

Coaxial

Power Splitter/Combiner

24 Way-0° 50Ω 650 to 2200 MHz

ZC24PD-222-S+



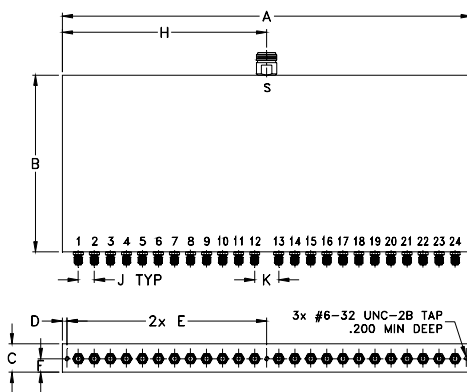
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	3.6W max.
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

SUM PORT	S
PORT 1,2,3...24	1,2,3...24

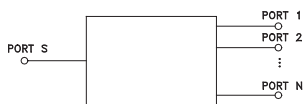
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
12.75	5.50	0.88	0.150	6.22	0.42
323.9	139.7	22.4	3.81	158.1	10.7
G	H	J	K	wt	
--	6.38	0.50	0.75	grams	
--	162.1	12.7	19.1	1750	

Electrical Schematic



Features

- wideband, 650 to 2200 MHz
- low insertion loss, 1.8 dB typ.
- good isolation, 25 dB typ.
- good amplitude unbalance, 0.5 dB typ.
- up to 10W power input as splitter

Applications

- UHF
- cellular
- GPS
- communication systems
- satellite L band

CASE STYLE: UU1741

Connectors	Model
SMA	ZC24PD-222-S+

+RoHS Compliant

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

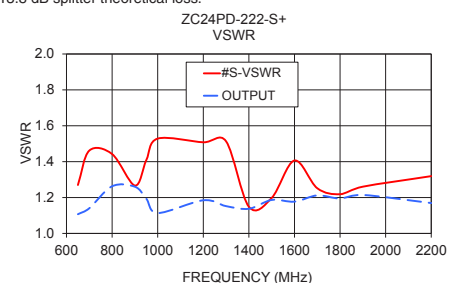
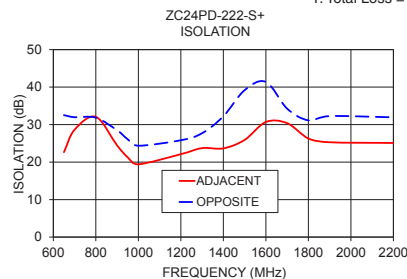
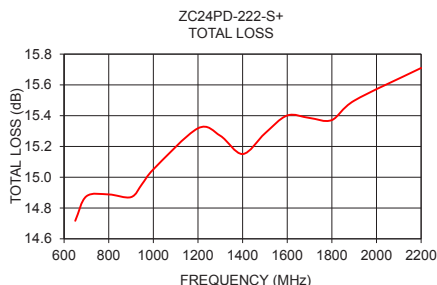
Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		650		2200	MHz
Insertion Loss (above theoretical 13.8 dB)	650 - 2200	—	1.8	2.8	dB
Isolation	650 - 2200	16	25	—	dB
Phase Unbalance	650 - 2200	—	10	18	Degree
Amplitude Unbalance	650 - 2200	—	0.5	0.9	dB
VSWR (Port S)	650 - 2200	—	1.3	1.85	:1
VSWR (Port 1-24)	650 - 2200	—	1.25	1.6	:1

