DC Pass

Power Splitter/Combiner

ZN3PD-622W-S+

3 Way-0° 50Ω 1800 to 6200 MHz

CASE STYLE: UU181

Connectors	Model
SMA	ZN3PD-622W-S+

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

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	0.6W max.
DC Current750 mA (250 mA for each port)	

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

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3

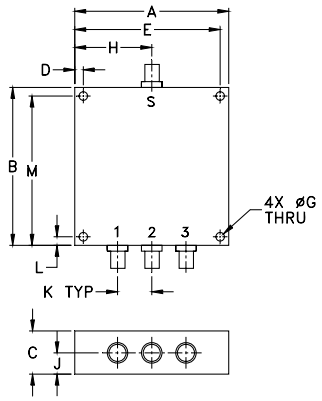
Features

- wideband, 1800 to 6200 MHz
- low insertion loss, 0.9 dB typ.
- low phase unbalance, 3.0 deg. typ.
- good isolation, 22 dB typ.
- DC Pass from sum port to all output ports

Applications

- PCS/UMTS
- LTE
- WIMAX
- WiFi
- bluetooth

Outline Drawing

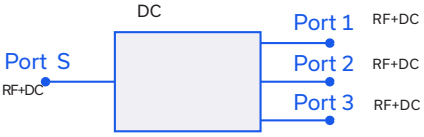


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
2.25	2.30	.63	.125	2.125	_	.125
57.15	58.42	16.00	3.18	53.98	_	3.18

H	J	K	L	M	wt
1.13	.31	.500	.125	2.175	grams
28.70	7.87	12.70	3.18	55.25	94

Electrical Schematic



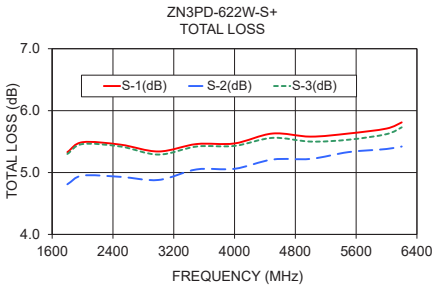
Electrical Specifications at 25°C

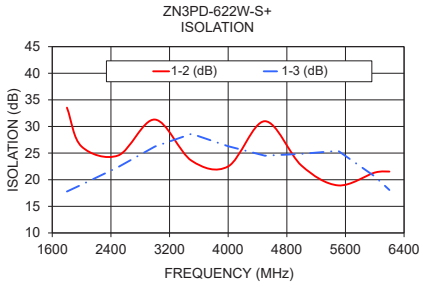
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		1800		6200	MHz
Insertion Loss Above 4.8 dB	1800-6200 2300-6000	– –	1.0 0.8	1.5 1.2	dB
Isolation	1800-6200 2300-6000	15 16	20 22	– –	dB
Phase Unbalance	1800-6000	–	3	7	Degree
Amplitude Unbalance	1800-6200	–	0.6	0.9	dB
VSWR (Port S)	1800-6200	–	1.4	–	:1
VSWR (Port 1-3)	1800-6200	–	1.3	–	:1

