



COAXIAL

Active Splitter

ZT-415

Mini-Circuits

50 Ω 30 to 6000 MHz 8-Way Rack-Mount N-type & SMA Female

THE BIG DEAL

- 8-way power division with no path loss
- Exceptionally wide frequency coverage
- Convenient rack-mountable chassis
- AC mains power supply

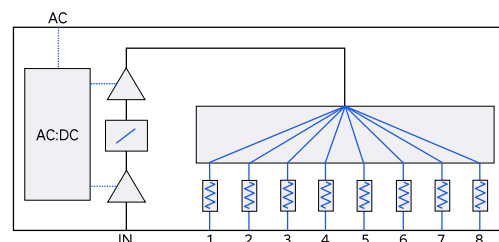


Generic photo used for illustration purposes only

APPLICATIONS

- Benchtop and rack-mounted automated test systems
- 5G FR1, Bluetooth & WiFi signal distribution
- GNSS (GPS, Galileo, GLONASS) signal distribution
- Test instrumentation time synchronization
- L-band satcom (satellite communications)

FUNCTIONAL BLOCK DIAGRAM



PRODUCT OVERVIEW

Mini-Circuits' ZT-415 is an 8-way active power splitter covering an extremely wide bandwidth from 30 MHz to 6 GHz, ideally suited for cellular, satcom and GNSS (GPS, GLONASS & Galileo) signal distribution applications. The splitter is powered from the AC mains input with internal amplification and equalization across the bandwidth to compensate for splitter path losses from input to each output.

The system is housed in a slim 19-inch rack chassis with all RF ports on the front panel, N-type at the input and SMA at the 8 outputs.

ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Conditions	Min.	Typ.	Max.	Units
Frequency Range		30		6000	MHz
Gain	30-1000 MHz	-1.0	+0.5		dB
	1000-4000 MHz	-0.5	+1.5		
	4000-6000 MHz	-4.0	-1.0		
Isolation	Within output groups ¹	18	23		dB
	Between adjacent groups ²	33	38		
Reverse Isolation ³		40	65		dB
Input Return Loss	30-3000 MHz		18		dB
	3000-6000 MHz		12		
Output Return Loss	30-3000 MHz		23		dB
	3000-6000 MHz		18		
Input P1dB ⁴				-20	dBm

1. Isolation between any pair of outputs within ports 1-4, or within ports 5-8

2. Isolation between any pair of outputs from 1-4 to 5-8

3. Reverse path loss measured from any output to in

4. Input power level at which the internal amplifier would typically be expected to reach its output power 1 dB compression point

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ZT-415
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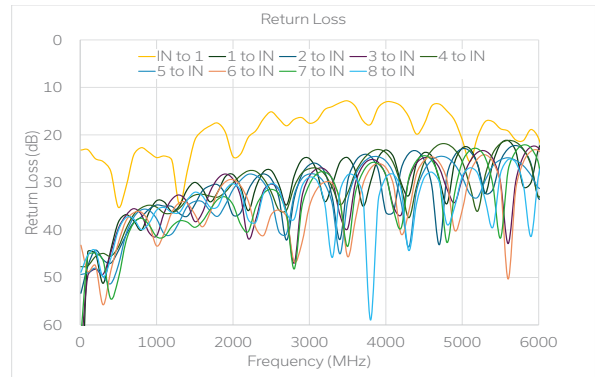
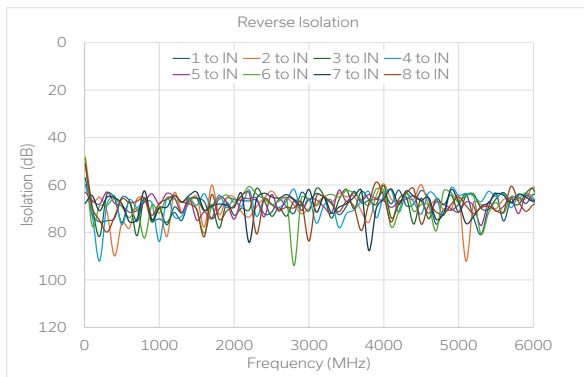
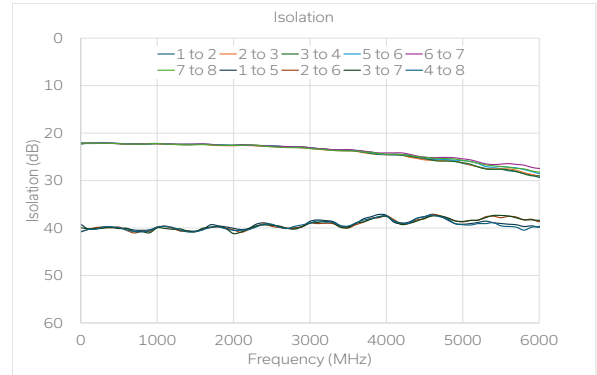
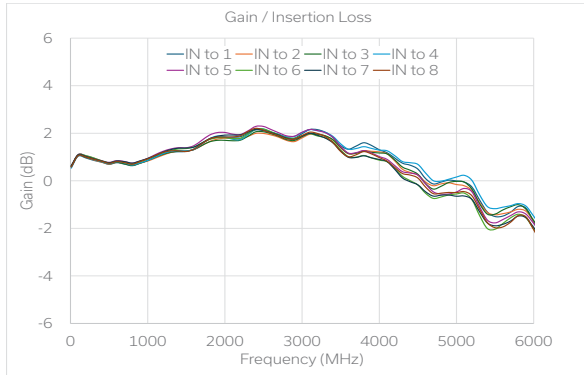
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TYPICAL PERFORMANCE GRAPHS



