



RACK-MOUNTED

# 10 x 10dB Attenuator Panel

**ZT-354**

50Ω DC to 18 GHz 20W

## THE BIG DEAL

- 10 x precision fixed attenuators
- Convenient panel-mounted design
- 20W power rating

## APPLICATIONS

- High power measurements
- Production test set-ups
- RF input protection

## PRODUCT OVERVIEW

Mini-Circuits panel-mounted structures provide clean, organized management of cable runs and connections in complex, high-volume test setups. Multiple connector adapters, power splitters, directional couplers and other essential RF components and test accessories can be integrated efficiently within the test system. Custom configurations are available upon request.

ZT-354 is a 2U height panel incorporating 10 fixed attenuators, each with 10 dB attenuation and 20 W power rating. All ports (SMA female) are accessible on the front panel.



CASE STYLE: YE2750

**RoHS Compliant**

See our website for RoHS Compliance methodologies and qualifications

## ELECTRICAL SPECIFICATIONS AT 25°C (PER ATTENUATOR)

| Parameter       | Frequency (GHz) | Min. | Typ. | Max. | Unit |
|-----------------|-----------------|------|------|------|------|
| Frequency Range | -               | DC   | -    | 18   | GHz  |
| Attenuation     | DC - 18         | -    | 10   | -    | dB   |
| VSWR            | DC - 6          | -    | 1.3  | -    | :1   |
|                 | 6 - 12.4        | -    | 1.3  | -    |      |
|                 | 12.4 - 18       | -    | 1.4  | -    |      |
| Input Power     | DC - 18         | -    | -    | 20   | W    |

## MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

|               |                                                                                                                  |                                                                                                                    |          |              |
|---------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------|--------------|
| Dimensions    | 19" (W) x 2U (H)                                                                                                 |                                                                                                                    |          |              |
| Case Style    | YE2750                                                                                                           |                                                                                                                    |          |              |
| Case Material | Aluminum (with protective coating to prevent corrosion)                                                          |                                                                                                                    |          |              |
| RF Connectors | Panel                                                                                                            | Connector                                                                                                          | Quantity | Port Labels  |
|               | Front                                                                                                            | SMA female                                                                                                         | 20       | A1-10; B1-10 |
| Panel Marking | Front Panel                                                                                                      | Rear Panel                                                                                                         |          |              |
|               | <ul style="list-style-type: none"><li>• ZT-354</li><li>• 20W 10 dB Attenuator Rack</li><li>• DC-18 GHz</li></ul> | <ul style="list-style-type: none"><li>• CE / EAC / UKCA</li><li>• Serial number / date code / model name</li></ul> |          |              |
| Panel Items   | <ul style="list-style-type: none"><li>• Carry handles</li></ul>                                                  |                                                                                                                    |          |              |
| Temperature   | Operating: 0 to +50 °C                                                                                           |                                                                                                                    |          |              |

REV. A  
ECO-013880  
ZT-354  
MCL:NY  
220623





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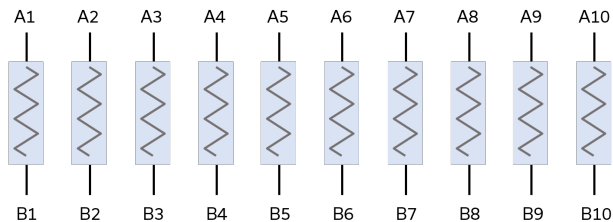
# 10 x 10dB Attenuator Panel

ZT-354

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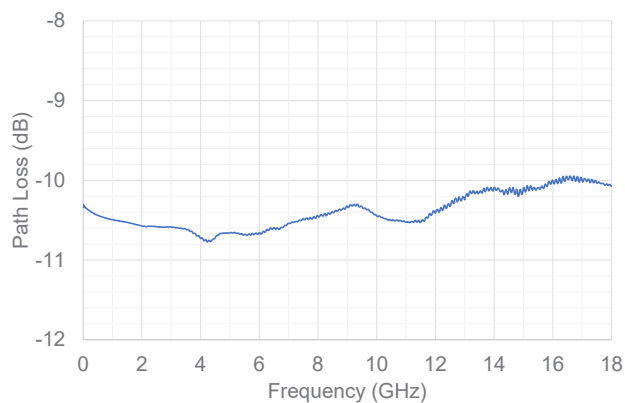
50 $\Omega$  DC to 18 GHz 20W