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR 1
			Adjacent	Opposite			
650.00	14.72	0.31	22.64	32.52	1.87	1.27	1.11
700.00	14.88	0.29	28.64	31.96	2.11	1.46	1.14
800.00	14.89	0.24	32.08	31.85	2.42	1.44	1.26
900.00	14.87	0.25	24.45	28.49	2.56	1.27	1.26
950.00	14.96	0.28	21.27	26.08	2.77	1.41	1.19
1000.00	15.05	0.30	19.41	24.37	2.97	1.53	1.11
1200.00	15.32	0.39	22.11	25.83	3.49	1.51	1.18
1300.00	15.27	0.29	23.73	27.71	3.95	1.51	1.15
1400.00	15.15	0.32	23.66	32.22	4.20	1.15	1.14
1500.00	15.28	0.34	25.92	39.18	4.64	1.20	1.19
1600.00	15.40	0.31	30.70	41.38	4.95	1.41	1.18
1700.00	15.39	0.26	30.38	34.25	5.43	1.25	1.21
1800.00	15.37	0.34	26.30	31.13	6.38	1.22	1.19
1900.00	15.50	0.30	25.29	32.27	5.91	1.26	1.21
2200.00	15.71	0.39	25.10	31.94	6.67	1.32	1.17

1. Total Loss = Insertion Loss + 13.8 dB splitter theoretical loss.



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.
 C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



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24 Way-0° Power Splitter/Combiner

ZC24PD-222+

Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB) S-1	AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)		PHASE UNBALANCE (deg.)	FREQUENCY (MHz)	VSWR (:1)	
			Adjacent	Opposite			S	OUTPUT
650.0	14.72	0.31	22.64	32.52	1.87	650.0	1.27	1.11
700.0	14.88	0.29	28.64	31.96	2.11	700.0	1.46	1.14
750.0	15.01	0.26	33.72	31.89	2.29	750.0	1.66	1.21
800.0	14.89	0.24	32.08	31.85	2.42	800.0	1.44	1.26
850.0	14.78	0.24	28.32	30.76	2.43	850.0	1.07	1.28
900.0	14.87	0.25	24.45	28.49	2.56	900.0	1.27	1.26
950.0	14.96	0.28	21.27	26.08	2.77	950.0	1.41	1.19
1000.0	15.05	0.30	19.41	24.37	2.97	1000.0	1.53	1.11
1050.0	15.16	0.33	19.09	23.69	3.14	1050.0	1.66	1.11
1100.0	15.10	0.35	19.98	23.98	3.34	1100.0	1.48	1.17
1150.0	15.05	0.37	21.24	24.92	3.47	1150.0	1.16	1.19
1200.0	15.32	0.39	22.11	25.83	3.49	1200.0	1.51	1.18
1250.0	15.30	0.25	22.89	26.77	4.16	1250.0	1.70	1.17
1300.0	15.27	0.29	23.73	27.71	3.95	1300.0	1.51	1.15
1350.0	15.13	0.31	23.82	29.46	3.96	1350.0	1.14	1.13
1400.0	15.15	0.32	23.66	32.22	4.20	1400.0	1.15	1.14
1450.0	15.20	0.34	24.26	35.83	4.49	1450.0	1.13	1.17
1500.0	15.28	0.34	25.92	39.18	4.64	1500.0	1.20	1.19
1550.0	15.41	0.35	28.18	41.74	4.76	1550.0	1.43	1.18
1600.0	15.40	0.31	30.70	41.38	4.95	1600.0	1.41	1.18
1650.0	15.32	0.27	31.93	38.02	5.15	1650.0	1.14	1.19
1700.0	15.39	0.26	30.38	34.25	5.43	1700.0	1.25	1.21
1750.0	15.44	0.29	27.80	31.80	5.81	1750.0	1.38	1.21
1800.0	15.37	0.34	26.30	31.13	6.38	1800.0	1.22	1.19
1850.0	15.44	0.27	26.05	31.98	5.42	1850.0	1.10	1.20
1900.0	15.50	0.30	25.29	32.27	5.91	1900.0	1.26	1.21
1950.0	15.54	0.31	23.79	30.94	6.00	1950.0	1.31	1.20
2000.0	15.61	0.32	23.19	30.14	6.14	2000.0	1.39	1.18
2050.0	15.67	0.32	23.71	31.03	6.31	2050.0	1.40	1.19
2100.0	15.64	0.33	24.14	33.32	6.40	2100.0	1.19	1.19
2150.0	15.66	0.34	24.05	34.69	6.58	2150.0	1.09	1.16
2200.0	15.71	0.39	25.10	31.94	6.67	2200.0	1.32	1.17

