

Features and Benefits

ANTRONIX®

1.218 GHz Horizontal Digital Splitters CMC4000H Series

Reliability, quality and performance define the Antronix CMC4000H series digital splitter. Our digital splitters have been designed specifically for today's two-way broadband networks. Low intermodulation distortion and high port-to-port return band isolation prevent high power cable modem signals from distorting neighboring port signals. Capacitively coupled F-ports block AC surges and prevent hum modulation. Additionally, our splitters are among the most robust in the industry. Every port on each CMC4000H series splitter can withstand 6 kV ring wave surges, while our proprietary ferrites remain ultralinear following several surges. To ensure years of reliable performance, Antronix's splitters are encased in a zinc alloy diecast housing with tin plating. The splitter ports are sealed to 15 psi and are SCTE compliant. The CMC4000H series splitters guarantee consistent performance over time and temperature.

- **6 kV Ring Wave Surge Withstand**
All ports can withstand multiple 6 kV ring wave surges per IEEE specification C62.41 Category A3.
- **-45 dBmV Spurious and Harmonics after 6 kV Ring Wave with a +55 dBmV Return Signal**
Proprietary ferrite bead inhibits re-magnetization of the core due to voltage spikes from impulse noise or lightning. The ferrite remains ultra linear to prevent intermodulation where high level return carriers can affect forward path video signals.
- **Digital Broadcast and HDTV Ready**
Compatible with existing and future networks such as VoIP and DOCSIS 3.0.
- **Flat 1.218 GHz Bandwidth with Minimal Insertion Loss**
Supports present and future multimedia applications including video, data and telephony.
- **High Return Path Output Return Loss and Port-to-Port Return Band Isolation**
Excellent return path performance compatible with two-way digitally modulated networks.
- **Eclipse Contact Technology (ECT) F-port**
Provides 400% more contact surface area for lower contact resistance and higher reliability.
- **Capacitively Coupled F-ports**
Protects against core re-magnetization and saturation while blocking AC surges.
- **Zinc Alloy Diecast Housing and Backplate w/Tin Plating**
Superior corrosion resistant plating combined with a diecast backplate protects the back of the housing where corrosion is more prominent.
- **100% Soldered Back**
Ensures repeatable 120 dB RFI shielding.
- **Flat 15 psi Sealed, SCTE Compliant F-ports**
Prevents water migration in to the splitter and ensures an excellent ground connection.
- **UV Resistant Label**
- **Integrated Mounting Tabs and Heavy Duty Ground Block for Years of Reliable Service**