## FUNCTIONAL BLOCK DIAGRAM

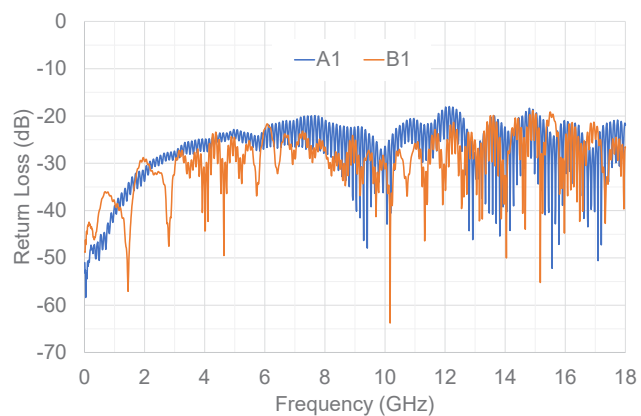


## TYPICAL PERFORMANCE CURVES

Path Loss



Return Loss





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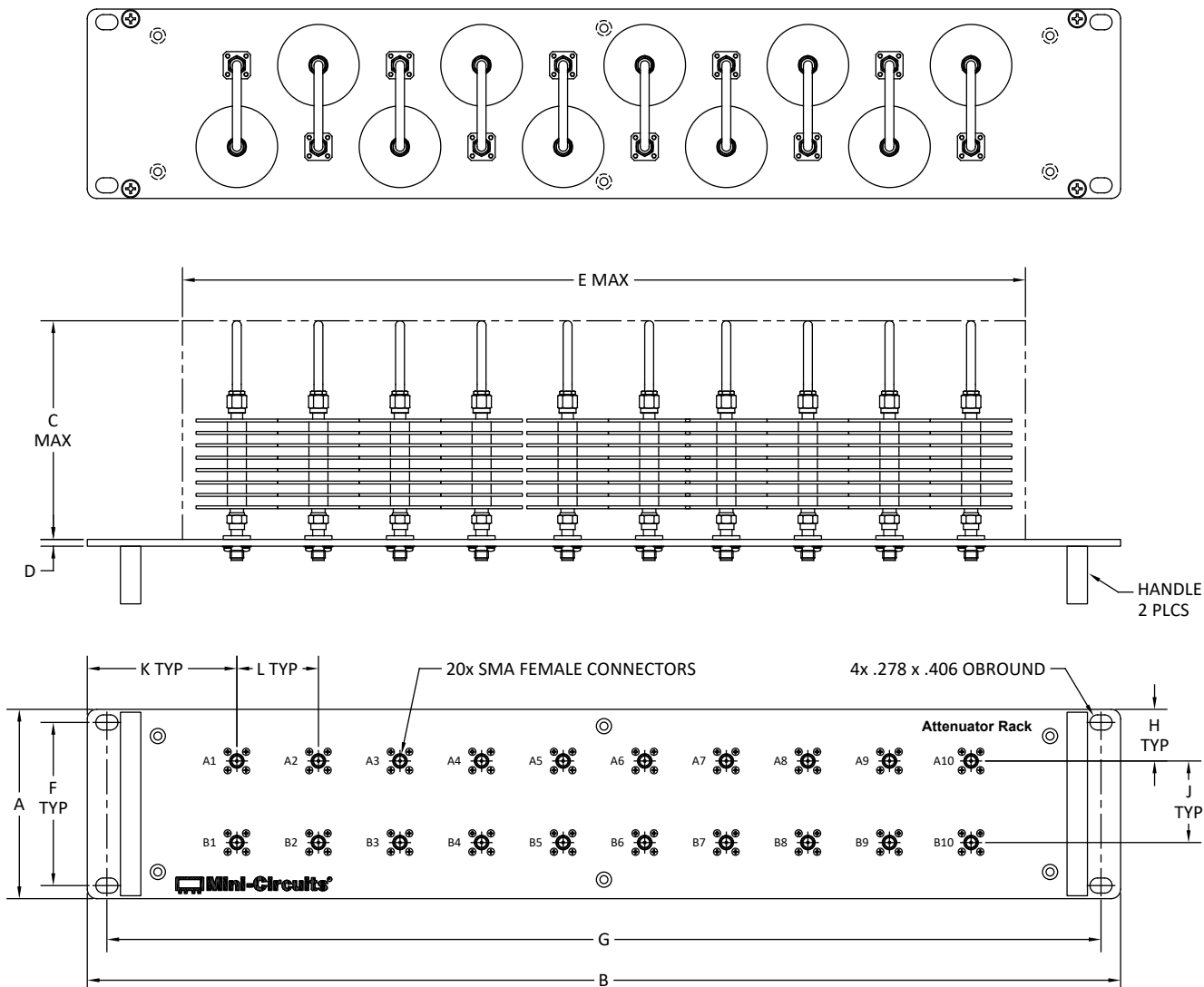
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## OUTLINE DRAWING



## OUTLINE DIMENSIONS (Inch/mm)

| A    | B     | C     | D    | E      | F     | G      | H     | J    | K    | L    | wt    |
|------|-------|-------|------|--------|-------|--------|-------|------|------|------|-------|
| 3.48 | 19.00 | 6.00  | 0.13 | 13.50  | 3.000 | 18.280 | 0.95  | 1.50 | 2.75 | 1.50 | grams |
| 88.4 | 482.6 | 152.4 | 3.30 | 342.90 | 76.2  | 464.3  | 24.13 | 38.1 | 69.9 | 38.1 | 1050  |

