Engineering Development Model

Power Splitter/Combiner ZCSC-ED12715/1

8 Way-0°

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : UU215

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		0.3		1600	MHz
Isolation	**0.3 - 3 MHz**		52		dB
	3 - 800 MHz		54		dB
	800 - 1600 MHz		48		dB
Insertion Loss Above 9.0 dB	**0.3 - 3 MHz**		10.93		dB
	3 - 800 MHz		10.82		dB
	800 - 1600 MHz		12.81		dB
Phase Unbalance	**0.3 - 3 MHz**		3.816		deg.
	3 - 800 MHz		1.523		deg.
	800 - 1600 MHz		5.545		deg.
Amplitude Unbalance	**0.3 - 3 MHz**		0.921		dB
	3 - 800 MHz		0.454		dB
	800 - 1600 MHz		0.337		dB
VSWR	**SUM Port**		1.30		(:1)
	OUT Ports		1.30		(:1)

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

Functional Diagram

8 Way-0° Power Splitter/Combiner ZCSC-ED12715/1

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS[1] (dB)						AMP. UNBAL. (dB)	ISOLATION (dB)				PHASE UNBAL. (deg.)
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-8	3-4	6-7	
0.0	28.03	26.96	27.02	25.94	26.13	25.55	2.48	60.87	47.90	56.37	49.75	2.79
0.2	21.83	21.18	21.24	20.56	20.61	20.14	1.70	49.68	43.21	54.65	46.95	5.39
0.3	21.01	20.58	20.62	20.16	20.16	19.80	1.21	49.16	45.20	56.16	49.86	4.79
0.4	20.90	20.51	20.54	20.12	20.11	19.77	1.13	49.06	45.74	56.39	50.54	4.57
0.5	20.72	20.38	20.41	20.03	20.01	19.70	1.02	48.73	46.57	56.43	51.54	4.10
0.6	20.60	20.29	20.32	19.96	19.95	19.65	0.95	48.46	47.15	56.39	52.37	3.73
0.7	20.50	20.21	20.25	19.91	19.90	19.61	0.89	48.16	47.67	56.59	53.03	3.47
0.8	20.43	20.15	20.18	19.87	19.85	19.58	0.85	47.94	48.07	56.53	53.55	3.25
0.9	20.37	20.11	20.13	19.83	19.81	19.55	0.82	47.84	48.38	56.56	54.19	3.08
1.0	20.31	20.06	20.09	19.80	19.78	19.53	0.79	47.80	48.71	56.36	54.69	2.96
2.0	20.01	19.83	19.84	19.62	19.59	19.40	0.61	48.32	50.99	56.29	59.17	2.02
3.0	19.91	19.74	19.75	19.56	19.54	19.36	0.55	49.15	52.35	56.36	61.75	1.51
4.0	19.86	19.70	19.71	19.53	19.50	19.34	0.52	49.71	53.53	56.37	63.17	1.20
5.0	19.83	19.68	19.68	19.51	19.49	19.33	0.51	50.15	54.22	56.44	63.88	0.96
6.0	19.82	19.67	19.67	19.50	19.48	19.32	0.50	50.45	54.66	56.54	64.47	0.81
7.0	19.81	19.66	19.66	19.49	19.47	19.32	0.49	50.65	55.19	56.50	64.29	0.70
8.0	19.80	19.66	19.66	19.49	19.47	19.31	0.49	50.81	55.39	56.53	64.20	0.62
9.0	19.80	19.65	19.66	19.49	19.47	19.31	0.49	50.91	55.70	56.28	64.09	0.55
10.0	19.80	19.65	19.65	19.49	19.47	19.31	0.49	51.02	55.83	56.31	63.86	0.50
20.0	19.82	19.67	19.67	19.50	19.49	19.33	0.49	51.29	56.37	55.40	61.69	0.19
30.0	19.84	19.69	19.69	19.52	19.51	19.35	0.49	50.67	56.37	53.88	61.03	0.17