Electrical Specifications

CMC4000H Series Splitter

| Model # | | CMC4002H | | CMC4003H | | CMC4003BH | | CMC4004H | | CMC4008H | |
|----------------------------|------------|----------|-----|-----------|-----------|-----------|-----|----------|-----|----------|------|
| Specification | Freq (MHz) | Max/Min | Typ | Max/Min | Typ | Max/Min | Typ | Max/Min | Typ | Max/Min | Typ |
| Insertion Loss | | | | | | | | | | | |
| Maximum (dB) | 5-15 | 3.5 | 3.3 | 3.5 / 7.0 | 3.4 / 6.8 | 5.8 | 5.5 | 7.0 | 6.8 | 11.2 | 11.0 |
| | 15-85 | 3.5 | 3.3 | 3.6 / 7.0 | 3.4 / 6.8 | 5.8 | 5.5 | 7.2 | 6.8 | 11.0 | 10.8 |
| | 85-200 | 3.6 | 3.3 | 3.6 / 7.2 | 3.6 / 7.1 | 5.8 | 5.5 | 7.2 | 6.8 | 11.2 | 11.0 |
| | 200-550 | 3.7 | 3.5 | 3.8 / 7.5 | 3.8 / 7.4 | 6.0 | 5.8 | 7.4 | 7.0 | 11.5 | 11.2 |
| | 550-750 | 3.8 | 3.7 | 4.0 / 7.7 | 4.0 / 7.8 | 6.2 | 6.0 | 7.6 | 7.2 | 12.0 | 11.8 |
| | 750-1002 | 4.2 | 3.8 | 4.2 / 8.5 | 4.0 / 8.0 | 6.8 | 6.3 | 8.5 | 7.6 | 12.5 | 12.3 |
| | 1002-1218 | 4.6 | 4.5 | 4.6 / 8.9 | 4.5 / 8.5 | 7.5 | 7.3 | 8.9 | 8.5 | 12.9 | 12.5 |
| Isolation | | | | | | | | | | | |
| Minimum (dB) | 5-15 | 24 | 30 | 24 | 30 | 24 | 30 | 24 | 30 | 22 | 24 |
| | 15-85 | 35 | 40 | 34 | 40 | 30 | 36 | 35 | 40 | 30 | 34 |
| | 85-200 | 30 | 38 | 30 | 35 | 28 | 30 | 28 | 35 | 25 | 28 |
| | 200-550 | 25 | 35 | 25 | 35 | 22 | 25 | 25 | 30 | 25 | 26 |
| | 550-750 | 25 | 30 | 25 | 30 | 22 | 25 | 25 | 30 | 22 | 24 |
| | 750-1002 | 22 | 28 | 22 | 28 | 22 | 25 | 22 | 28 | 22 | 24 |
| | 1002-1218 | 22 | 23 | 22 | 23 | 22 | 24 | 22 | 24 | 22 | 24 |
| Input Return Loss | | | | | | | | | | | |
| Minimum (dB) | 5-15 | 22 | 25 | 22 | 25 | 22 | 28 | 20 | 22 | 20 | 22 |
| | 15-85 | 25 | 30 | 22 | 28 | 22 | 30 | 20 | 22 | 25 | 26 |
| | 85-200 | 23 | 30 | 23 | 26 | 22 | 30 | 20 | 25 | 20 | 22 |
| | 200-550 | 20 | 28 | 20 | 25 | 20 | 25 | 20 | 25 | 20 | 22 |
| | 550-750 | 20 | 25 | 20 | 25 | 20 | 25 | 20 | 24 | 20 | 22 |
| | 750-1002 | 20 | 25 | 20 | 25 | 20 | 25 | 20 | 24 | 20 | 22 |
| | 1002-1218 | 20 | 21 | 18 | 21 | 18 | 20 | 18 | 20 | 18 | 20 |
| Output Return Loss | | | | | | | | | | | |
| Minimum (dB) | 5-15 | 22 | 28 | 20 | 25 | 20 | 25 | 20 | 25 | 20 | 22 |
| | 15-85 | 35 | 40 | 30 | 38 | 25 | 35 | 30 | 38 | 28 | 30 |
| | 85-200 | 25 | 38 | 24 | 30 | 22 | 33 | 24 | 30 | 20 | 22 |
| | 200-550 | 22 | 28 | 20 | 28 | 20 | 25 | 20 | 25 | 20 | 22 |
| | 550-750 | 20 | 25 | 20 | 25 | 20 | 25 | 20 | 24 | 20 | 22 |
| | 750-1002 | 20 | 25 | 20 | 25 | 20 | 25 | 20 | 24 | 20 | 22 |
| | 1002-1218 | 20 | 21 | 18 | 21 | 18 | 20 | 18 | 20 | 18 | 20 |
| RFI Minimum (dB) | 1218 | 120 | | | | | | | | | |

Specifications CMC4000H Series

| General | |
|-----------------------|--|
| Nominal Impedance | 75 Ω |
| F-connector Type | ANSI/SCTE-01 Compliant ECT F-port |
| Recommended Torque | 30 in-lbs |
| Surge Withstand | 6 kV Ring Wave Surge per IEEE C62.41 Category A3 |
| Second Harmonic | -45 dBmV after 6 kV ring wave surge with a +55 dBmV return input carrier |
| Environmental | |
| Pressure Seal | 15 psi |
| Operating Temperature | -40 °C to 60 °C |
| Corrosion Resistance | Exceeds ANSI/SCTE 143 specifications for 1000 hour |

| Physical | | | |
|----------------------------------|-------------|-------------|------------|
| Dimensions (Tol. ±0.5mm) | Length (mm) | Width (mm) | Depth (mm) |
| Model | | | |
| CMC4002H | 1.9 (48.0) | 2.4 (61.0) | 0.6 (16.2) |
| CMC4003H, CMC4003BH, CMC4004H | 1.9 (48.0) | 3.4 (86.0) | 0.6 (16.5) |
| CMC4008H | 2.1 (52.3) | 4.0 (101.4) | 1.2 (31.0) |

Ordering Information

CMC40**XXXX**

Style
 BH – Balance Horizontal (3-way only)
 H – Horizontal

Number of Ports
 02, 03, 04, 06 or 08

Capacitively coupled
 1.218 GHz Splitter

(Ex.) CMC4003BH-A: 3-way horizontal splitter with balanced outputs

