Engineering Development Model

Power Splitter/Combiner ZB5PD-ED7890/1

5 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 : BV278

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		600		1000	MHz
Isolation	**600 - 1000 MHz**		31		dB
Insertion Loss Above 7.0 dB	**600 - 1000 MHz**		0.60		dB
Phase Unbalance	**600 - 1000 MHz**		2.20		deg.
Amplitude Unbalance	**600 - 1000 MHz**		0.20		dB
VSWR	**SUM Port**		1.15		(:1)
	OUT Ports		1.00		(:1)

MAXIMUM RATINGS	
Operating Temperature	-55°C to 90°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS	
SUM PORT	S, TYPE N(FEMALE)
PORT 1	1, TYPE N(FEMALE)
PORT 2	2, TYPE N(FEMALE)
PORT 3	3, TYPE N(FEMALE)
PORT 4	4, TYPE N(FEMALE)
PORT 5	5, TYPE N(FEMALE)

Functional Diagram

5 Way-0° Power Splitter/Combiner ZB5PD-ED7890/1

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS[1] (dB)					AMP UNBAL. (dB)	ISOLATION (dB)				PHASE UNBAL. (Deg)
	S1	S2	S3	S4	S5		1-2	1-3	3-4	4-5	
400.0	6.97	6.97	7.51	7.60	7.64	0.67	18.77	23.76	17.29	16.61	2.63
425.0	7.05	7.05	7.54	7.63	7.66	0.61	20.36	24.75	17.90	17.12	3.15
450.0	7.15	7.15	7.54	7.62	7.66	0.52	21.65	25.88	18.52	17.63	3.46
475.0	7.25	7.25	7.55	7.63	7.67	0.42	22.55	27.13	19.20	18.23	3.64
500.0	7.32	7.33	7.53	7.63	7.68	0.35	23.14	28.54	19.98	18.92	3.66
525.0	7.38	7.38	7.52	7.60	7.64	0.26	23.54	30.19	20.87	19.74	3.52
550.0	7.42	7.43	7.49	7.57	7.61	0.19	23.96	32.06	21.88	20.73	3.19
575.0	7.46	7.46	7.47	7.55	7.59	0.13	24.51	34.23	23.00	21.91	2.93
600.0	7.46	7.48	7.43	7.50	7.54	0.11	25.29	36.76	24.13	23.32	2.47
625.0	7.46	7.46	7.42	7.48	7.52	0.11	26.41	39.41	25.21	24.95	2.03
650.0	7.45	7.47	7.40	7.46	7.50	0.10	27.96	41.17	26.07	26.81	1.67
675.0	7.46	7.46	7.41	7.47	7.50	0.09	30.14	40.63	26.50	28.74	1.36
700.0	7.44	7.45	7.41	7.46	7.50	0.09	33.36	38.81	26.57	30.44	0.82
720.0	7.45	7.47	7.43	7.48	7.52	0.08	37.35	37.26	26.50	31.39	0.79
740.0	7.45	7.46	7.45	7.49	7.54	0.09	44.99	36.04	26.38	31.86	0.92
760.0	7.45	7.47	7.48	7.51	7.55	0.10	52.28	34.98	26.29	31.99	0.89
780.0	7.44	7.47	7.49	7.52	7.55	0.11	39.89	34.10	26.29	32.01	1.14
800.0	7.45	7.47	7.53	7.56	7.59	0.14	35.13	33.40	26.41	32.11	1.25
820.0	7.45	7.49	7.56	7.57	7.61	0.16	32.23	32.86	26.59	32.35	1.56
840.0	7.47	7.49	7.58	7.60	7.63	0.16	30.26	32.38	26.82	32.66	1.73
860.0	7.47	7.49	7.60	7.62	7.65	0.17	28.81	32.01	27.03	32.93	2.20
880.0	7.46	7.50	7.65	7.64	7.69	0.23	27.83	31.79	27.14	32.80	2.44
900.0	7.47	7.50	7.68	7.68	7.70	0.24	27.11	31.56	27.00	32.00	2.66
920.0	7.47	7.50	7.72	7.70	7.73	0.26	26.72	31.40	26.59	30.68	3.05
940.0	7.45	7.49	7.75	7.73	7.76	0.31	26.59	31.31	25.91	29.06	3.50
960.0	7.46	7.50	7.80	7.78	7.82	0.35	26.76	31.19	25.16	27.48	3.75
980.0	7.47	7.50	7.86	7.84	7.87	0.40	27.28	31.12	24.31	26.00	4.06
1000.0	7.46	7.52	7.92	7.90	7.92	0.46	28.14	31.07	23.50	24.72	4.26
1025.0	7.47	7.53	8.02	7.99	8.01	0.54	29.76	30.95	22.62	23.35	4.57
1050.0	7.47	7.53	8.10	8.08	8.10	0.63	31.53	30.71	21.88	22.25	4.95
1075.0	7.50	7.56	8.19	8.18	8.20	0.70	31.15	30.43	21.31	21.35	5.09
1100.0	7.52	7.57	8.29	8.28	8.30	0.78	28.03	30.04	20.89	20.63	5.08
1125.0	7.57	7.64	8.40	8.41	8.43	0.86	24.59	29.57	20.62	20.05	5.04
1150.0	7.65	7.71	8.51	8.54	8.56	0.91	21.73	29.06	20.47	19.58	5.09
1175.0	7.76	7.84	8.65	8.69	8.72	0.97	19.44	28.52	20.38	19.14	5.07
1200.0	7.94	8.01	8.82	8.88	8.93	0.99	17.59	27.99	20.32	18.70	4.93

