COAXIAL

# Active Splitter

# ZT-415

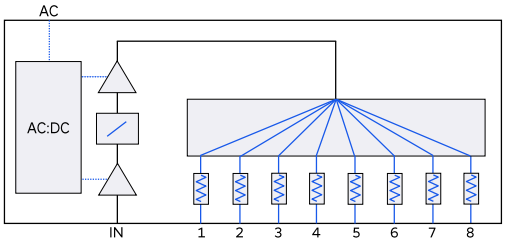
50 Ω 30 to 6000 MHz 8-Way Rack-Mount N-type & SMA Female

## 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*

## FUNCTIONAL BLOCK DIAGRAM




## 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)

## 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

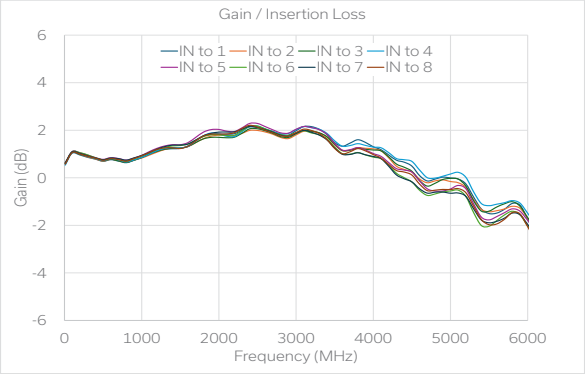
REV. A
ECO-023589
ZT-415
MCL NY
231218

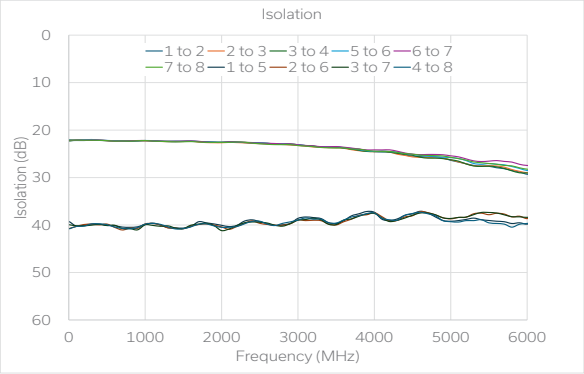
# Active Splitter

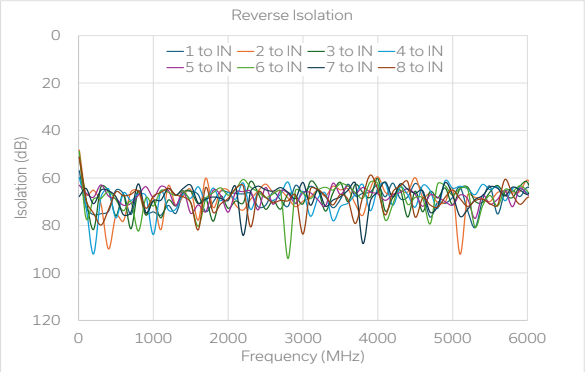
**ZT-415**

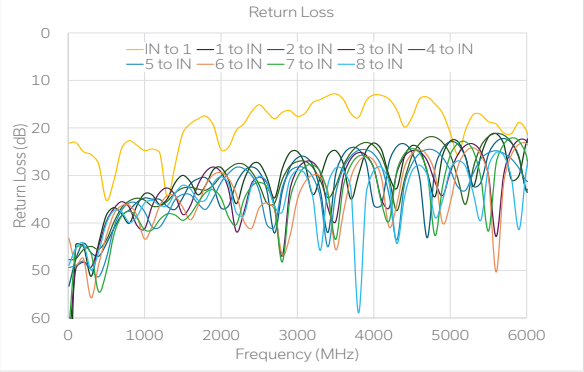
50 Ω 30 to 6000 MHz 8-Way Rack-Mount N-type & SMA Female

## TYPICAL PERFORMANCE GRAPHS



# Active Splitter

# ZT-415

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

## ABSOLUTE MAXIMUM RATINGS

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

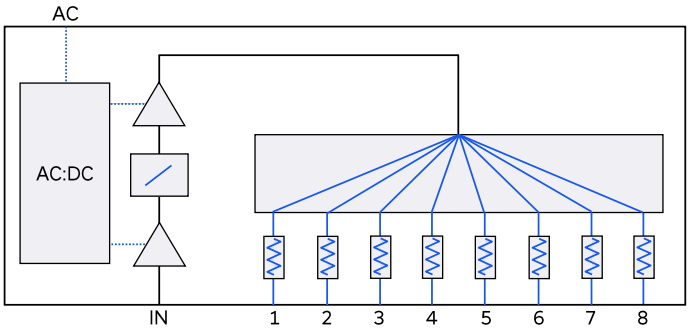
| | |
|---|---|
| **Power Supply** | AC mains input:<br>100-240 V, 50 / 60 Hz |
| **Fuse** | 2A, 250V rating |
| **Power Consumption** | 150W maximum |

