

Power Splitter/Combiner ZC10PD-26W-S+

10 Way-0° 50Ω 2250 to 2800 MHz

The Big Deal

- Low insertion loss, 0.7 dB
- High isolation, 25 dB
- Power handling up to 10W as a splitter



CASE STYLE: AB204

Product Overview

Mini-Circuits' ZC10PD-26W-S+ is a 10-way 0° splitter/combiner providing 10W RF power handling as a splitter across the 2250 to 2800 MHz range, covering a variety of applications including cellular, ISM and more. It provides a high port-count with low insertion loss, high isolation and low amplitude unbalance, making this model ideal for systems requiring distribution of signal into many channels. The splitter/combiner comes housed in a rugged aluminum alloy case (6.13 x 3.00 x 0.53") with SMA connectors.

Key Features

Feature	Advantages
10W power handling as a splitter	Suitable for a variety of system power requirements.
High isolation, 25 dB typ.	Minimizes signal leakage and interference between ports.
Low amplitude unbalance, 0.8 dB	ZC10PD-26W-S+ produces nearly equal output signals, ideal for parallel path / multi-channel systems.
Good VSWR, 1.25:1 typ.	Provides excellent thru-path transmission with low signal reflection

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



Power Splitter/Combiner

ZC10PD-26W-S+

10 Way-0° 50Ω 2250 to 2800 MHz

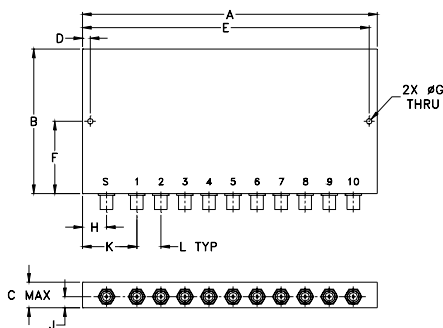
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.80W max.
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

SUM PORT	S
PORT 1,2,3,4,5,6,7,8,9,10	1,2,3,4,5,6,7,8,9,10

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
6.13	3.00	.53	.162	5.962	1.500
155.70	76.20	13.46	4.11	151.43	38.10
G	H	J	K	L	wt
.116	.50	.25	1.13	.50	grams
2.95	12.70	6.35	28.70	12.70	207

electrical schematic



Features

- low insertion loss, 0.7 dB typ.
- high isolation, 25 dB typ.
- good amplitude unbalance. 0.8 dB typ.
- good VSWR, 1.25 typ.
- up to 10W power input as splitter

Applications

- cellular communications
- CATV
- ISM
- wireless communication systems



Generic photo used for illustration purposes only

CASE STYLE: AB204

Connectors Model
SMA ZC10PD-26W-S+

+RoHS Compliant

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

Electrical Specifications

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		2250		2800	MHz
Insertion Loss (above theoretical 10 dB)	2300 - 2600 2250 - 2800	— —	0.7 0.9	1.6 1.9	dB
Isolation	2300 - 2600 2250 - 2800	19 18	22 21	—	dB
Phase Unbalance	2300 - 2600 2250 - 2800	— —	8 10	15 17	Degree
Amplitude Unbalance	2300 - 2600 2250 - 2800	— —	0.5 0.6	0.9 1.0	dB
VSWR (Port S)	2250 - 2800	—	1.35	1.6	:1
VSWR (Port 1-10)	2300 - 2600 2250 - 2800	— —	1.30 1.45	1.55 1.6	:1
Power Handling¹	as splitter	—	—	10	W
	as combiner ²	—	—	0.8	

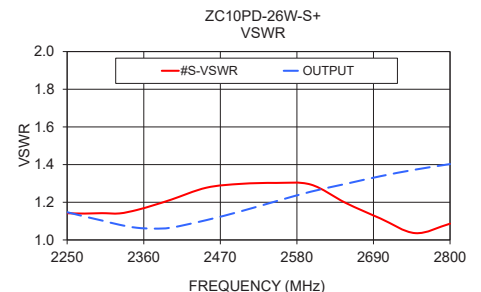
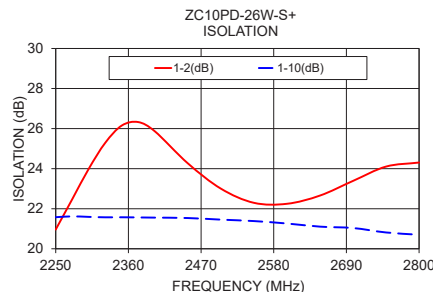
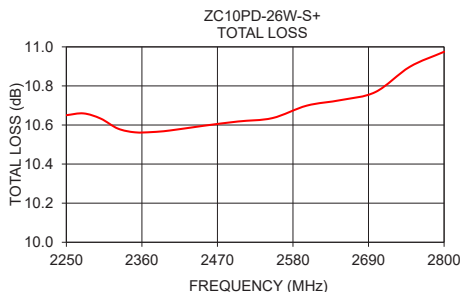
1. Over 25°C to 100°C. Derate linearly to 50% of rating at 100°C.

