

# Features and Benefits

**ANTRONIX®**

## 1 GHz Horizontal & Vertical Digital Splitters CMC2000 Series

Reliability, quality and performance define the Antronix CMC2000 series digital splitter. Our horizontal and vertical digital splitters have been designed specifically for today's two-way broadband networks. Our digital splitters are among the most robust in the industry. Every port on each CMC2000 series splitter is 6 kV ring wave surge protected, while our proprietary ferrites remain ultra-linear following several surges. The CMC2000 series digital splitters employ high "O" surface mount technology (SMT) components, guaranteeing consistent performance over time and temperature. With over 90 versions available, there will be a CMC2000 digital splitter to meet your needs.



- **6 kV Ring Wave Surge Protected**

All ports are protected against multiple 6 kV ring wave surges per IEEE specification C62.41 Category A3.

- **-45 dBmV Spurious and Harmonics after 5 Surges of 6 kV Ring Wave with a +55 dBmV Return Signal**

Proprietary ferrite blend 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.

- **Flat 1 GHz Bandwidth with Minimal Insertion Loss**

Supports present and future multimedia applications including video, data and telephony.

- **35 dB Return Path Output Return Loss and 40 dB 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/Proprietary Nickel Alloy 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.

- **1 inch Port-to-Port Spacing Flat 15 psi Sealed, SCTE Compliant F-Port**

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

## CMC2000 Series    1 GHz Horizontal Digital Splitters

Model #		CMC2002H		CMC2003H		CMC2003BH		CMC2004H		CMC2008H		CMC2016H	
Specification	Freq (MHz)	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ
<b>Insertion Loss</b>													
<b>Maximum</b> (dB)	5-14	3.5	3.3	3.5 / 7.0	3.3 / 6.5	5.8	5.5	7.0	6.8	11.0	10.8	13.7	13.5
	14-40	3.5	3.3	3.5 / 7.0	3.3 / 6.5	5.8	5.5	7.2	6.8	11.0	10.8	13.7	13.5
	40-200	3.5	3.3	3.5 / 7.1	3.3 / 6.5	5.8	5.5	7.2	6.8	11.0	10.8	14.2	14.0
	200-550	3.7	3.5	3.7 / 7.3	3.5 / 6.8	6.0	5.8	7.4	7.0	11.2	11.0	14.7	14.5
	550-750	3.8	3.7	3.9 / 7.6	3.6 / 7.2	6.2	6.0	7.6	7.2	11.8	11.5	14.7	14.5
	750-1002	4.0	3.8	4.1 / 8.1	3.8 / 7.8	6.8	6.3	8.0	7.6	12.5	12.0	15.2	15.0
<b>Isolation</b>													
<b>Minimum</b> (dB)	5-14	24	30	24	30	24	30	24	30	24	28	21	23
	14-40	35	40	35	40	32	36	35	40	35	40	24	26
	40-200	30	38	30	35	30	33	28	35	28	35	24	26
	200-550	25	35	25	35	25	28	25	30	25	28	24	26
	550-750	25	30	25	30	25	28	25	30	25	28	24	26
	750-1002	23	28	23	28	23	25	23	28	23	26	23	23
<b>Input Return Loss</b>													
<b>Minimum</b> (dB)	5-14	22	25	22	25	22	28	20	22	22	25	20	21
	14-40	25	30	24	28	25	30	25	22	25	30	20	22
	40-200	25	30	23	26	23	30	23	25	23	28	18	20
	200-550	20	28	20	25	20	25	20	25	20	25	18	20
	550-750	20	25	20	25	20	25	20	24	20	25	18	20
	750-1002	20	25	20	25	20	25	20	24	20	24	18	20
<b>Output Return Loss</b>													
<b>Minimum</b> (dB)	5-14	22	28	20	25	20	25	20	25	20	23	18	20
	14-40	35	40	34	40	30	35	32	38	28	35	20	21
	40-200	25	38	24	30	24	33	24	30	24	30	20	22
	200-550	22	28	20	28	20	25	20	25	20	28	20	22
	550-750	20	25	20	25	20	25	20	24	20	24	20	22
	750-1002	20	25	20	25	20	25	20	24	20	24	20	22
<b>RFI Isolation</b>													
<b>dB(min)</b>	5-1002												120