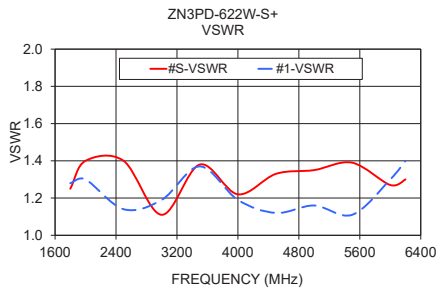
Typical Performance Data

Freq. (MHz)	Total Loss[1] (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
1800.00	5.33	4.81	5.30	0.52	33.54	17.78	33.76	1.83	1.25	1.28	1.14	1.26
2000.00	5.49	4.95	5.46	0.53	26.23	19.07	26.02	1.69	1.40	1.30	1.11	1.28
2500.00	5.45	4.93	5.42	0.52	24.56	22.37	23.81	1.15	1.40	1.14	1.07	1.13
3000.00	5.34	4.88	5.29	0.47	31.30	26.23	30.21	1.46	1.11	1.19	1.22	1.18
3500.00	5.46	5.05	5.42	0.42	23.57	28.62	23.39	1.58	1.38	1.37	1.32	1.36
4000.00	5.47	5.06	5.43	0.41	22.50	26.29	21.91	2.00	1.22	1.19	1.22	1.19
4500.00	5.63	5.21	5.56	0.42	30.99	24.51	29.78	2.30	1.33	1.12	1.34	1.12
5000.00	5.58	5.22	5.50	0.36	22.65	24.85	23.33	2.60	1.35	1.16	1.19	1.15
5500.00	5.63	5.33	5.53	0.30	18.93	25.43	18.54	2.79	1.39	1.11	1.11	1.10
6000.00	5.71	5.38	5.62	0.33	21.34	20.61	19.85	3.21	1.27	1.30	1.18	1.29
6200.00	5.81	5.42	5.73	0.39	21.53	18.07	20.13	3.51	1.30	1.40	1.09	1.42