40.0	19.86	19.70	19.70	19.54	19.52	19.36	0.50	50.04	56.46	52.38	59.75	0.21
50.0	19.88	19.72	19.72	19.56	19.54	19.38	0.49	49.16	56.36	50.96	58.68	0.25
60.0	19.89	19.73	19.73	19.57	19.55	19.39	0.49	48.31	56.24	49.79	58.00	0.28
70.0	19.90	19.75	19.75	19.58	19.56	19.41	0.50	47.51	56.38	48.76	57.21	0.32
80.0	19.91	19.76	19.76	19.59	19.57	19.42	0.49	46.76	56.38	47.83	56.73	0.40
90.0	19.92	19.77	19.77	19.61	19.58	19.43	0.49	45.98	56.29	46.96	55.78	0.47
100.0	19.93	19.78	19.78	19.62	19.59	19.44	0.50	45.39	56.36	46.22	55.34	0.47
200.0	20.03	19.88	19.89	19.73	19.70	19.55	0.49	41.06	56.48	41.45	50.71	0.97
300.0	20.11	19.96	19.98	19.83	19.78	19.64	0.46	39.02	56.61	39.28	47.72	1.39
400.0	20.19	20.05	20.08	19.94	19.88	19.75	0.44	38.17	56.71	38.27	45.62	1.77
500.0	20.29	20.15	20.18	20.05	19.99	19.87	0.41	38.06	56.59	37.89	44.25	2.20
600.0	20.40	20.28	20.31	20.19	20.12	20.02	0.38	38.38	56.35	37.79	43.35	2.67
700.0	20.54	20.43	20.46	20.36	20.27	20.19	0.34	38.85	55.85	37.74	42.91	3.09
800.0	20.71	20.62	20.64	20.55	20.46	20.40	0.31	39.05	55.20	37.54	43.01	3.60
900.0	20.89	20.81	20.85	20.76	20.66	20.62	0.27	38.97	54.29	37.37	43.53	4.13
1000.0	21.11	21.04	21.09	21.02	20.91	20.88	0.23	38.77	53.69	37.37	44.40	4.58
1100.0	21.37	21.32	21.38	21.32	21.20	21.18	0.21	38.54	52.99	37.62	45.35	5.11
1150.0	21.53	21.49	21.55	21.52	21.36	21.36	0.24	38.36	52.77	37.76	45.94	5.34
1200.0	21.76	21.72	21.77	21.85	21.57	21.58	0.36	38.22	52.73	37.91	46.40	5.55
1250.0	21.96	21.89	21.90	22.03	21.70	21.73	0.45	37.96	52.78	37.95	46.65	5.80
1300.0	22.11	22.09	22.20	22.23	21.96	22.03	0.39	37.91	52.76	38.21	47.24	6.05
1400.0	22.54	22.55	22.67	22.64	22.37	22.55	0.48	38.22	53.19	38.90	48.52	6.69
1450.0	22.75	22.76	22.86	22.81	22.53	22.79	0.55	38.79	53.51	39.64	49.46	7.09
1500.0	23.08	23.10	23.17	23.11	22.80	23.14	0.61	40.03	54.05	41.16	50.98	7.46
1600.0	23.77	23.81	23.77	23.71	23.32	23.88	0.82	45.67	55.26	48.40	56.38	8.77
1700.0	24.59	24.64	24.46	24.43	23.94	24.75	1.08	57.39	57.79	51.89	74.16	10.94
1800.0	25.49	25.57	25.20	25.25	24.65	25.72	1.28	42.96	61.09	41.34	58.60	13.62
1900.0	26.48	26.56	26.01	26.18	25.48	26.74	1.36	38.97	66.02	38.28	54.50	16.26
2000.0	27.76	27.81	27.10	27.43	26.63	27.98	1.35	37.23	77.02	37.48	53.99	18.15
2100.0	29.67	29.63	28.81	29.24	28.34	29.69	1.35	35.56	75.57	36.81	56.06	19.16
2200.0	32.16	32.01	31.11	31.40	30.48	31.78	1.73	34.01	67.79	35.40	55.18	18.77
2300.0	35.52	35.18	34.04	33.91	32.88	34.29	3.01	33.37	67.24	34.54	51.35	21.29