# Electrical Specifications

## CMC2000 Series    1 GHz Vertical Digital Splitters

Model #		CMC2002V		CMC2003V		CMC2003BV		CMC2004V		CMC2006V		CMC2008V	
Specification	Freq (MHz)	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ	Max/Min	Typ
<b>Insertion Loss</b>													
<b>Maximum</b> (dB)	5-14	3.5	3.3	3.5 / 7.0	3.3 / 6.8	6.0	5.5	7.0	6.8	9.2	9.0	11.0	10.8
	14-40	3.5	3.3	3.5 / 7.0	3.4 / 6.8	5.8	5.5	7.2	6.8	9.2	9.0	11.0	10.8
	40-200	3.6	3.5	3.6 / 7.2	3.4 / 7.0	6.0	5.5	7.4	7.0	9.4	9.2	11.0	10.8
	200-550	3.8	3.5	3.8 / 7.4	3.6 / 7.2	6.0	5.8	7.6	7.2	9.6	9.4	11.2	11.0
	550-750	3.9	3.6	4.0 / 7.8	3.8 / 7.4	6.2	6.0	7.8	7.4	9.8	9.6	11.8	11.2
	750-1002	4.2	3.8	4.3 / 8.3	4.0 / 8.0	6.9	6.5	8.2	7.8	10.5	10.0	12.5	12.0
<b>Isolation</b>													
<b>Minimum</b> (dB)	5-14	22	25	22	25	22	25	22	25	22	25	22	25
	14-40	35	40	35	40	32	38	35	40	28	35	35	40
	40-200	25	35	25	30	25	35	28	35	25	28	28	35
	200-550	25	28	25	28	25	28	25	28	25	28	25	28
	550-750	25	28	25	28	25	28	25	28	25	26	25	26
	750-1002	23	25	23	25	23	25	23	25	23	25	23	25
<b>Input Return Loss</b>													
<b>Minimum</b> (dB)	5-14	20	22	20	22	20	22	20	22	20	22	20	22
	14-40	22	25	22	25	22	25	22	25	22	25	22	25
	40-200	20	22	20	22	20	22	20	22	20	22	20	22
	200-550	20	22	20	22	20	22	20	22	20	22	20	22
	550-750	20	22	20	22	20	22	20	22	20	22	20	22
	750-1002	20	22	20	22	20	22	20	22	20	22	20	22
<b>Output Return Loss</b>													
<b>Minimum</b> (dB)	5-14	20	22	20	22	20	22	20	22	20	22	20	22
	14-40	30	38	30	38	25	35	30	38	25	30	28	35
	40-200	22	28	22	28	22	22	22	28	22	25	22	28
	200-550	20	25	20	25	20	22	20	25	20	22	20	25
	550-750	20	22	20	22	20	22	20	22	20	22	20	22
	750-1002	20	22	20	22	20	22	20	22	20	22	20	22
<b>dB (min)</b>	5-1002	120											



Specifications subject to change without notice

## Specifications

### CMC2000 Series 1 GHz Horizontal & Vertical Digital Splitters

General	
Nominal Impedance	75 Ω
F-Connector Type	ANSI/SCTE-01 (formerly SCTE IPS-SP-400) Compliant ECT F-Port
F-Connector Torque Specs	30 in. lbs.
Surge Withstand	6 kV Ring Wave Surge per IEEE C62.41 Category A3
Second Harmonic	-45 dBmV after Five 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	Meets SCTE/ANSI Specification

Physical			
Dimensions (Tol. ±0.5mm)	Length (mm)	Width (mm)	Depth (mm)
<b>Model</b>			
CMC2002H	1.9 (48.0)	2.4 (61.0)	0.6 (16.2)
CMC2003H CMC2003BH CMC2004H	1.9 (48.0)	3.4 (86.0)	0.6 (16.5)
CMC2008H	2.1 (52.3)	4.0 (101.4)	1.2 (31.0)
CMC2016H	9.4 (238.5)	2.7 (68.2)	1.5 (38.0)
CMC2002V	1.4 (36.5)	2.3 (57.5)	1.1 (30.0)
CMC2003V CMC2003BV CMC2004V	1.6 (41.0)	3.3 (85.0)	1.2 (31.0)
CMC2006V CMC2008V	2.8 (70.0)	3.5 (89.0)	1.2 (31.0)

### Ordering Information

#### CMC20XXXX

Style  
 BH - Balanced Horizontal – 3-way only  
 BV - Balanced Vertical – 3-way only  
 H - Horizontal  
 V - Vertical

Number of Ports  
 02, 03, 04, 06, 08, or 16

Capacitively coupled  
 1 GHz Splitter



(Ex.) CMC2003BV: 3-way vertical splitter with balanced outputs