2. As a combiner of non-coherent signals max power per port is 0.8 Watt power rating divided by number of ports.

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR 1
			1-2	1-10			
2250	10.65	0.37	20.96	21.58	5.83	1.14	1.15
2275	10.66	0.50	22.47	21.62	6.08	1.14	1.12
2300	10.63	0.49	23.99	21.59	7.06	1.14	1.10
2325	10.58	0.32	25.29	21.57	7.42	1.14	1.08
2350	10.56	0.29	26.15	21.57	7.18	1.16	1.06
2375	10.56	0.27	26.32	21.56	6.93	1.19	1.06
2400	10.57	0.27	25.87	21.56	6.73	1.21	1.07
2450	10.60	0.26	24.26	21.53	6.48	1.28	1.11
2500	10.62	0.27	23.00	21.46	6.80	1.30	1.15
2550	10.64	0.31	22.29	21.38	7.52	1.30	1.21
2600	10.70	0.30	22.25	21.26	8.95	1.29	1.26
2650	10.73	0.35	22.66	21.11	8.39	1.20	1.30
2700	10.77	0.41	23.39	21.04	9.21	1.11	1.34
2750	10.90	0.47	24.10	20.81	10.10	1.04	1.37
2800	10.97	0.50	24.31	20.70	11.05	1.09	1.40

1. Total Loss = Insertion Loss + 10dB splitter loss.



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10 Way-0° Power Splitter/Combiner

ZC10PD-26W-S+

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB) S-1	AMP. UNBAL. (dB)	ISOLATION (dB)		PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)	
			1-2	1-10			S	1
1800	10.67	0.61	10.97	21.42	2.82	1800	1.20	1.44
1850	10.67	0.59	11.24	21.37	3.35	1850	1.09	1.42
1900	10.70	0.60	11.60	21.34	3.86	1900	1.13	1.40
1950	10.74	0.59	12.08	21.34	4.40	1950	1.21	1.38
2000	10.78	0.57	12.74	21.35	4.85	2000	1.27	1.36
2025	10.78	0.55	13.15	21.37	5.03	2025	1.29	1.34
2050	10.78	0.52	13.62	21.38	5.21	2050	1.30	1.33
2075	10.77	0.49	14.17	21.38	5.37	2075	1.30	1.31
2100	10.75	0.46	14.79	21.38	5.47	2100	1.29	1.29
2125	10.74	0.42	15.51	21.40	5.54	2125	1.28	1.27
2150	10.71	0.38	16.34	21.42	5.60	2150	1.25	1.25
2175	10.69	0.34	17.28	21.44	5.68	2175	1.22	1.22
2200	10.67	0.28	18.36	21.47	5.79	2200	1.19	1.20
2225	10.65	0.27	19.58	21.52	5.82	2225	1.16	1.17
2250	10.65	0.37	20.96	21.58	5.83	2250	1.14	1.15
2275	10.66	0.50	22.47	21.62	6.08	2275	1.14	1.12
2300	10.63	0.49	23.99	21.59	7.06	2300	1.14	1.10
2325	10.58	0.32	25.29	21.57	7.42	2325	1.14	1.08
2350	10.56	0.29	26.15	21.57	7.18	2350	1.16	1.06
2375	10.56	0.27	26.32	21.56	6.93	2375	1.19	1.06
2400	10.57	0.27	25.87	21.56	6.73	2400	1.21	1.07
2425	10.58	0.27	25.08	21.55	6.58	2425	1.25	1.08
2450	10.60	0.26	24.26	21.53	6.48	2450	1.28	1.11
2475	10.61	0.26	23.56	21.49	6.54	2475	1.29	1.13
2500	10.62	0.27	23.00	21.46	6.80	2500	1.30	1.15
2525	10.63	0.29	22.57	21.42	7.11	2525	1.30	1.18
2550	10.64	0.31	22.29	21.38	7.52	2550	1.30	1.21
2575	10.64	0.33	22.17	21.34	8.16	2575	1.29	1.23
2600	10.70	0.30	22.25	21.26	8.95	2600	1.29	1.26
2625	10.74	0.25	22.45	21.12	8.23	2625	1.24	1.28
2650	10.73	0.35	22.66	21.11	8.39	2650	1.20	1.30
2675	10.74	0.38	22.99	21.08	8.79	2675	1.16	1.32
2700	10.77	0.41	23.39	21.04	9.21	2700	1.11	1.34
2725	10.82	0.44	23.76	20.97	9.67	2725	1.07	1.36
2750	10.90	0.47	24.10	20.81	10.10	2750	1.04	1.37
2775	10.96	0.47	24.37	20.68	10.52	2775	1.05	1.39
2800	10.97	0.50	24.31	20.70	11.05	2800	1.09	1.40
2850	11.03	0.58	22.82	20.88	12.26	2850	1.16	1.44
2900	11.13	0.70	20.37	21.07	13.35	2900	1.24	1.48
2950	11.26	0.84	17.78	21.34	14.52	2950	1.28	1.51
3000	11.43	0.96	15.43	21.70	15.95	3000	1.31	1.54