1. Total Loss = Insertion Loss + 4.8 dB splitter 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

3 Way-0° Power Splitter/Combiner ZN3PD-622W-S+

Typical Performance Data

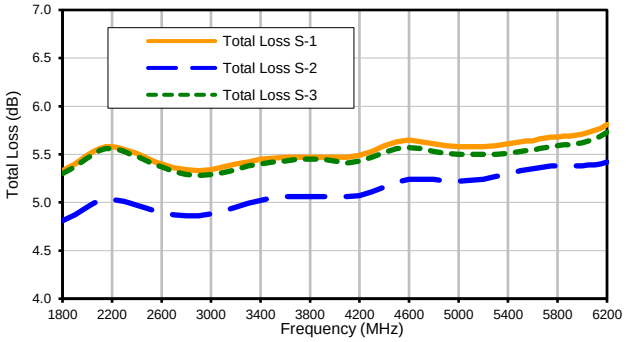
FREQ. (MHz)	TOTAL LOSS[1] (dB) S-1	S-2	S-3	AMP. UNBAL. (dB)	ISOLATION (dB) 1-2	1-3	2-3	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1) S	1	2	3
1800	5.33	4.81	5.30	0.52	33.54	17.78	33.76	1.83	1800	1.25	1.28	1.14	1.26
1900	5.40	4.87	5.37	0.53	28.76	18.45	28.69	1.75	1900	1.33	1.29	1.12	1.28
2000	5.49	4.95	5.46	0.53	26.23	19.07	26.02	1.69	2000	1.40	1.30	1.11	1.28
2050	5.53	4.99	5.50	0.54	25.37	19.37	25.11	1.66	2050	1.43	1.29	1.11	1.28
2100	5.56	5.02	5.54	0.54	24.72	19.66	24.40	1.62	2100	1.46	1.29	1.11	1.28
2150	5.58	5.03	5.56	0.55	24.24	19.98	23.88	1.56	2150	1.48	1.28	1.11	1.27
2200	5.58	5.03	5.56	0.55	23.90	20.30	23.49	1.49	2200	1.50	1.27	1.11	1.26
2250	5.57	5.02	5.55	0.55	23.73	20.65	23.28	1.41	2250	1.51	1.26	1.10	1.24
2300	5.55	5.01	5.53	0.54	23.68	20.98	23.17	1.35	2300	1.51	1.24	1.10	1.23
2350	5.53	4.99	5.50	0.54	23.77	21.32	23.20	1.27	2350	1.49	1.21	1.09	1.20
2400	5.51	4.97	5.48	0.53	23.91	21.66	23.29	1.22	2400	1.47	1.19	1.08	1.18
2450	5.48	4.95	5.45	0.53	24.18	22.01	23.49	1.18	2450	1.44	1.16	1.07	1.15
2500	5.45	4.93	5.42	0.52	24.56	22.37	23.81	1.15	2500	1.40	1.14	1.07	1.13
2550	5.42	4.91	5.39	0.51	25.00	22.70	24.17	1.19	2550	1.36	1.11	1.06	1.10
2600	5.40	4.89	5.37	0.51	25.60	23.08	24.69	1.21	2600	1.31	1.08	1.06	1.07
2700	5.36	4.87	5.32	0.49	27.04	23.80	25.93	1.26	2700	1.22	1.03	1.09	1.02
2800	5.34	4.86	5.29	0.48	28.90	24.59	27.56	1.33	2800	1.13	1.07	1.13	1.06
2900	5.33	4.86	5.28	0.47	30.74	25.40	29.27	1.37	2900	1.07	1.13	1.17	1.12
3000	5.34	4.88	5.29	0.47	31.30	26.23	30.21	1.46	3000	1.11	1.19	1.22	1.18
3100	5.37	4.91	5.31	0.46	30.02	27.03	29.54	1.51	3100	1.19	1.26	1.26	1.24
3200	5.40	4.95	5.34	0.44	27.95	27.75	27.79	1.56	3200	1.26	1.31	1.29	1.29
3300	5.42	4.99	5.38	0.43	26.12	28.29	26.03	1.58	3300	1.32	1.35	1.32	1.33
3400	5.45	5.02	5.40	0.42	24.64	28.58	24.53	1.60	3400	1.36	1.37	1.32	1.35
3500	5.46	5.05	5.42	0.42	23.57	28.62	23.39	1.58	3500	1.38	1.37	1.32	1.36
3600	5.47	5.06	5.43	0.42	22.79	28.43	22.54	1.60	3600	1.37	1.36	1.30	1.35
3700	5.47	5.06	5.45	0.41	22.31	28.05	22.01	1.62	3700	1.34	1.33	1.27	1.33
