



RACK-MOUNTED

Splitter / Combiner Rack

ZT-429

50Ω DC to 18 GHz 20 x 2-Way N-Type Female

KEY FEATURES

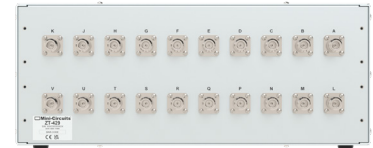
- Rack-mounted RF splitter / combiner system
- 20 x 2-way splitters in 4U rack space
- Connectors in-line on the front & rear panels
- Wide band resistive splitter design

APPLICATIONS

- Production test setups
- Quantum computing
- 5G FR1 & FR3, WiFi 6E MIMO, UWB, Bluetooth
- Military radio, radar & electronic warfare
- Microwave radio & cellular infrastructure



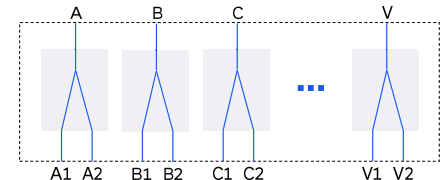
Front View



Rear View

Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



PRODUCT OVERVIEW

Mini-Circuits' rack-mounted test solutions enable convenient integration of any combination of passive or active RF and microwave components within complex production test environments. A wide range of standard configurations are supplied from stock, with custom configurations available upon request.

ZT-429 integrates 20 x 2-way splitter / combiners into a compact rack-mounted chassis requiring only 4U of rack space. The wideband resistive design of the splitters achieves close to the ideal 6 dB insertion loss and isolation across the full bandwidth from DC-18 GHz.

The orientation of the N-type connectors supports straight-through connections within the rack, with ports 1-2 of each splitter on the front panel and sum ports on the rear.

ELECTRICAL SPECIFICATIONS AT +25°C (EACH SPLITTER)

Parameter	Conditions	Min.	Typ.	Max.	Units
Frequency		DC		18	GHz
Insertion Loss	DC – 6 GHz		7.0	8.0	dB
	6 – 12 GHz		7.8	9.0	
	12 – 18 GHz		8.7	10.0	
Isolation	DC – 6 GHz	5.0	7.0		dB
	6 – 12 GHz	6.0	7.8		
	12 – 18 GHz	6.5	8.5		
Input Return Loss ¹	DC – 6 GHz		22		dB
	6 – 12 GHz		18		
	12 – 18 GHz		15		
Output Return Loss ²	DC – 6 GHz		22		dB
	6 – 12 GHz		18		
	12 – 18 GHz		12		
Input Power	As a splitter into load with 2:1 max VSWR			+10	dBm