FREQ. (MHz)	VSWR (:1)		
	S	1	8
0.0	5.22	1.28	1.28
0.2	1.83	1.19	1.18
0.3	1.44	1.14	1.12
0.4	1.39	1.13	1.12
0.5	1.32	1.11	1.10
0.6	1.27	1.10	1.09
0.7	1.24	1.10	1.09
0.8	1.22	1.09	1.08
0.9	1.20	1.09	1.08
1.0	1.18	1.08	1.07
2.0	1.11	1.06	1.05
3.0	1.08	1.05	1.05
4.0	1.06	1.05	1.04
5.0	1.05	1.04	1.04
6.0	1.05	1.04	1.04
7.0	1.04	1.04	1.03
8.0	1.04	1.04	1.03
9.0	1.04	1.04	1.03
10.0	1.04	1.04	1.03
20.0	1.03	1.04	1.03
30.0	1.03	1.04	1.03
40.0	1.03	1.04	1.03
50.0	1.04	1.04	1.03
60.0	1.04	1.03	1.03
70.0	1.04	1.03	1.03
80.0	1.04	1.03	1.03
90.0	1.05	1.03	1.03
100.0	1.05	1.03	1.03
200.0	1.08	1.02	1.02
300.0	1.11	1.03	1.03
400.0	1.12	1.04	1.05
500.0	1.13	1.06	1.07
600.0	1.13	1.08	1.09
700.0	1.13	1.10	1.11
800.0	1.13	1.12	1.13
900.0	1.15	1.14	1.15
1000.0	1.18	1.16	1.17
1100.0	1.22	1.19	1.20
1150.0	1.23	1.20	1.21
1200.0	1.25	1.21	1.22
1250.0	1.28	1.22	1.24
1300.0	1.31	1.23	1.25
1400.0	1.36	1.26	1.27
1450.0	1.40	1.28	1.29
1500.0	1.45	1.29	1.30
1600.0	1.54	1.31	1.31
1700.0	1.61	1.31	1.32
1800.0	1.60	1.32	1.33
1900.0	1.49	1.33	1.34
2000.0	1.36	1.35	1.37
2100.0	1.39	1.36	1.39
2200.0	1.55	1.38	1.42
2300.0	1.70	1.40	1.44

[1] Total Loss = Insertion Loss+ 9dB Splitter Loss

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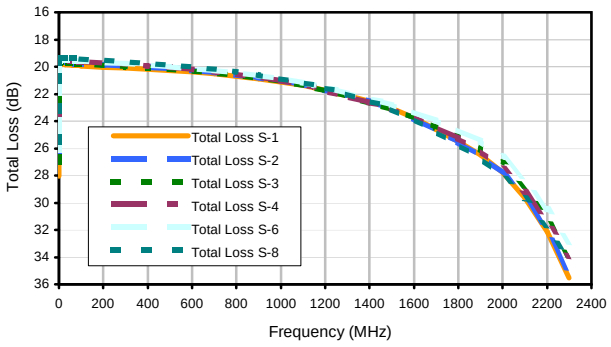
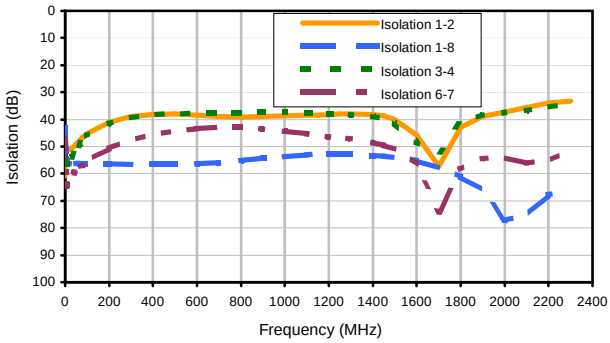
8 Way-0° Power Splitter/Combiner ZCSC-ED12715/1

