

Coaxial Power Splitter/Combiner

ZFSCJ-2-3+ ZFSCJ-2-3



Generic photo used for illustration purposes only

CASE STYLE: K18

Connectors	Model
BNC	ZFSCJ-2-3
SMA	ZFSCJ-2-3-S+
N-TYPE	ZFSCJ-2-3-N
BRACKET (OPTION "B")	

+RoHS Compliant

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

2 Way-180° 50Ω 5 to 300 MHz

Maximum Ratings

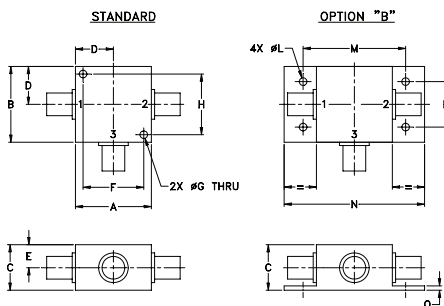
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

Coaxial Connections

SUM PORT	3
PORT 1	1
PORT 2	2

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 bracket version, Option B dimension "C" changes from 0.75 to 0.94 inch when connectors are Type N.

Features

- low insertion loss, 1.0 dB typ.
- high isolation, 33 dB typ.
- rugged shielded case

Applications

- VHF
- signal processing

Electrical Specifications

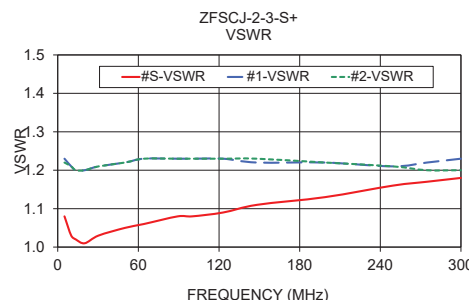
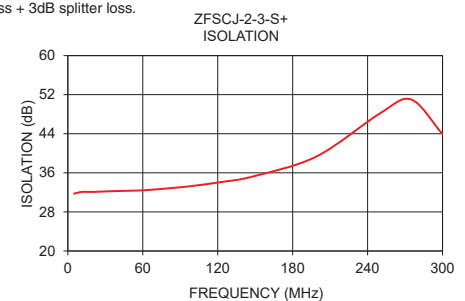
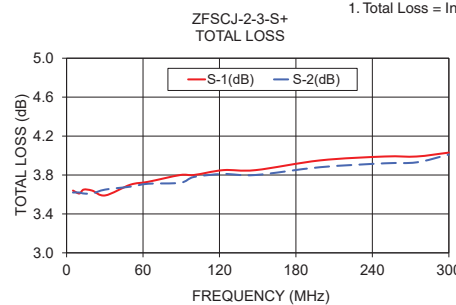
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
f_L - f_U																		
5-300	30	20	33	25	30	18	1.0	1.5	1.0	1.5	1.0	1.5	2	4	6	0.15	0.2	0.5

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						
5.00	3.64	3.62	0.02	31.73	179.50	1.08	1.23	1.22
10.00	3.61	3.62	0.01	32.06	179.50	1.03	1.21	1.21
13.40	3.65	3.61	0.04	32.11	179.40	1.02	1.20	1.20
20.00	3.64	3.61	0.03	32.09	179.40	1.01	1.20	1.20
30.30	3.59	3.65	0.06	32.20	179.30	1.03	1.21	1.21
50.00	3.70	3.68	0.02	32.34	179.10	1.05	1.22	1.22
64.00	3.73	3.71	0.02	32.48	179.00	1.06	1.23	1.23
89.30	3.80	3.72	0.08	33.03	178.80	1.08	1.23	1.23
100.00	3.80	3.78	0.02	33.32	178.70	1.08	1.23	1.23
123.00	3.85	3.81	0.04	34.12	178.60	1.09	1.23	1.23
148.30	3.85	3.80	0.05	35.26	178.40	1.11	1.22	1.23
198.90	3.95	3.88	0.07	39.32	178.10	1.13	1.22	1.22
249.40	3.99	3.92	0.07	48.08	177.80	1.16	1.21	1.21
274.70	3.99	3.93	0.06	51.04	177.70	1.17	1.22	1.20
300.00	4.03	4.01	0.02	43.94	177.50	1.18	1.23	1.20