FREQ. (MHz)	VSWR (:1)		
	S	1	5
400.0	1.18	1.09	1.10
425.0	1.26	1.09	1.09
450.0	1.32	1.09	1.09
475.0	1.37	1.08	1.08
500.0	1.39	1.07	1.06
525.0	1.40	1.06	1.05
550.0	1.39	1.05	1.04
575.0	1.36	1.05	1.03
600.0	1.32	1.05	1.04
625.0	1.28	1.05	1.05
650.0	1.23	1.06	1.06
675.0	1.19	1.07	1.07
700.0	1.16	1.08	1.08
720.0	1.15	1.08	1.09
740.0	1.14	1.09	1.10
760.0	1.14	1.09	1.10
780.0	1.13	1.09	1.10
800.0	1.13	1.09	1.10
820.0	1.12	1.08	1.10
840.0	1.12	1.08	1.10
860.0	1.10	1.08	1.10
880.0	1.09	1.07	1.09
900.0	1.07	1.06	1.09
920.0	1.05	1.06	1.08
940.0	1.04	1.05	1.08
960.0	1.04	1.05	1.08
980.0	1.06	1.05	1.08
1000.0	1.09	1.06	1.09
1025.0	1.12	1.08	1.11
1050.0	1.16	1.10	1.13
1075.0	1.19	1.12	1.15
1100.0	1.24	1.15	1.18
1125.0	1.30	1.18	1.21
1150.0	1.38	1.21	1.23
1175.0	1.49	1.24	1.25
1200.0	1.63	1.27	1.28

[1]Total Loss = Insertion Loss + 7dB Splitter Loss

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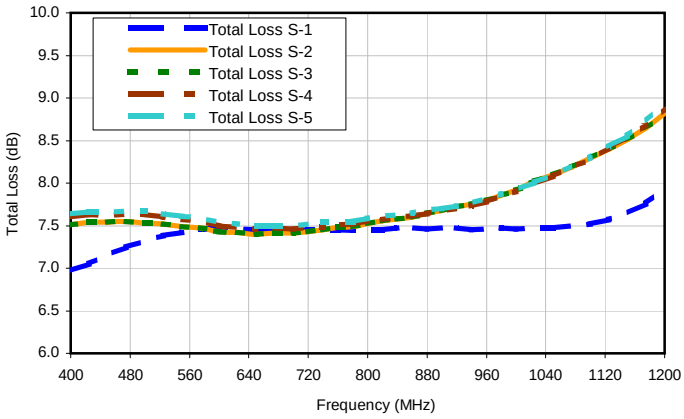
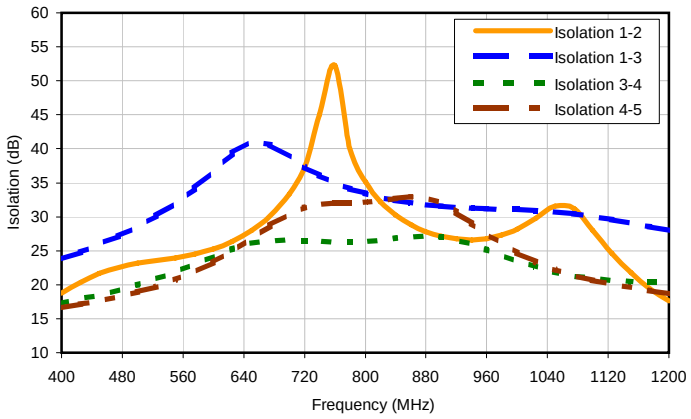
Typical Performance Curves