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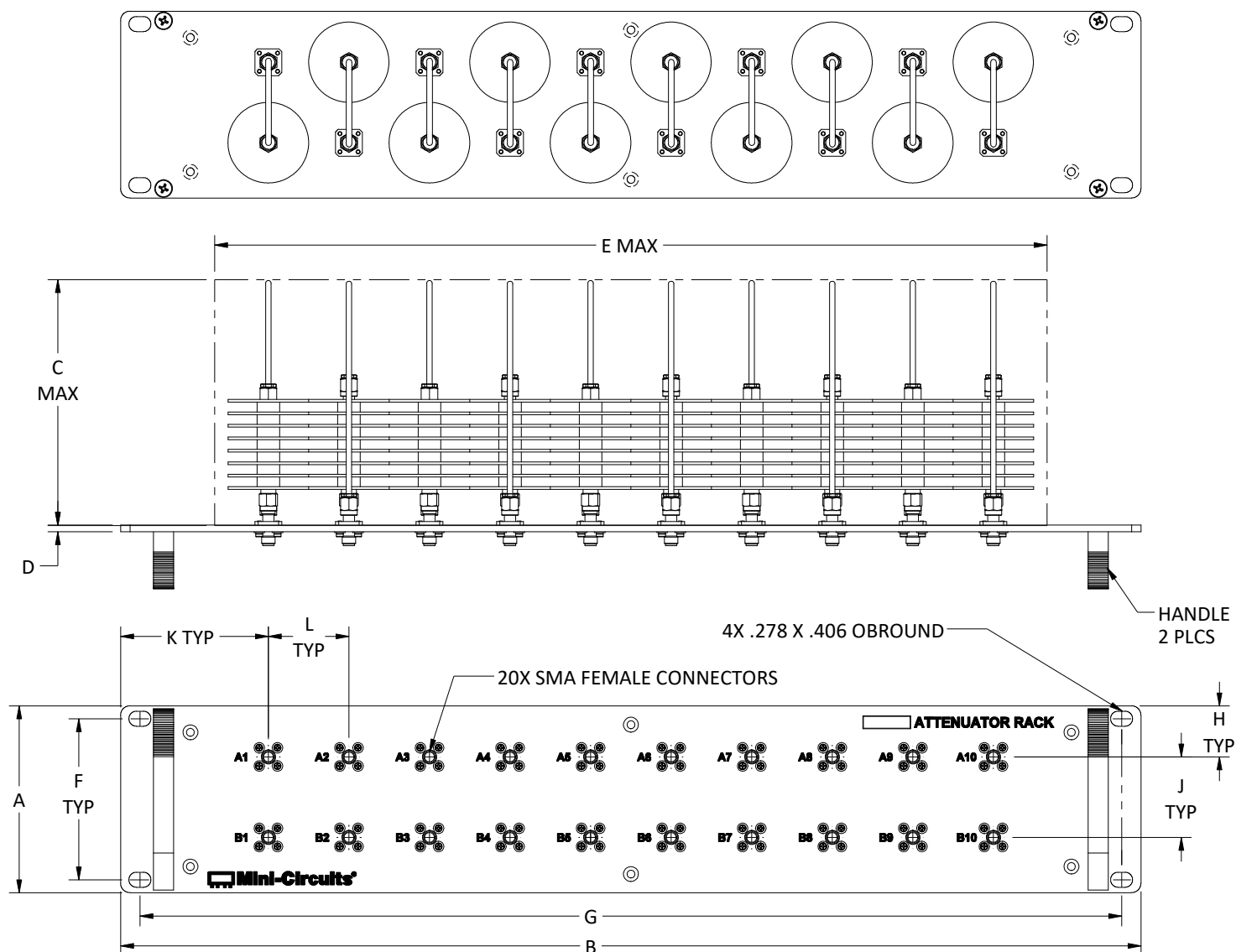
**ORDERING INFORMATION**To learn more, click here: [ZT-354](#)

| Model                  | Description                 |
|------------------------|-----------------------------|
| <a href="#">ZT-354</a> | 10 x 10 dB Attenuator Panel |

| Included Accessories                                                              | Part No. | Description             |
|-----------------------------------------------------------------------------------|----------|-------------------------|
|  | HT-4-SMA | SMA Cable Wrench (4 in) |

**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](http://www.minicircuits.com/terms/viewterm.html)



| CASE # | A      | B       | C       | D     | E       | F       | G        | H      | J      | K      | L      | WT, GRAMS |
|--------|--------|---------|---------|-------|---------|---------|----------|--------|--------|--------|--------|-----------|
| YE2750 | 3.48   | 19.00   | 6.00    | .13   | 15.50   | 3.000   | 18.280   | .95    | 1.50   | 2.75   | 1.50   | 1050      |
|        | (88.4) | (482.6) | (152.4) | (3.3) | (393.7) | (76.20) | (464.31) | (24.1) | (38.1) | (69.9) | (38.1) |           |

Dimensions are in inches ( mm ) . Tolerances: 2 Pl.  $\pm .1$ ; 3 Pl.  $\pm .015$

### Notes:

- Case material: Aluminum alloy.
- Finish: Clear chemical conversion coating



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

RF/IF MICROWAVE COMPONENTS



## Environmental Specifications ENV56

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 40° C<br>Ambient Environment  | Individual Model Data Sheet |
| Storage Temperature            | -15° to 85° 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      |