¹Total Loss = Insertion Loss + 10dB Splitter Loss

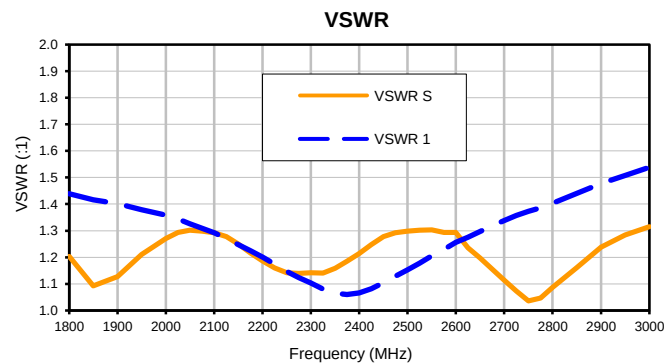
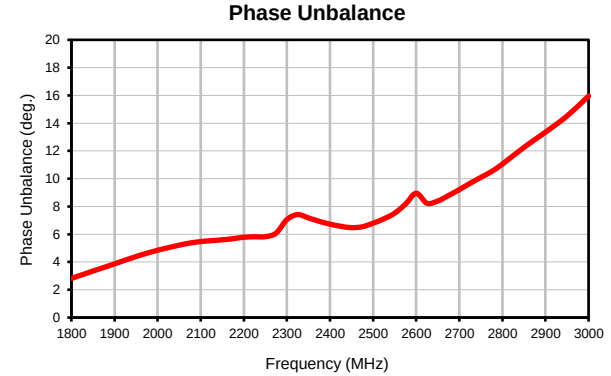
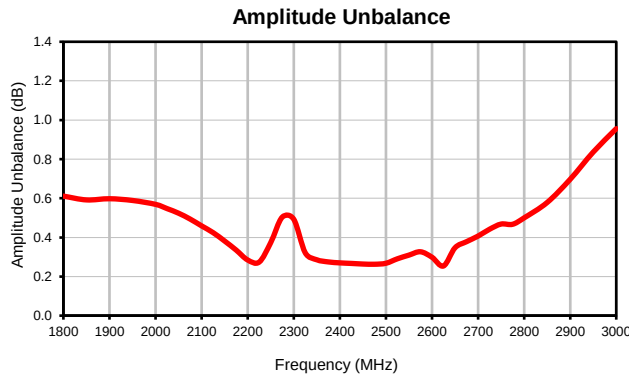
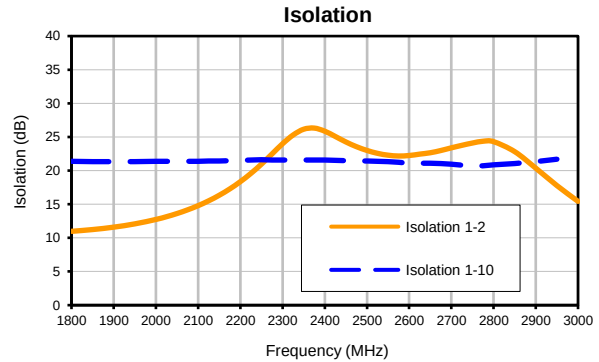
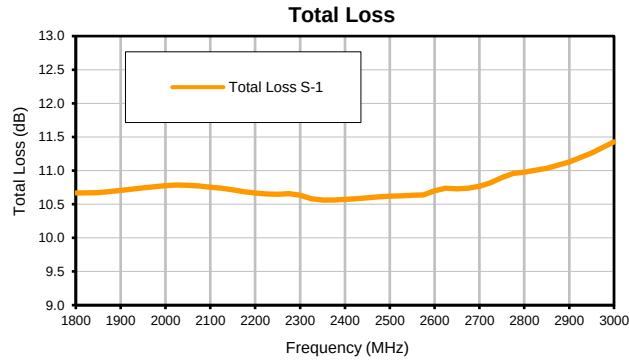


