

Non-Catalog Model

Power Splitter/Combiner

ZB3CS-640-6W

3 Way-0°

Important Note

This is a non-catalog model and can be manufactured on specific request.
Pricing and delivery information can be supplied upon request.



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CASE STYLE : Z667

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		424		640 MHz
Isolation	424 - 640 MHz	20	27	dB
Insertion Loss Above 4.8 dB	424 - 640 MHz		0.20	0.70 dB
Phase Unbalance	424 - 640 MHz		2.055	5.000 deg.
Amplitude Unbalance	424 - 640 MHz		0.084	0.300 dB
VSWR	SUM Port		1.16	(:1)
	OUT Ports		1.11	(:1)

Notes: Full power rating over -55°C to +55°C. Derate linearly to 20% of rating at 90°C.

As a combiner of noncoherent signals, max. power per port is power rating divided by number of ports.

MAXIMUM RATINGS	
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS	
SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3

Functional Diagram



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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-3		1-2	1-3	2-3			S	1	2	3
424.0	4.97	5.06	5.05	0.08	28.08	29.56	25.23	1.65	424.0	1.22	1.12	1.03	1.16
430.0	4.96	5.04	5.04	0.07	27.78	29.74	25.08	1.70	430.0	1.21	1.11	1.04	1.16
435.0	4.98	5.06	5.05	0.08	27.54	29.82	24.91	1.63	435.0	1.20	1.09	1.05	1.15
440.0	4.97	5.06	5.05	0.09	27.30	29.85	24.79	1.61	440.0	1.19	1.08	1.05	1.13
445.0	4.97	5.06	5.06	0.09	27.04	29.77	24.66	1.77	445.0	1.18	1.08	1.04	1.12
450.0	4.98	5.05	5.06	0.08	26.80	29.70	24.51	1.75	450.0	1.19	1.08	1.05	1.11
455.0	4.98	5.05	5.06	0.08	26.58	29.52	24.36	1.83	455.0	1.19	1.08	1.06	1.11
460.0	4.98	5.06	5.06	0.08	26.38	29.33	24.27	1.91	460.0	1.19	1.07	1.07	1.11
465.0	4.98	5.05	5.06	0.08	26.16	29.12	24.18	1.79	465.0	1.19	1.06	1.07	1.10
470.0	4.97	5.05	5.06	0.09	26.00	28.95	24.10	1.84	470.0	1.19	1.05	1.08	1.10
475.0	4.96	5.05	5.06	0.10	25.86	28.81	24.04	1.86	475.0	1.19	1.04	1.08	1.09
480.0	4.98	5.05	5.06	0.08	25.78	28.58	23.98	1.93	480.0	1.19	1.03	1.08	1.07
490.0	5.00	5.06	5.08	0.08	25.62	28.32	23.92	1.86	490.0	1.20	1.02	1.10	1.05
500.0	5.00	5.07	5.08	0.07	25.62	28.11	23.95	1.95	500.0	1.20	1.02	1.12	1.06
505.0	5.00	5.07	5.08	0.08	25.63	28.03	24.00	2.02	505.0	1.20	1.02	1.12	1.06
510.0	5.01	5.06	5.08	0.07	25.68	27.91	24.02	1.94	510.0	1.20	1.03	1.12	1.06
515.0	5.01	5.05	5.08	0.07	25.74	27.88	24.05	1.92	515.0	1.20	1.03	1.12	1.06
520.0	5.01	5.06	5.08	0.07	25.76	27.81	24.11	1.96	520.0	1.21	1.03	1.12	1.05
525.0	5.01	5.06	5.08	0.07	25.84	27.76	24.16	2.05	525.0	1.21	1.03	1.13	1.05
530.0	5.01	5.06	5.08	0.07	25.94	27.70	24.25	1.98	530.0	1.21	1.04	1.14	1.05
535.0	5.02	5.07	5.09	0.07	26.08	27.72	24.36	2.03	535.0	1.21	1.05	1.14	1.06
540.0	5.02	5.06	5.10	0.08	26.25	27.68	24.49	2.06	540.0	1.20	1.06	1.14	1.07
550.0	5.03	5.05	5.10	0.07	26.70	27.91	24.79	2.08	550.0	1.19	1.08	1.14	1.09
555.0	5.02	5.05	5.10	0.08	26.98	28.02	25.00	2.09	555.0	1.19	1.09	1.15	1.09
560.0	5.02	5.05	5.09	0.07	27.34	28.23	25.23	2.20	560.0	1.18	1.10	1.15	1.10
565.0	5.00	5.04	5.10	0.10	27.79	28.50	25.49	2.07	565.0	1.18	1.10	1.16	1.10
570.0	5.02	5.04	5.11	0.08	28.22	28.84	25.72	2.11	570.0	1.17	1.11	1.16	1.10
575.0	5.03	5.05	5.11	0.08	28.73	29.15	25.98	2.17	575.0	1.17	1.12	1.16	1.11
580.0	5.03	5.03	5.10	0.08	29.30	29.46	26.17	2.22	580.0	1.16	1.12	1.16	1.12
585.0	5.02	5.04	5.10	0.08	29.92	29.88	26.35	2.22	585.0	1.15	1.13	1.15	1.13
590.0	5.01	5.03	5.09	0.08	30.45	30.35	26.51	2.21	590.0	1.14	1.14	1.15	1.14
595.0	5.02	5.02	5.11	0.08	31.12	30.79	26.64	2.32	595.0	1.12	1.15	1.16	1.14
600.0	5.01	5.02	5.11	0.09	31.71	31.24	26.69	2.32	600.0	1.11	1.15	1.16	1.14
610.0	5.02	5.01	5.11	0.10	32.95	32.32	26.75	2.38	610.0	1.08	1.15	1.15	1.13
615.0	5.02	5.01	5.12	0.11	33.53	32.93	26.76	2.39	615.0	1.07	1.16	1.14	1.14
620.0	5.02	5.00	5.11	0.11	33.96	33.61	26.74	2.50	620.0	1.06	1.17	1.14	1.15
625.0	5.02	5.01	5.11	0.10	34.36	34.58	26.63	2.46	625.0	1.05	1.18	1.14	1.16
630.0	5.03	5.00	5.11	0.10	34.33	35.35	26.49	2.47	630.0	1.04	1.19	1.15	1.17
635.0	5.03	5.00	5.11	0.11	33.98	36.43	26.28	2.46	635.0	1.02	1.20	1.15	1.17
640.0	5.03	5.00	5.12	0.12	33.42	37.51	26.04	2.48	640.0	1.01	1.20	1.15	1.17

