Coaxial, Dual-Channel

Power Splitter/Combiner ZC8SC272-12DL+

8 Way-0° 50Ω 1 to 100 MHz, 2450 to 2700 MHz

The Big Deal

- Distributes IF and reference signals on the same line
- Excellent VSWR, 1.2:1 typ.
- Good isolation, 22 dB

CASE STYLE: UU2358-1

Product Overview

Mini-Circuits' ZC8SC272-12DL+ is an 8-way 0˚ dual channel splitter/combiner with a low pass channel from 1 to 100 MHz and a high pass channel from 2450 to 2700 MHz. This model is ideal for distributing signals where S-band IF and a reference signal are fed onto the same line. It provides good input and output matching VSWR, low insertion loss, and excellent isolation between channels. It comes housed in a rugged aluminum alloy case (4.00" x 1.25" x 0.50") with SMA connectors.

Key Features

Feature	Advantages
Dual channel: • 1 to 100 MHz low pass • 2450 to 2700 high pass	Distributes S-Band IF and reference signals on the same line into 8 paths without the need for diplexers and other additional components.
Good matching VSWR • 1.2:1 high pass (ports 1-8) • 1.1:1 low pass (ports 1-8)	Provides excellent transmission of signal power with minimal signal reflection.
Good power handling: • +37 dBm high pass (as a splitter) • +27 dBm low pass (as a splitter)	Suitable for a wide range of power requirements
Low insertion loss: • 0.5 dB low pass • 2.0 dB high pass	Low insertion loss minimizes intrinsic losses, making this model a suitable candidate for high power signal distribution applications where low loss is a requirement.

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ZC8SC272-12DL+

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HT-Series Tight Spot SMA Wrench

Generic photo used for illustration purposes only

CASE STYLE: UU2358-1

Connectors	Model
SMA	ZC8SC272-12DL+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C

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	1,2,3,4,5,6,7,8

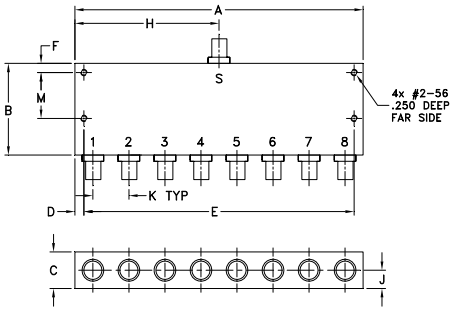
Features

- Dual Channel Frequency
- Excellent input matching, VSWR 1.35:1 typ.
- Excellent output matching, VSWR 1.2:1 typ.

Applications

- ISM
- MDS
- SATCOM
- WLAN
- Test Instrumentation

Outline Drawing

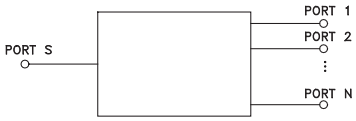


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
4.00	1.25	.50	.125	3.750	.125	--
101.60	31.75	12.70	3.18	95.25	3.18	--

H	J	K	L	M	wt
2.00	.25	.500	--	0.625	grams
50.80	6.35	12.70	--	15.88	85

Electrical Schematic



Electrical Specifications at 25°C

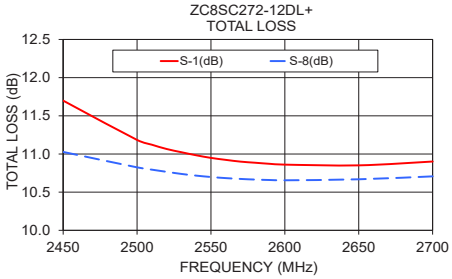
Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range			2450		2700	MHz
Insertion Loss (above theoretical 9.0 dB)	Low Pass	1 - 100	—	0.5	0.9	dB
	High Pass	2450 - 2700	—	2.0	3.5	
Isolation	Low Pass	1 - 100	20	30	—	dB
	High Pass	2450 - 2700	15	22	—	
Phase Unbalance	Low Pass	1 - 100	—	0.2	3.0	Degree
	High Pass	2450 - 2700	—	7.0	16.0	
Amplitude Unbalance	Low Pass	1 - 100	—	0.05	0.3	dB
	High Pass	2450 - 2700	—	0.6	1.5	
VSWR (Port S)	Low Pass	1 - 100	—	1.15	1.30	:1
	High Pass	2450 - 2700	—	1.35	1.7	
VSWR (Port 1-8)	Low Pass	1 - 100	—	1.1	1.3	:1
	High Pass	2450 - 2700	—	1.2	1.5	
Power Input	Low Pass	Splitter[1]	—	—	27	dBm
		Combiner[2]	—	—	24	
	High Pass	Splitter[1]	—	—	37	dBm
		Combiner[2]	—	—	24	