3800	5.47	5.06	5.45	0.41	22.07	27.57	21.70	1.70	3800	1.30	1.29	1.25	1.29
3900	5.47	5.06	5.45	0.41	22.10	26.97	21.64	1.87	3900	1.26	1.24	1.22	1.24
4000	5.47	5.06	5.43	0.41	22.50	26.29	21.91	2.00	4000	1.22	1.19	1.22	1.19
4100	5.47	5.06	5.41	0.42	23.27	25.74	22.55	2.02	4100	1.20	1.13	1.23	1.14
4200	5.49	5.07	5.43	0.42	24.48	25.31	23.60	2.05	4200	1.21	1.09	1.25	1.11
4300	5.53	5.11	5.47	0.42	26.14	25.02	25.07	2.10	4300	1.23	1.08	1.29	1.09
4400	5.59	5.16	5.52	0.42	28.38	24.78	27.10	2.20	4400	1.28	1.10	1.31	1.09
4500	5.63	5.21	5.56	0.42	30.99	24.51	29.78	2.30	4500	1.33	1.12	1.34	1.12
4600	5.65	5.24	5.57	0.41	32.38	24.37	32.62	2.39	4600	1.38	1.14	1.35	1.14
4700	5.63	5.24	5.56	0.39	30.23	24.35	31.98	2.45	4700	1.40	1.16	1.35	1.15
4800	5.61	5.24	5.53	0.37	27.13	24.44	28.62	2.50	4800	1.39	1.17	1.31	1.16
4900	5.59	5.22	5.51	0.37	24.60	24.63	25.62	2.53	4900	1.37	1.17	1.26	1.16
5000	5.58	5.22	5.50	0.36	22.65	24.85	23.33	2.60	5000	1.35	1.16	1.19	1.15
5100	5.58	5.23	5.50	0.35	21.22	25.15	21.65	2.62	5100	1.35	1.14	1.13	1.13
5200	5.58	5.24	5.50	0.34	20.20	25.47	20.42	2.70	5200	1.35	1.11	1.07	1.11
5300	5.59	5.27	5.50	0.32	19.50	25.67	19.51	2.74	5300	1.36	1.10	1.02	1.09
5400	5.61	5.29	5.51	0.32	19.09	25.72	18.91	2.75	5400	1.37	1.10	1.05	1.09
5500	5.63	5.33	5.53	0.30	18.93	25.43	18.54	2.79	5500	1.39	1.11	1.11	1.10
5550	5.64	5.34	5.54	0.30	18.96	25.22	18.47	2.83	5550	1.39	1.12	1.14	1.11
5600	5.64	5.35	5.54	0.29	19.07	24.89	18.48	2.85	5600	1.39	1.14	1.16	1.12
5650	5.66	5.36	5.56	0.30	19.21	24.53	18.52	2.90	5650	1.39	1.15	1.19	1.14
5700	5.67	5.37	5.57	0.30	19.40	24.07	18.60	2.91	5700	1.38	1.17	1.20	1.16
5750	5.68	5.38	5.58	0.30	19.62	23.61	18.70	2.97	5750	1.37	1.19	1.21	1.17
5800	5.68	5.38	5.59	0.30	19.95	23.06	18.91	3.01	5800	1.35	1.20	1.22	1.19
5850	5.69	5.38	5.60	0.31	20.26	22.48	19.11	3.04	5850	1.34	1.24	1.21	1.21
5900	5.69	5.39	5.60	0.31	20.63	21.88	19.34	3.09	5900	1.31	1.24	1.20	1.23
5950	5.70	5.38	5.61	0.32	20.97	21.25	19.58	3.18	5950	1.29	1.27	1.19	1.26
6000	5.71	5.38	5.62	0.33	21.34	20.61	19.85	3.21	6000	1.27	1.30	1.18	1.29
6050	5.73	5.39	5.64	0.34	21.59	19.96	20.03	3.28	6050	1.26	1.31	1.16	1.32
6100	5.75	5.39	5.66	0.36	21.76	19.33	20.18	3.35	6100	1.26	1.34	1.14	1.35
6150	5.77	5.40	5.69	0.37	21.73	18.68	20.22	3.46	6150	1.27	1.37	1.12	1.38
6200	5.81	5.42	5.73	0.39	21.53	18.07	20.13	3.51	6200	1.30	1.40	1.09	1.42