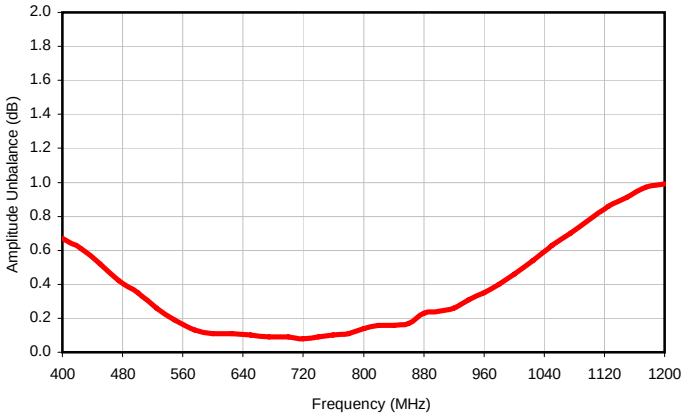
Total Loss



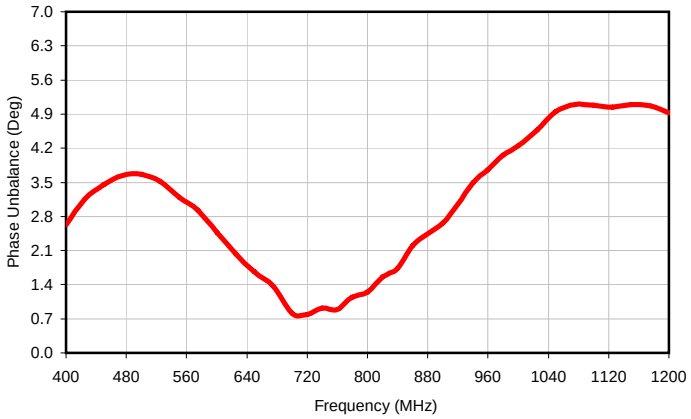
Isolation



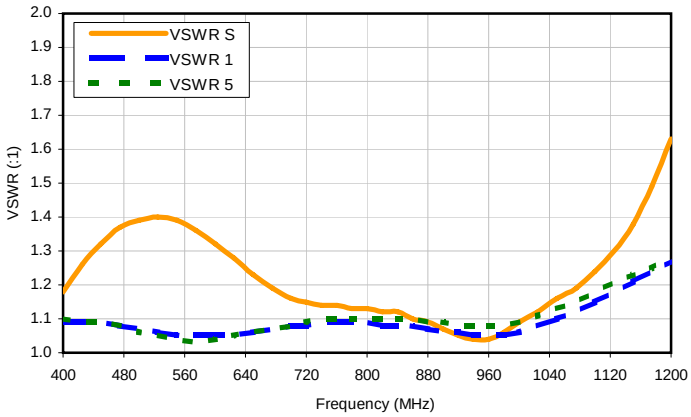
Amplitude Unbalance



Phase Unbalance

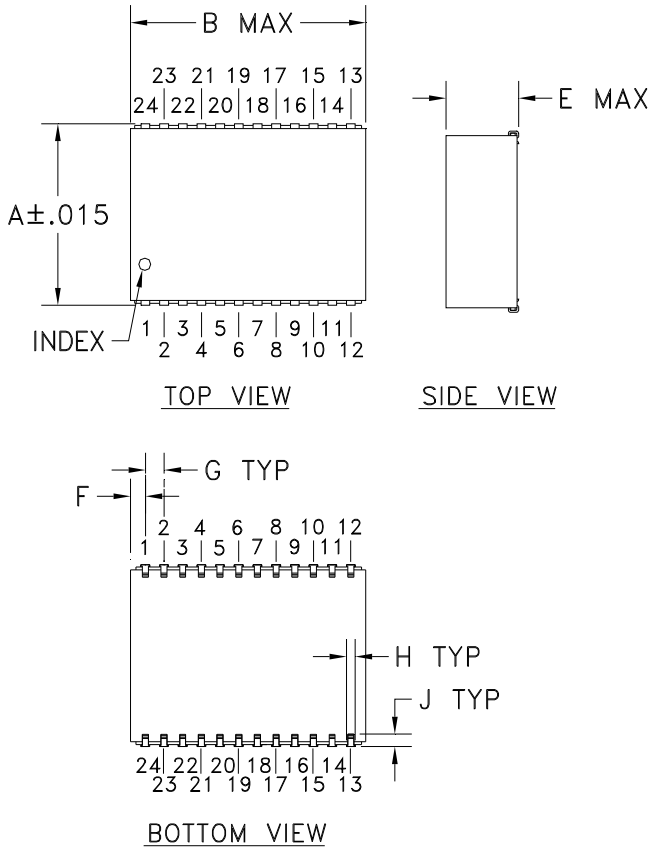


VSWR

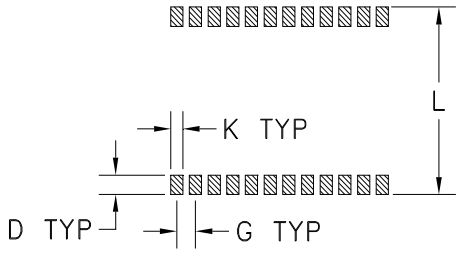


Outline Dimensions

BL372



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
BL372	.940 (23.88)	1.426 (36.22)	-- --	.100 (2.54)	.250 (6.35)	.163 (4.14)	.100 (2.54)	.047 (1.19)	.065 (1.65)	.065 (1.65)	.970 (24.64)	6.4

Dimensions are in inches (mm). Tolerances: 2Pl. ± .01; 3Pl. ± .005

Notes:

1. Case material: Copper-Nickel alloy.
2. Base material: Printed wiring laminate.
3. Termination finish:
   For RoHS Case Styles: Tin plate over Nickel plate. All models, (+) suffix.
   For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.

Mini-Circuits

Environmental Specifications **ENV28T9**

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 90° 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