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.
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REV. C
M151107
ZFSCJ-2-3
HY/TD/CP/AM
151020

2 Way-180° Power Splitter/Combiner

ZFSCJ-2-3+

Typical Performance Data

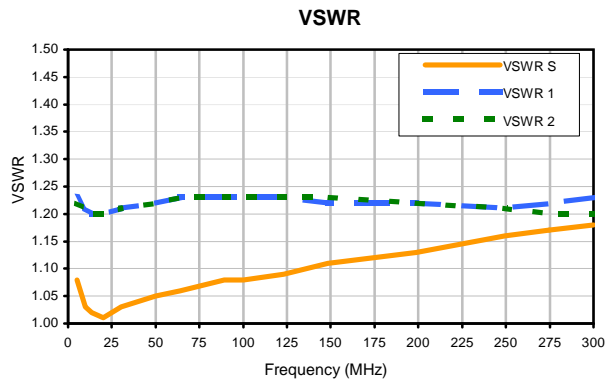
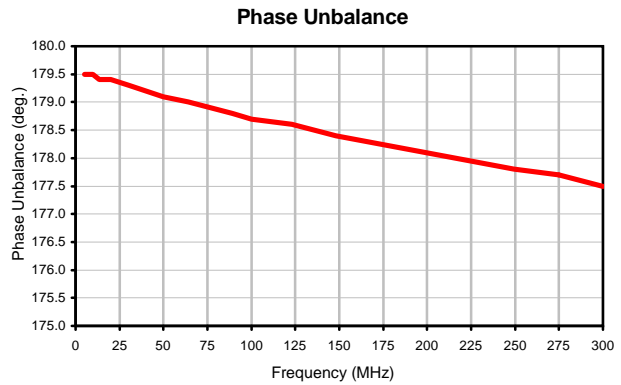
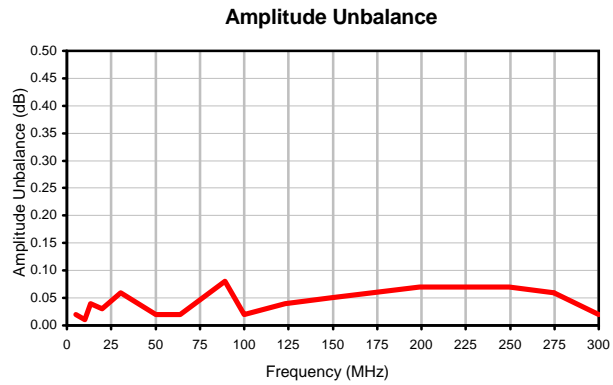
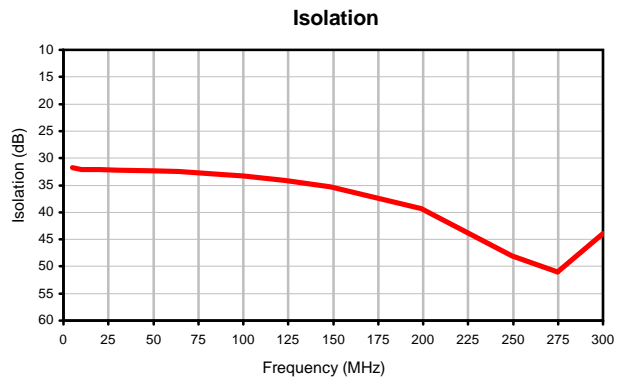
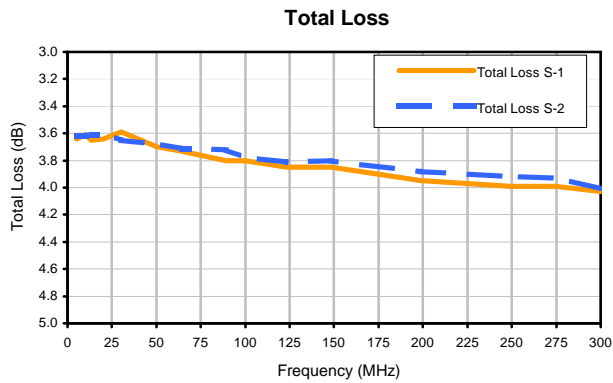
FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
5.0	3.64	3.62	0.02	31.73	179.50	5.0	1.08	1.23	1.22
10.0	3.61	3.62	0.01	32.06	179.50	10.0	1.03	1.21	1.21
13.4	3.65	3.61	0.04	32.11	179.40	13.4	1.02	1.20	1.20
20.0	3.64	3.61	0.03	32.09	179.40	20.0	1.01	1.20	1.20
30.3	3.59	3.65	0.06	32.20	179.30	30.3	1.03	1.21	1.21
50.0	3.70	3.68	0.02	32.34	179.10	50.0	1.05	1.22	1.22
64.0	3.73	3.71	0.02	32.48	179.00	64.0	1.06	1.23	1.23
89.3	3.80	3.72	0.08	33.03	178.80	89.3	1.08	1.23	1.23
100.0	3.80	3.78	0.02	33.32	178.70	100.0	1.08	1.23	1.23
123.0	3.85	3.81	0.04	34.12	178.60	123.0	1.09	1.23	1.23
148.3	3.85	3.80	0.05	35.26	178.40	148.3	1.11	1.22	1.23
198.9	3.95	3.88	0.07	39.32	178.10	198.9	1.13	1.22	1.22
249.4	3.99	3.92	0.07	48.08	177.80	249.4	1.16	1.21	1.21
274.7	3.99	3.93	0.06	51.04	177.70	274.7	1.17	1.22	1.20
300.0	4.03	4.01	0.02	43.94	177.50	300.0	1.18	1.23	1.20