1. Splitter sum ports (A to V)

2. Splitter output ports (A1, A2 to V1, V2)





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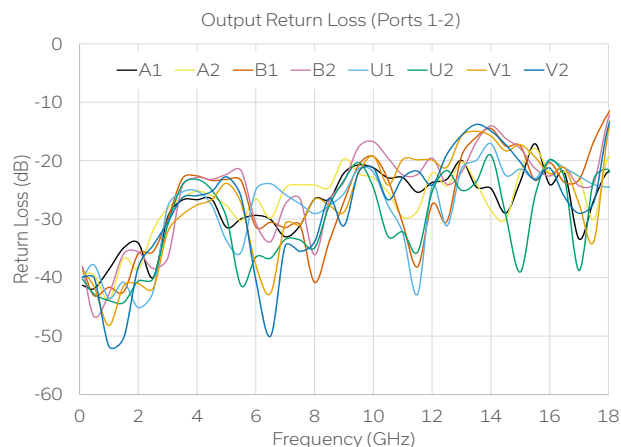
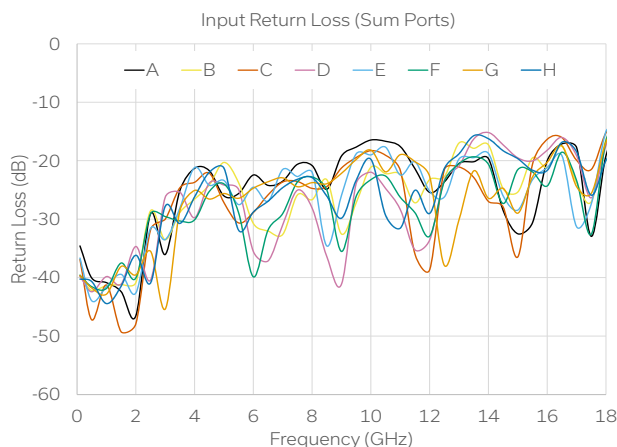
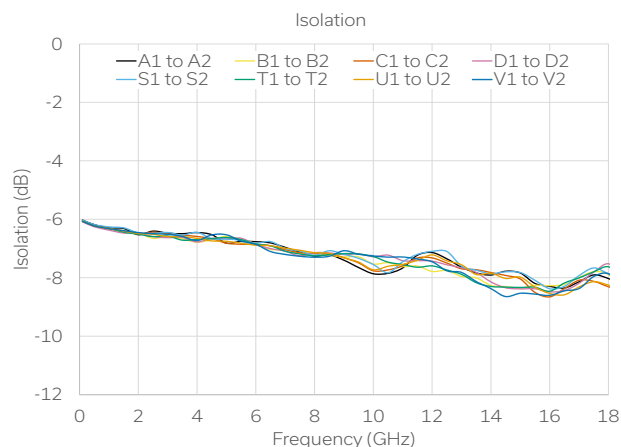
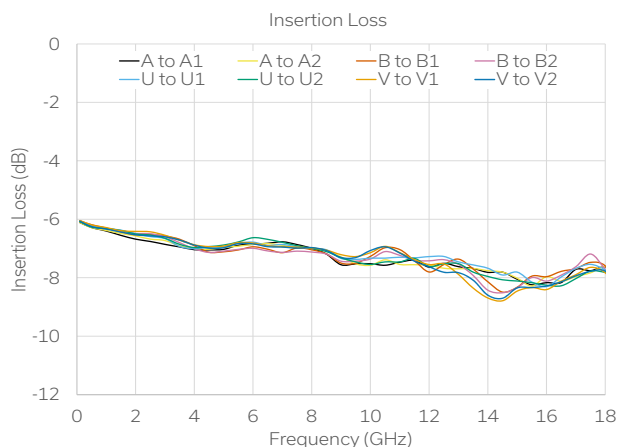
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TYPICAL PERFORMANCE GRAPHS



ABSOLUTE MAXIMUM RATINGS

Parameter	Conditions	Limits	Units
Temperature	Operating	0 to +50	°C
	Storage	-20 to +60	

Permanent damage may occur if any of these limits are exceeded. Operating in the range between operating power limits and absolute maximum ratings for extended periods of time may result in reduced life and reliability.

CONNECTIONS

Port	Function	Connector
A to V	Sum port	N-type female
A1, A2 to V1, V2	Input / output port	N-type female