[1]Total Loss = Insertion Loss + 4.8dB Splitter Loss

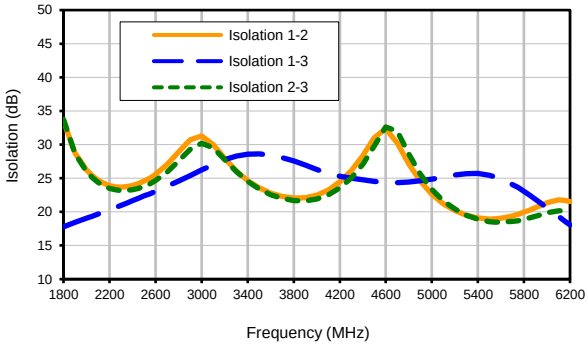
3 Way-0° Power Splitter/Combiner ZN3PD-622W-S+

Typical Performance Curves

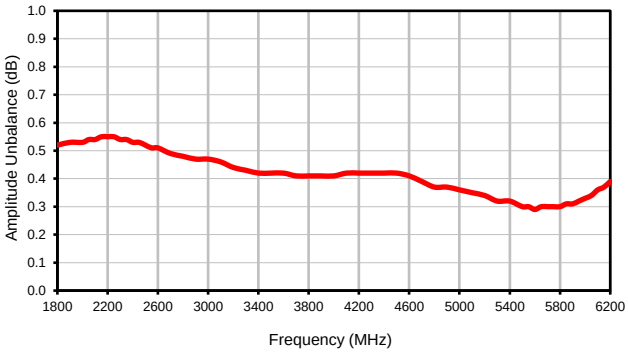
Total Loss



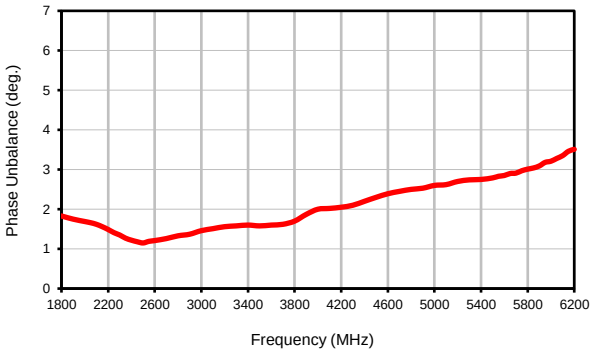
Isolation



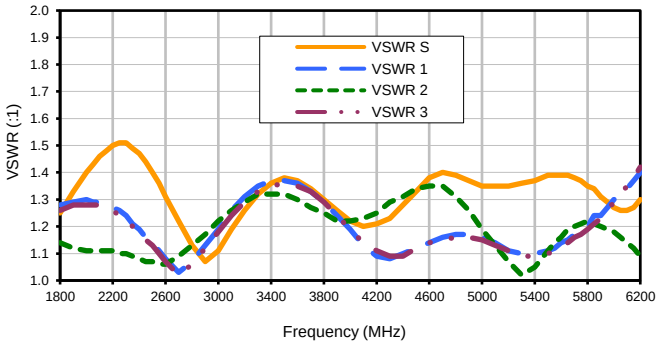
Amplitude Unbalance



Phase Unbalance

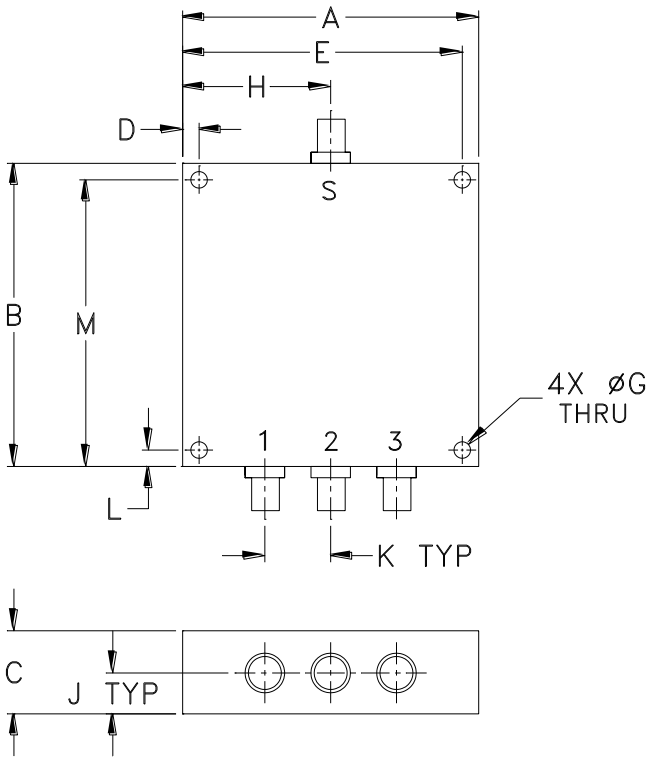


VSWR



Case Style UU

Outline Dimensions UU181



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	WT. GRAMS
UU181	2.25 (57.15)	2.30 (58.42)	.63 (16.00)	.125 (3.18)	2.125 (53.98)	-- --	.125 (3.18)	1.13 (28.70)	.31 (7.87)	.500 (12.70)	.125 (3.18)	2.175 (55.24)	94

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.

Mini-Circuits

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