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Active Splitter

ZT-41550 Ω 30 to 6000 MHz 8-Way Rack-Mount N-type & SMA Female**ABSOLUTE MAXIMUM RATINGS**

Parameter	Conditions	Limits	Units
Temperature	Operating	0 to +50	$^{\circ}\text{C}$
	Storage	-20 to +60	
Input Power (No Damage)		-20	dBm

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.

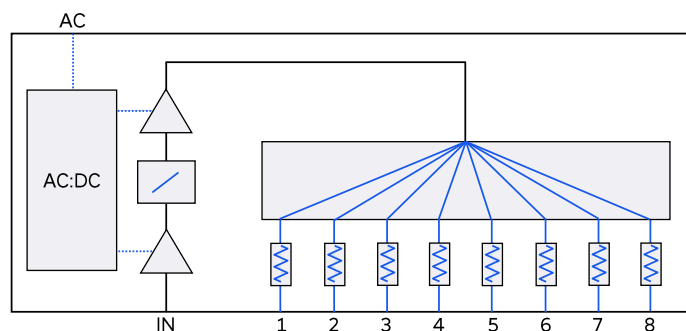
POWER SUPPLY

Power Supply	AC mains input: 100-240 V, 50 / 60 Hz
Fuse	2A, 250V rating
Power Consumption	150W maximum