Typical Performance Curves

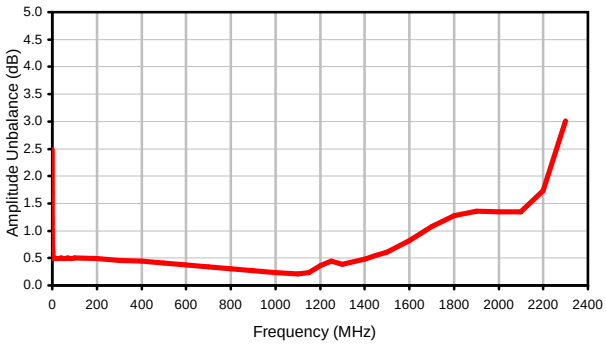
Total Loss



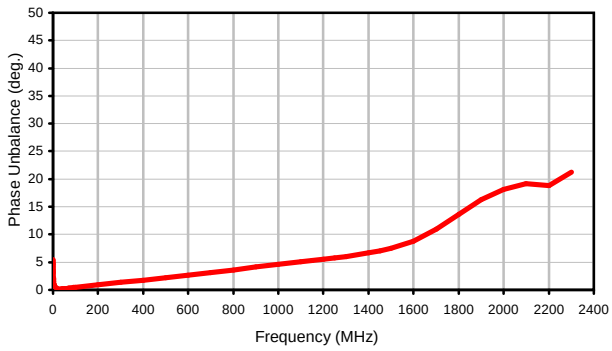
Isolation



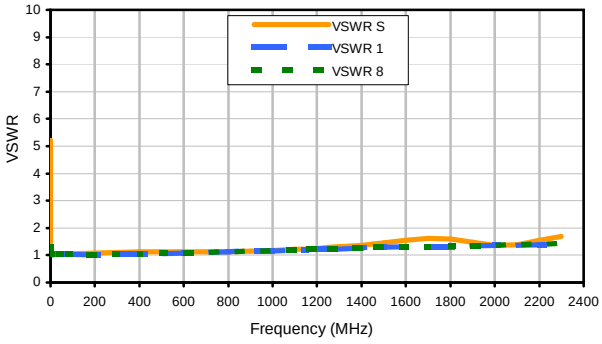
Amplitude Unbalance



Phase Unbalance



VSWR



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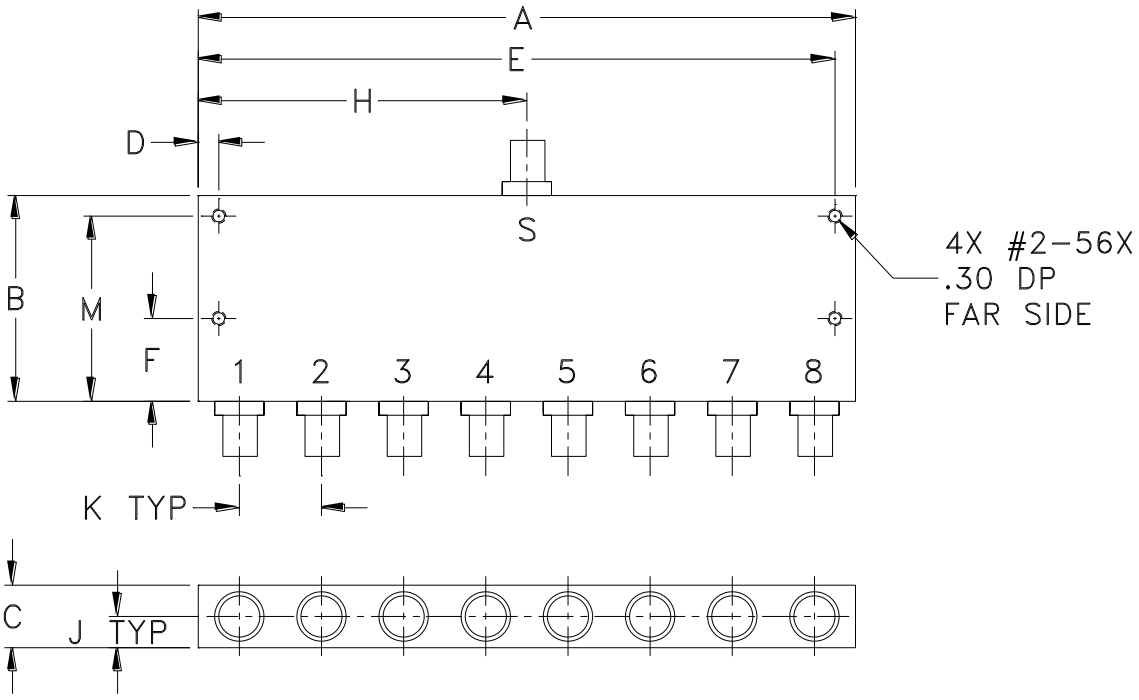
Case Style UU

Outline Dimensions

UU215



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	WT. GRAMS
UU215	4.00 (101.60)	1.25 (31.75)	.38 (9.65)	.125 (3.18)	3.875 (98.43)	.500 (12.70)	-- --	2.00 (50.80)	.19 (4.83)	.500 (12.70)	-- --	1.125 (28.58)	77

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

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
   For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
3. Refer to the individual model data sheet for the type of connectors available.

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Environmental Specifications ENV28

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 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

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