¹Total Loss = Insertion Loss + 13.8dB Splitter Loss



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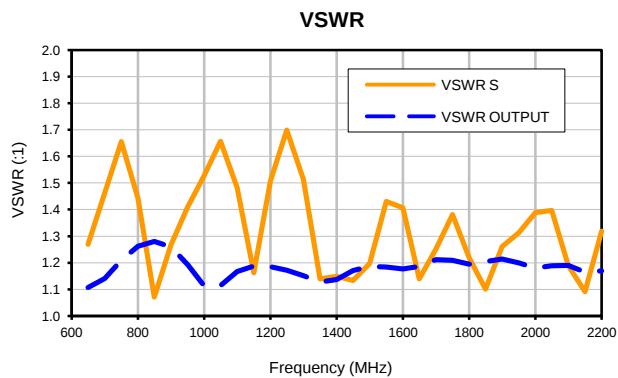
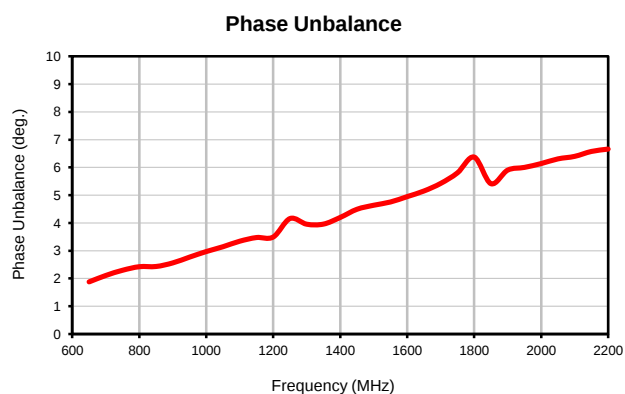
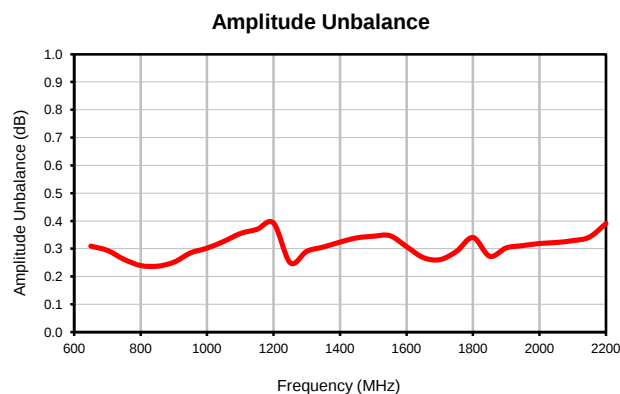
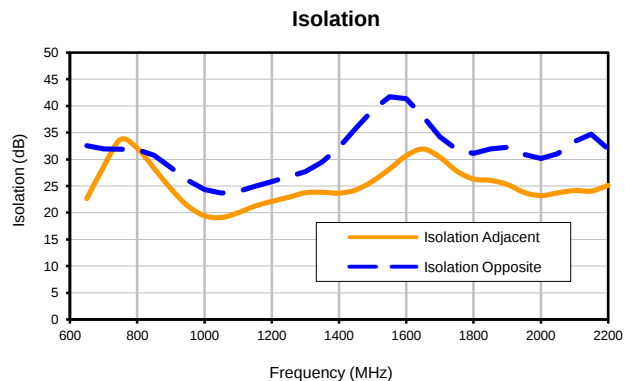
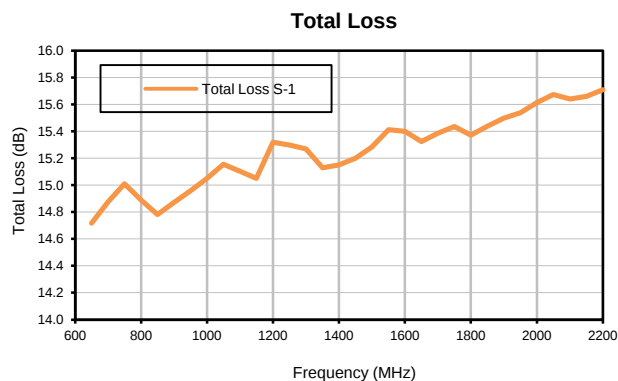