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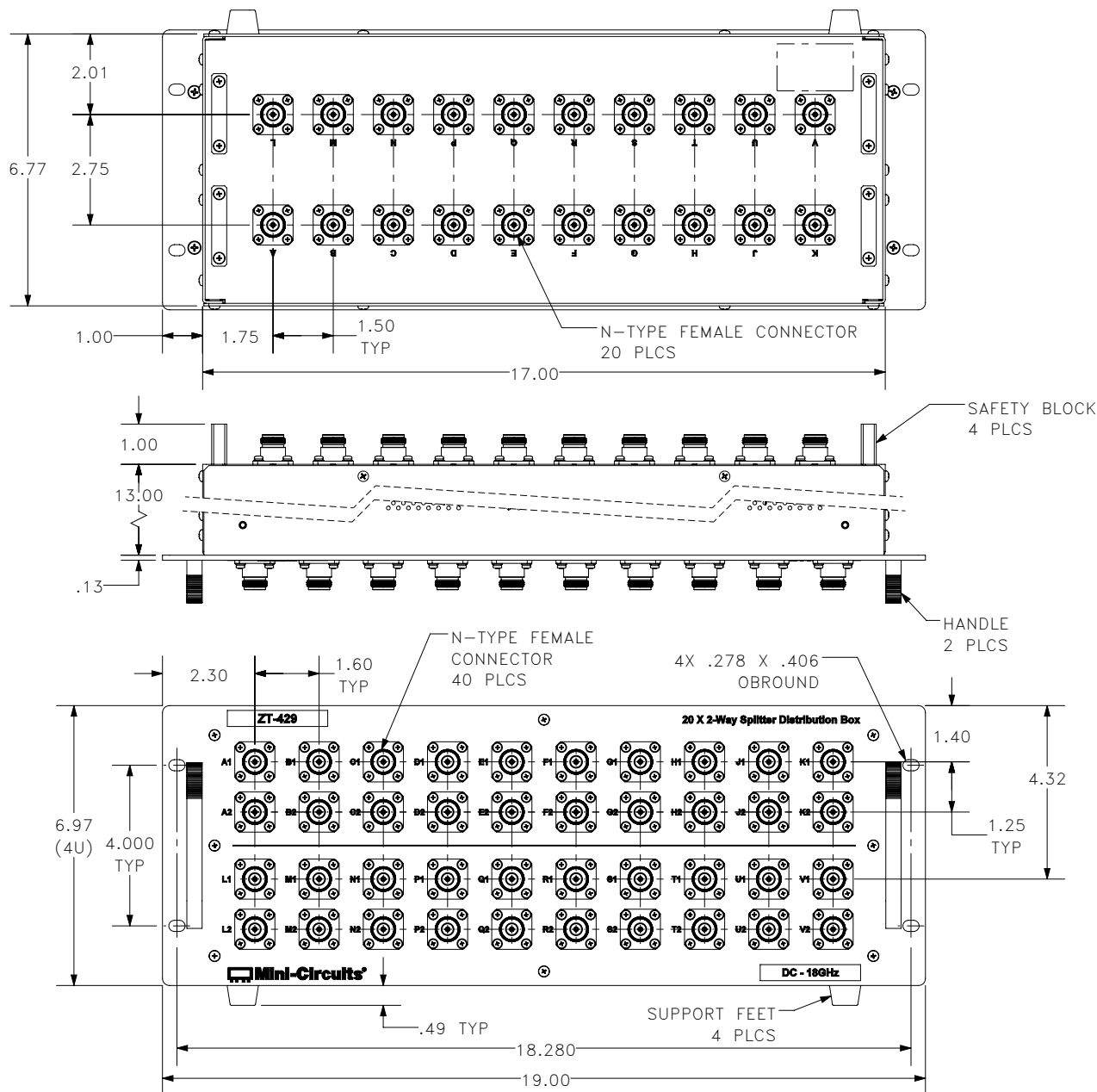
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CASE STYLE DRAWING



PRODUCT MARKING*

Product Marking: ZT-429

Product Description: 20 X 2-Way Splitter Distribution Box

Product Frequency: DC - 18 GHz

Unit ID Label: Serial number and other identification marks

*Marking may contain other features or characters for internal lot control





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DETAILED MODEL INFORMATION IS AVAILABLE ON OUR WEBSITE [CLICK HERE](#)

Case Style	99-01-3705
Environmental Rating	ENV55
Regulatory Compliance	Refer to our website for compliance methodologies and qualifications   www.minicircuits.com/quality/environmental_introduction.html

Contact Us: testsolutions@minicircuits.com

- NOTES
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