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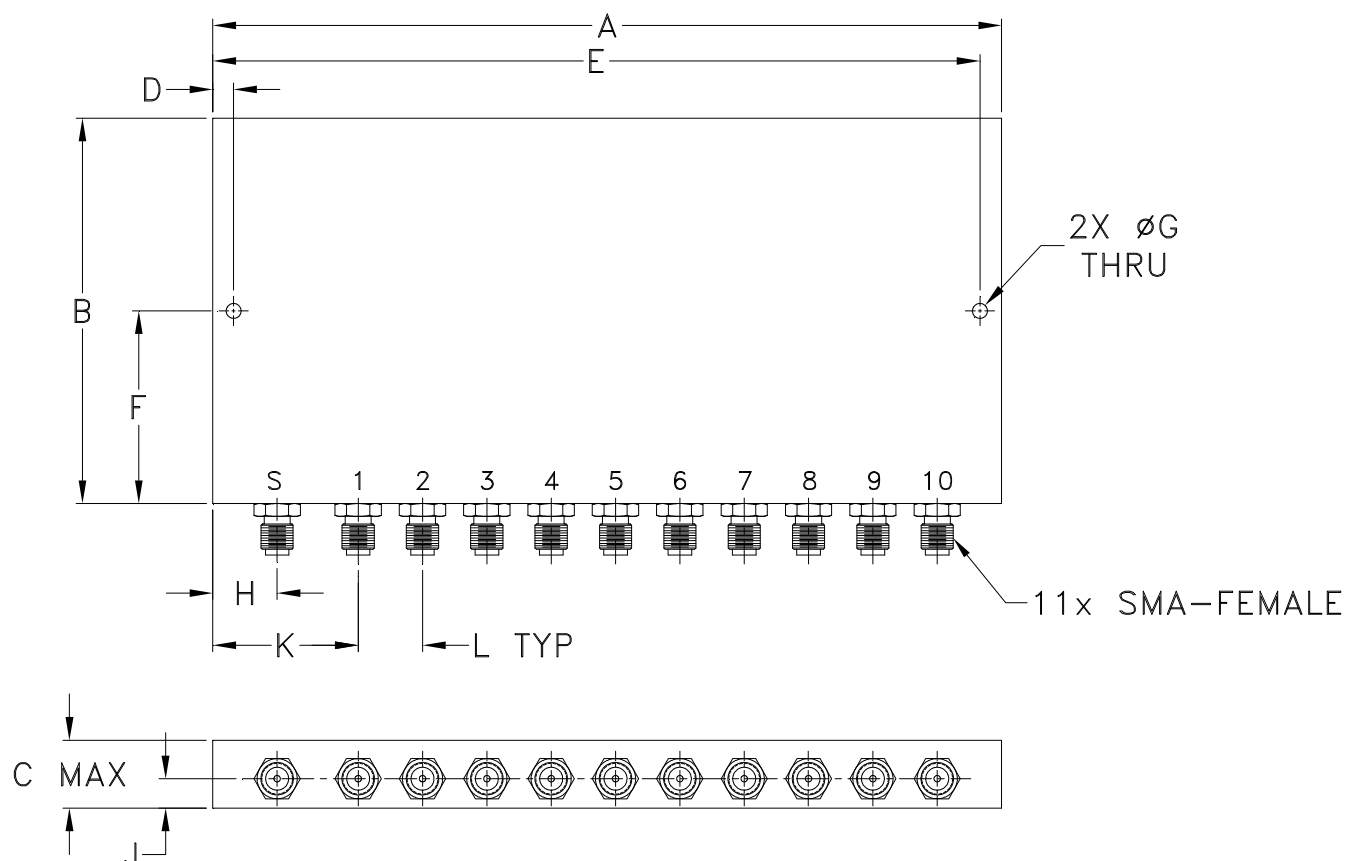
IF/RF MICROWAVE COMPONENTS

REV. A
ZC10PD-26W-S+
1/16/2019
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Typical Performance Curves



Outline Dimensions



CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
AB204	6.13 (155.70)	3.00 (76.20)	.53 (13.46)	.162 (4.11)	5.962 (151.43)	1.500 (38.10)	.116 (2.95)	.50 (12.70)	.25 (6.35)	1.13 (28.70)	.50 (12.70)	207

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

Notes:

- Case material: Aluminum alloy.
- Case finish:

For RoHS Case Styles:

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



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The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

RF/IF MICROWAVE COMPONENTS



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