¹ Total Loss = Insertion Loss+ 3dB Splitter Loss

2 Way-180° Power Splitter/Combiner

ZFSCJ-2-3+

Typical Performance Curves



REV. X2
ZFSCJ-2-3+
100627
Page 1 of 1



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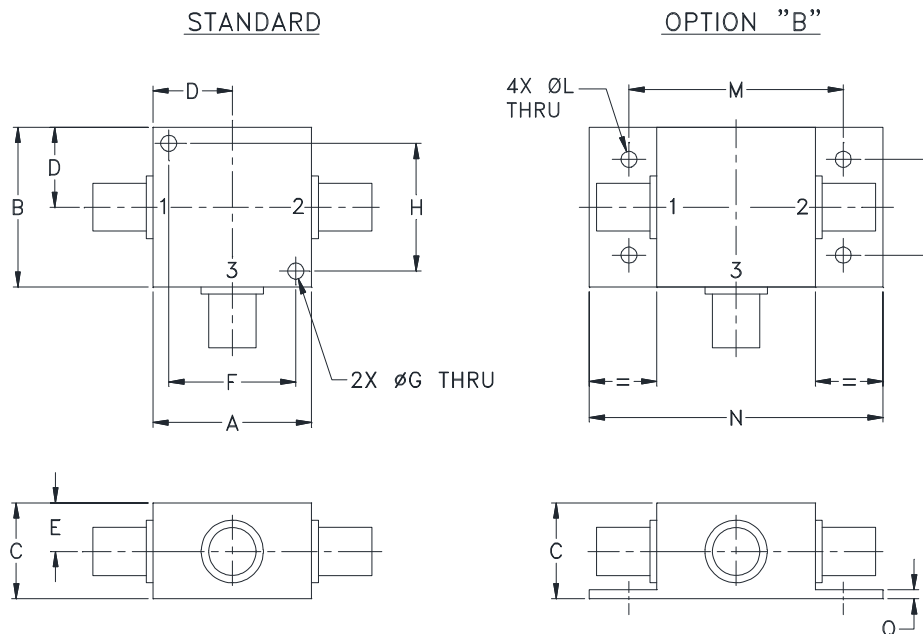


Case Style

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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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