CONNECTIONS

Port	Connector
IN	N-type female
1-8	SMA female
AC Input	IEC C14 inlet

IN = Input port
1-8 = Output ports

FUNCTIONAL BLOCK DIAGRAM



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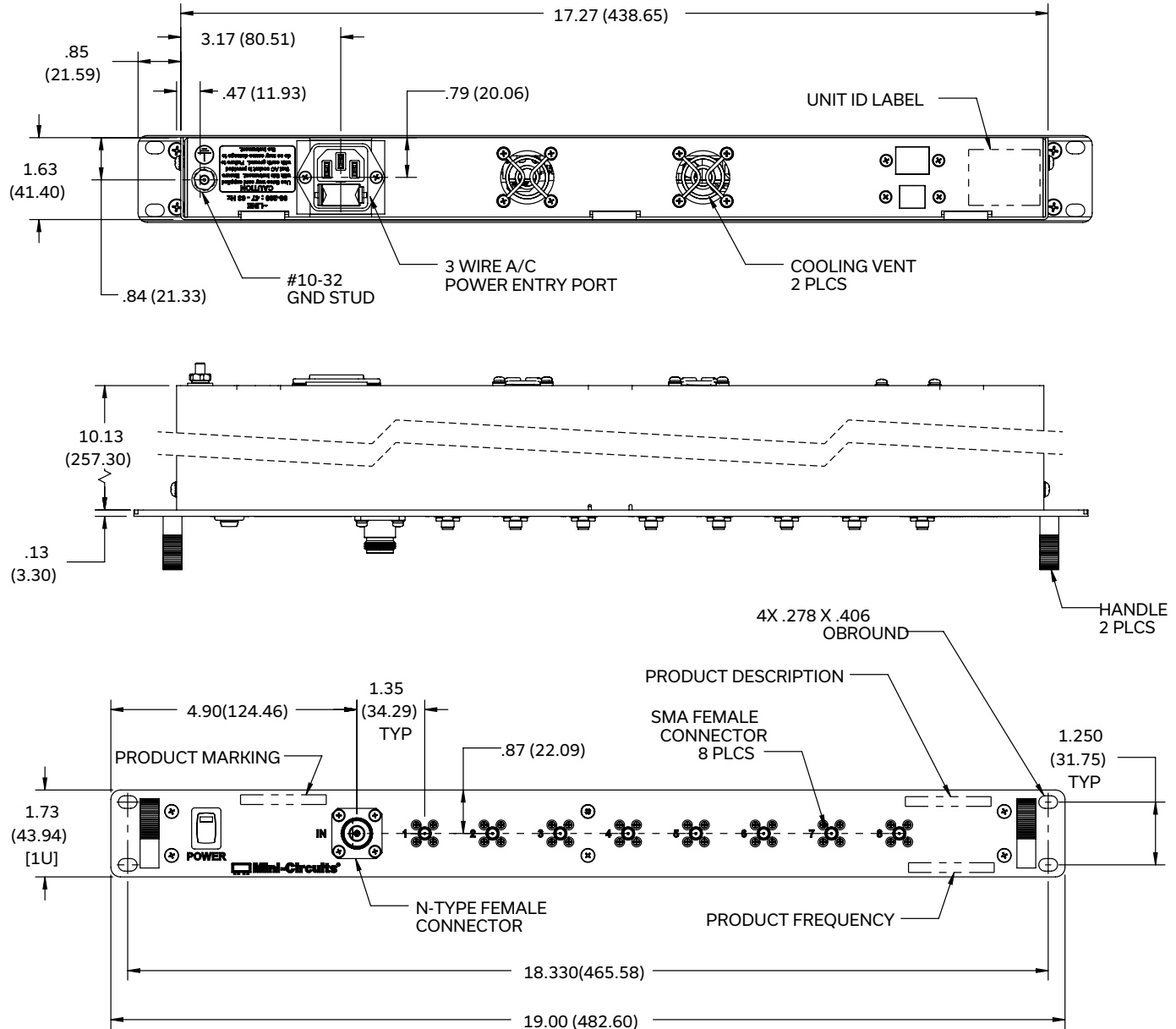
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CASE STYLE DRAWING



Weight: 2330 grams.

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

PRODUCT MARKING

Product Marking: ZT-415

Product Description: 8-Way Active Splitter

Product Frequency: 30-6000 MHz

Unit ID Label: Serial number and other identification marks

Marking may contain other features or characters for internal lot control





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50 Ω 30 to 6000 MHz 8-Way Rack-Mount N-type & SMA FemaleDETAILED MODEL INFORMATION IS AVAILABLE ON OUR WEBSITE [CLICK HERE](#)

Case Style	BAL3652
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

Included Accessories	Part Number	Description
	CBL-3W-xx	AC power cord (IEC C13 connector to local plug) Select one option from the list below. Please contact testsolutions@minicircuits.com if your region is not listed.
	HT-4-SMA	SMA connector wrench (4" length)

AC Power Cord Options	Part Number	Description
	CBL-3W-US	USA NEMA 5-15 plug (type B) to IEC C13 connector
	CBL-3W-EU	Europe CEE 7/7 plug (type E/F) to IEC C13 connector
	CBL-3W-UK	UK BS-1363 plug (type G) to IEC C13 connector
	CBL-3W-AU	Australia & China AS/NZS 3112 plug (type I) to IEC C13 connector
	CBL-3W-IL	Israel SI-32 plug (type H) to IEC C13 connector

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/terms/viewterm.html



Environmental Specifications ENV55

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	-0° to 50° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-20° to 60° C Ambient Environment	Individual Model Data Sheet
Operating and Storage Humidity	5% to 85% RH (non-condensing)	Ambient
Bench Handling Test	Bench Top Tip 45° & Drop	MIL-PRF-28800F
Transit Drop Test	Free Fall Drop, 20 cm (7.9 inches)	MIL-PRF-28800F Class 3