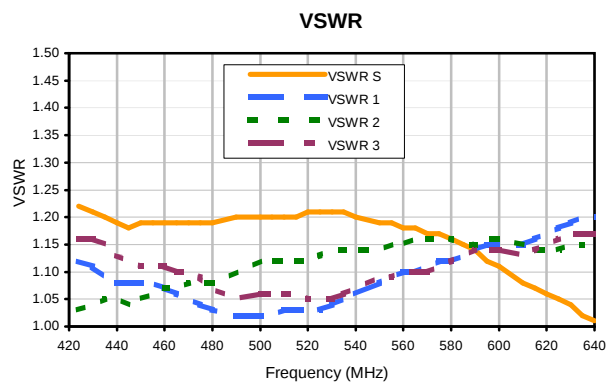
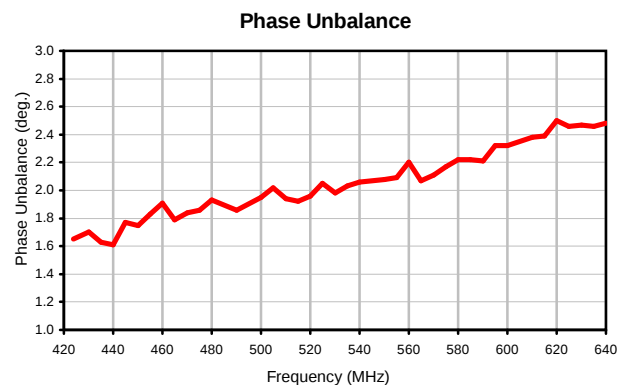
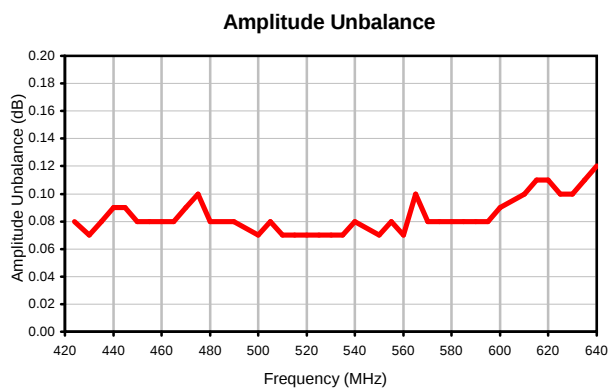
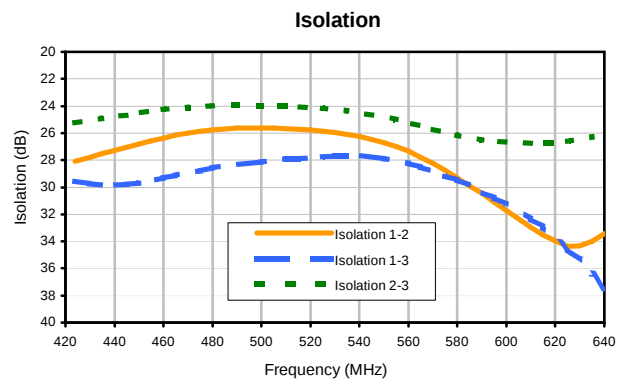
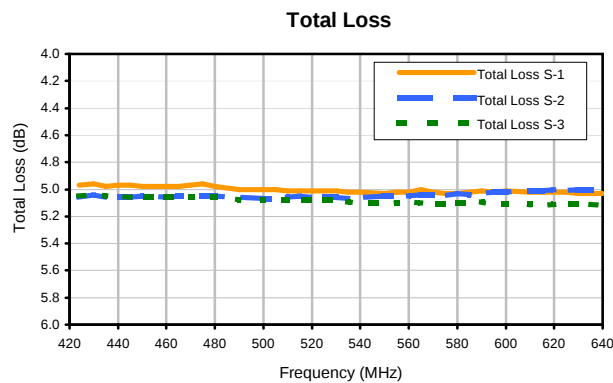
¹ Total Loss = Insertion Loss+ 4.8dB Splitter Loss

