	3.60	3.60	0.00	18.67	0.01	46.0	2.02	1.54	1.54
55.0	3.58	3.57	0.01	18.50	0.01	55.0	2.02	1.53	1.53
64.0	3.50	3.50	0.00	18.32	0.01	64.0	2.02	1.53	1.53
73.0	3.45	3.44	0.00	18.16	0.01	73.0	2.02	1.52	1.52
82.0	3.45	3.45	0.00	18.10	0.01	82.0	2.02	1.52	1.51
91.0	3.50	3.51	0.00	18.08	0.05	91.0	2.02	1.51	1.51
100.0	3.56	3.55	0.00	18.04	0.02	100.0	2.02	1.51	1.51
190.0	3.53	3.53	0.00	17.80	0.01	190.0	2.00	1.49	1.49
280.0	3.53	3.53	0.00	17.91	0.03	280.0	1.99	1.49	1.49
370.0	3.52	3.52	0.00	18.12	0.00	370.0	1.97	1.50	1.50
460.0	3.56	3.55	0.01	18.42	0.00	460.0	1.94	1.51	1.51
550.0	3.47	3.47	0.01	18.66	0.02	550.0	1.91	1.52	1.53
640.0	3.41	3.40	0.01	18.91	0.04	640.0	1.87	1.54	1.54
730.0	3.37	3.36	0.01	19.20	0.10	730.0	1.82	1.55	1.55
820.0	3.47	3.45	0.02	19.62	0.11	820.0	1.78	1.57	1.57
910.0	3.51	3.51	0.01	20.06	0.16	910.0	1.73	1.58	1.59
1000.0	3.50	3.49	0.02	20.54	0.14	1000.0	1.68	1.59	1.60
1050.0	3.35	3.33	0.02	20.86	0.14	1050.0	1.65	1.60	1.61
1100.0	3.50	3.49	0.01	21.09	0.12	1100.0	1.62	1.61	1.62
1150.0	3.42	3.40	0.02	21.22	0.13	1150.0	1.59	1.62	1.63
1200.0	3.35	3.33	0.02	21.47	0.17	1200.0	1.56	1.63	1.64
1250.0	3.57	3.56	0.01	21.62	0.17	1250.0	1.53	1.63	1.64
1300.0	3.27	3.25	0.02	21.73	0.12	1300.0	1.51	1.63	1.65
1350.0	3.54	3.53	0.01	21.74	0.16	1350.0	1.48	1.63	1.65
1400.0	3.36	3.36	0.00	21.83	0.10	1400.0	1.46	1.63	1.65
1450.0	3.41	3.39	0.01	21.59	0.20	1450.0	1.43	1.63	1.65
1500.0	3.53	3.52	0.00	21.68	0.11	1500.0	1.41	1.62	1.65
1550.0	3.35	3.33	0.01	21.13	0.10	1550.0	1.39	1.62	1.65
1600.0	3.50	3.51	0.01	21.08	0.09	1600.0	1.36	1.61	1.64
1650.0	3.42	3.43	0.00	20.40	0.12	1650.0	1.34	1.60	1.63
1700.0	3.43	3.43	0.00	20.15	0.03	1700.0	1.31	1.59	1.62
1750.0	3.56	3.56	0.01	19.45	0.06	1750.0	1.28	1.57	1.61
1800.0	3.43	3.43	0.00	19.02	0.00	1800.0	1.26	1.56	1.60
1850.0	3.51	3.51	0.00	18.24	0.03	1850.0	1.23	1.54	1.58
1900.0	3.51	3.51	0.01	17.77	0.09	1900.0	1.20	1.52	1.56
1950.0	3.44	3.44	0.01	16.99	0.11	1950.0	1.17	1.50	1.54
2000.0	3.60	3.63	0.02	16.53	0.19	2000.0	1.14	1.47	1.53

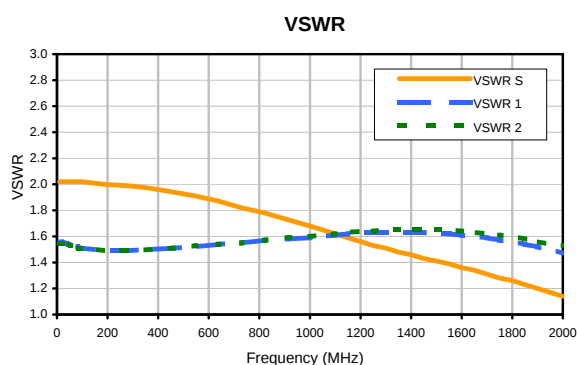
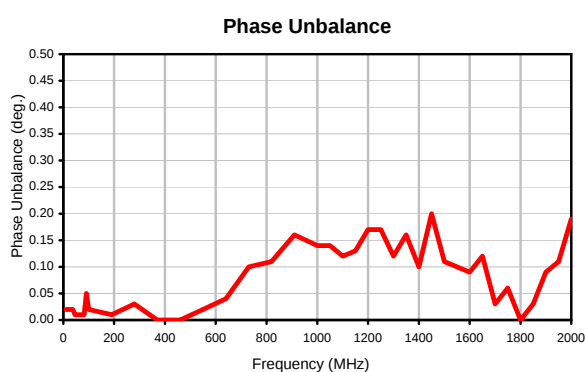
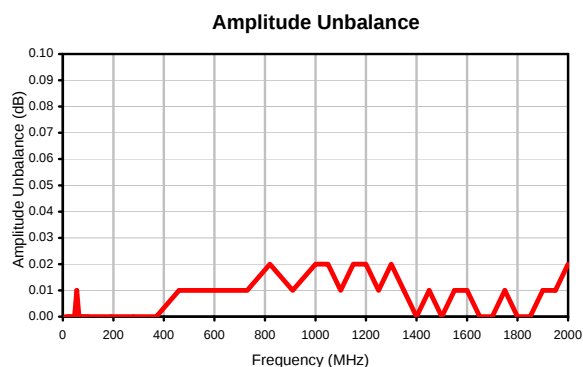
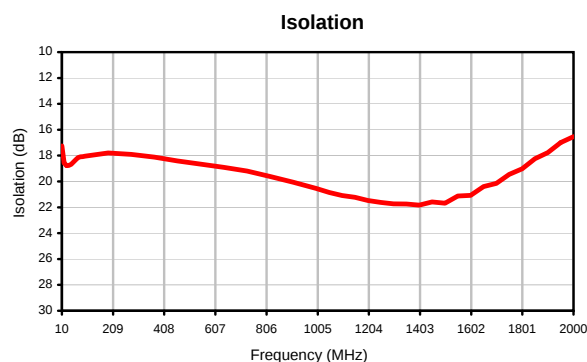
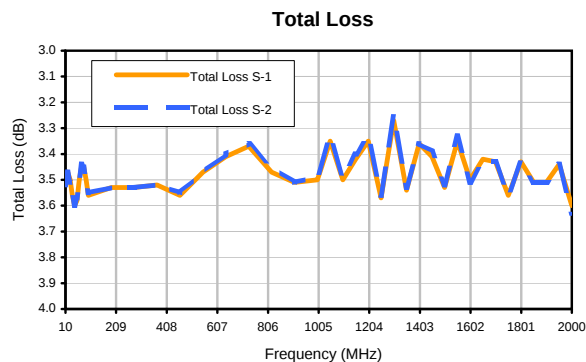
¹ Total Loss = Insertion Loss+ 3dB Splitter Loss

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2 Way-0° Power Splitter/Combiner

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Typical Performance Curves



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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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Specification	Test/Inspection Condition	Reference/Spec
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