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Typical Performance Curves



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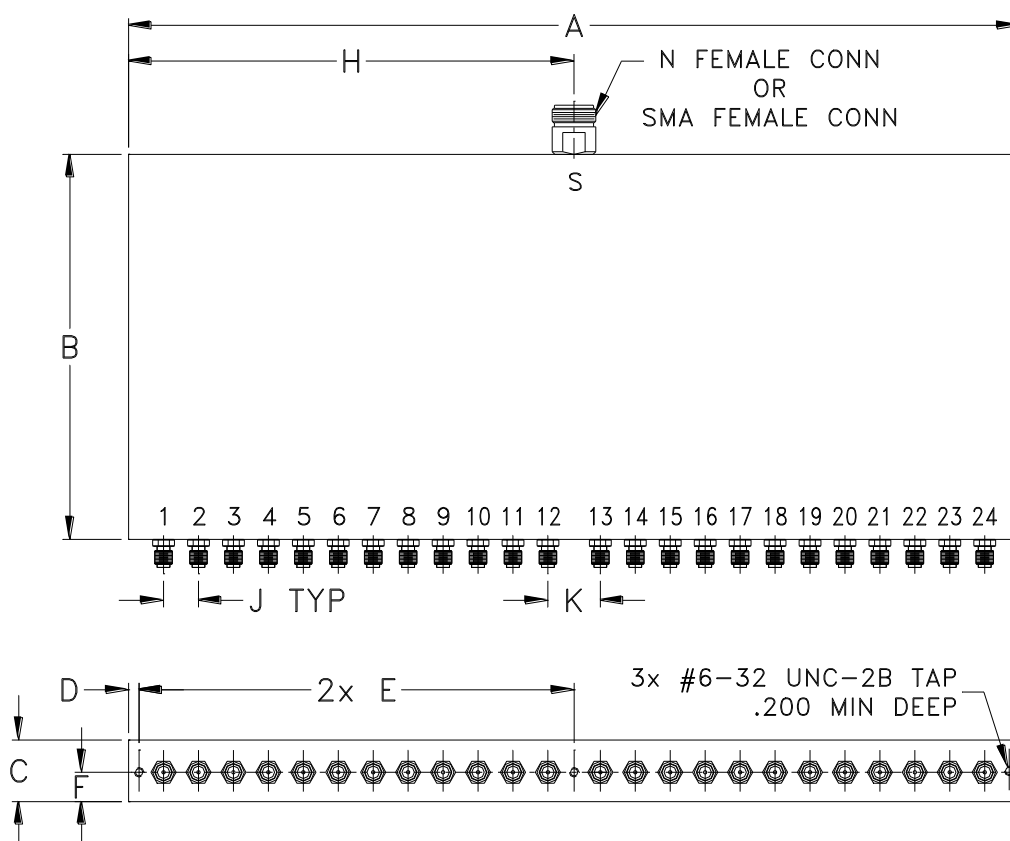
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Outline Dimensions

UU1741



CASE#	A	B	C	D	E	F	G	H	J	K	WT, GRAMS
UU1741	12.75 (323.85)	5.50 (139.70)	.88 (22.35)	.150 (3.81)	6.225 (158.12)	.42 (10.67)	-- --	6.38 (162.05)	.50 (12.70)	.75 (19.05)	1750

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

Notes:

1. Case material: Aluminum alloy.
2. Case finish: 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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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