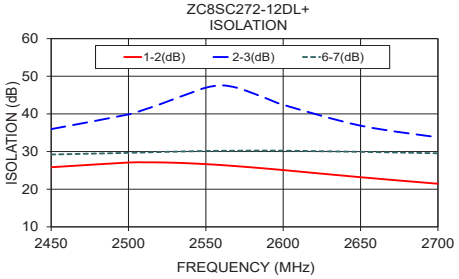
1. All outputs must terminate 50 ohms (VSWR 2.0:1 or better)
2. As a combiner of non-coherent signals, max. power as specified.

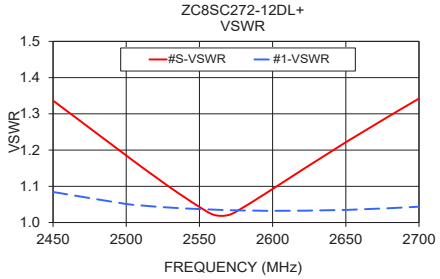
Typical Performance Data

Freq. (MHz)	Total Loss[3] (dB)						Amp. Unb. (dB)	Isolation (dB)				Phase Unb. (deg.)	VSWR S	VSWR 1	VSWR 8
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	2-3	3-4	6-7				
2450	11.70	11.28	11.18	10.92	11.32	11.03	1.00	25.83	35.96	28.29	29.22	7.67	1.34	1.08	1.15
2500	11.18	10.86	10.94	10.72	10.84	10.82	0.67	27.09	39.87	28.96	29.66	7.46	1.19	1.05	1.17
2510	11.12	10.81	10.91	10.70	10.79	10.79	0.63	27.13	41.12	28.87	29.76	7.44	1.15	1.05	1.17
2520	11.07	10.76	10.88	10.67	10.74	10.77	0.60	27.12	42.51	28.70	29.88	7.41	1.13	1.04	1.18
2530	11.02	10.72	10.85	10.65	10.70	10.74	0.58	27.02	44.05	28.45	29.97	7.38	1.10	1.04	1.18
2540	10.98	10.69	10.83	10.63	10.66	10.72	0.56	26.87	45.54	28.15	30.07	7.38	1.07	1.04	1.18
2550	10.95	10.66	10.81	10.61	10.63	10.70	0.54	26.66	46.97	27.79	30.15	7.40	1.04	1.04	1.18
2560	10.92	10.64	10.80	10.60	10.61	10.68	0.54	26.41	47.58	27.39	30.20	7.43	1.02	1.04	1.18
2570	10.90	10.61	10.79	10.58	10.59	10.67	0.53	26.11	46.95	26.95	30.22	7.46	1.02	1.03	1.18
2580	10.89	10.60	10.78	10.58	10.58	10.66	0.53	25.79	45.55	26.49	30.25	7.49	1.04	1.03	1.17
2590	10.87	10.59	10.77	10.57	10.56	10.66	0.52	25.44	43.98	26.02	30.25	7.56	1.07	1.03	1.17
2600	10.86	10.58	10.76	10.57	10.55	10.66	0.52	25.08	42.42	25.55	30.22	7.62	1.09	1.03	1.16
2650	10.85	10.58	10.76	10.56	10.53	10.67	0.50	23.18	36.88	23.27	29.93	7.97	1.22	1.03	1.15
2700	10.90	10.62	10.78	10.58	10.54	10.71	0.47	21.45	33.78	21.33	29.54	8.76	1.34	1.04	1.15

3. Total Loss = Insertion Loss + 9dB theoretical 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.
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