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Typical Performance Curves



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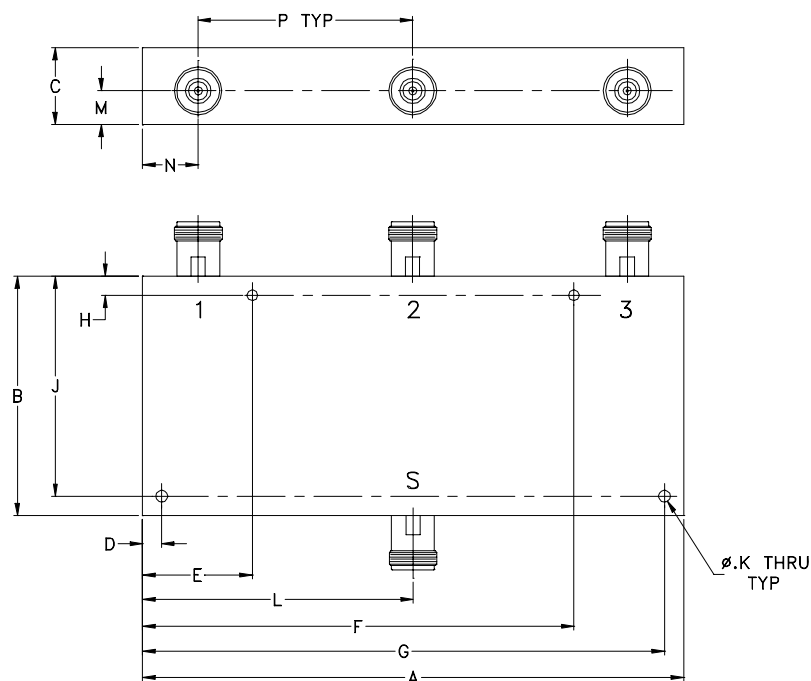
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Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
Z667	7.06 (179.32)	3.13 (79.50)	1.00 (25.40)	.250 (6.35)	1.430 (36.32)	5.630 (143.00)	6.810 (172.97)	.250 (6.35)	2.875 (73.03)	.156 (3.96)	3.53 (89.66)	.44 (11.18)	.73 (18.54)

CASE#	P	WT.GRAMS
Z667	2.80 (71.12)	810

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

Notes:

1. Case material: Aluminum alloy.

1. Case finish:

For RoHS Case Styles:

Clear chemical conversion coating, non-chrome or trivalent chrome based.



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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 85°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