## 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

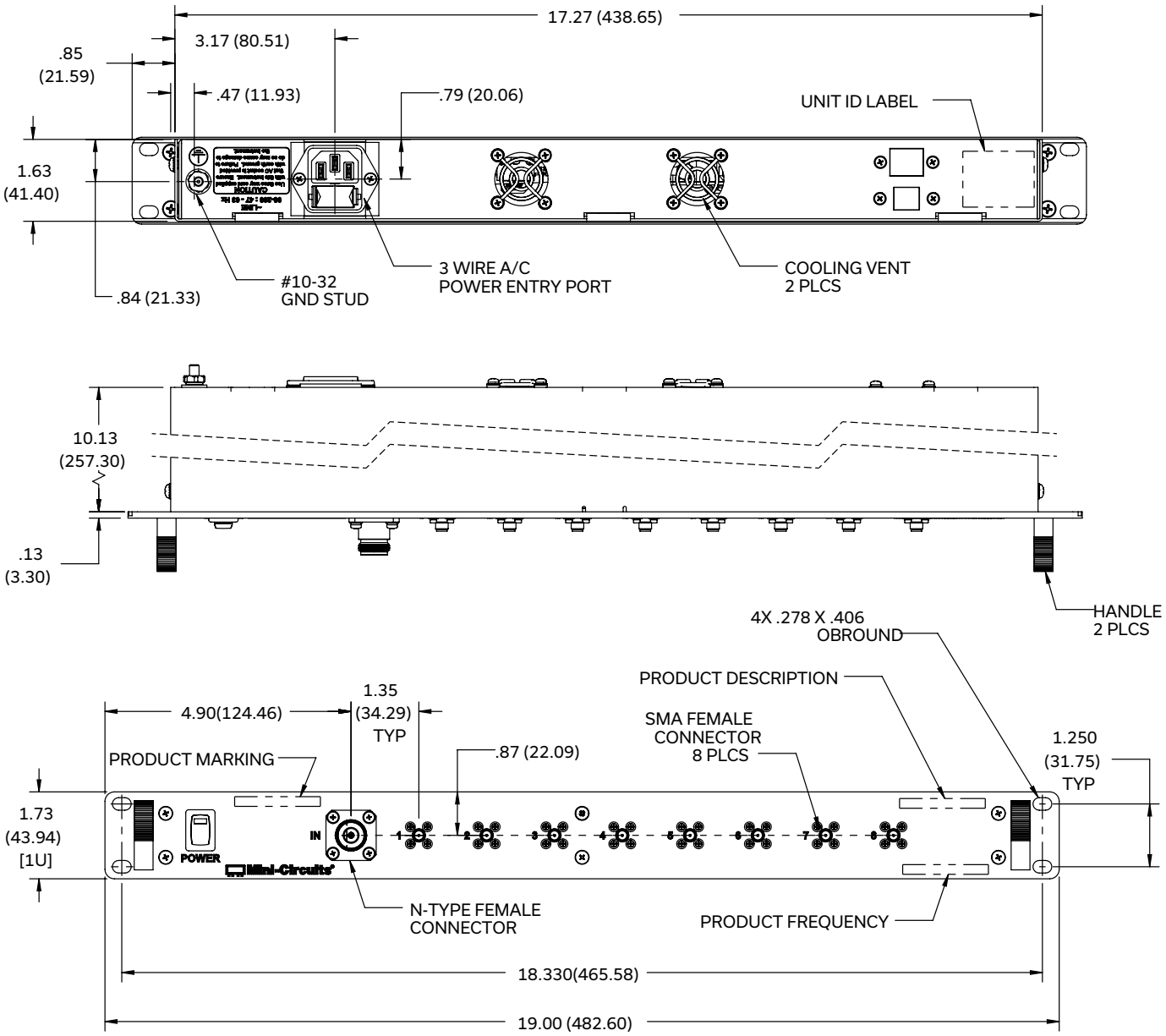


# Active Splitter

**ZT-415**

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

## CASE STYLE DRAWING




Weight: 2330 grams.
Dimensions are in inches (mm). Tolerances: 2 Pl.±.03 inch; 3 Pl.±.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

COAXIAL

# Active Splitter

# ZT-415

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

**DETAILED 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 CE UKCA 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<br>NEMA 5-15 plug (type B) to IEC C13 connector |
| | CBL-3W-EU | Europe<br>CEE 7/7 plug (type E/F) to IEC C13 connector |
| | CBL-3W-UK | UK<br>BS-1363 plug (type G) to IEC C13 connector |
| | CBL-3W-AU | Australia & China<br>AS/NZS 3112 plug (type I) to IEC C13 connector |
| | CBL-3W-IL | Israel<br>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

Mini-Circuits

**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<br>Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -20° to 60° C<br>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 |



This document and its contents are the property of Mini-Circuits