

Features and Benefits

ANTRONIX®

1 GHz Horizontal & Vertical Digital Splitters CMC2000HC-A Series

Reliability, quality and performance define the Antronix CMC2000HC-A series digital splitter. Our horizontal and vertical digital splitters have been designed specifically for today's two-way broadband networks. Low intermodulation distortion and 40 dB 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 digital splitters are among the most robust in the industry. The input port is 6 kV combination wave surge protected while all other ports are 6 kV ring wave surge protected. Our proprietary ferrites remain ultra-linear following several surges. The splitter ports are sealed to 15 psi.

- **6 kV Combination Wave Surge Protected**

Input port is protected against multiple 6 kV combination wave surge per IEEE specification C62.41 Category B3. All ports are protected against multiple 6 kV ring wave surges per IEEE specification C62.41 Category A3.

- **-45 dBmV Spurious and Harmonics after Surge 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 Tin 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-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 CMC2000HC-A Series Splitter

Model #		CMC2002HC-A		CMC2003HC-A		CMC2003BHC-A		CMC2004HC-A		CMC2008HC-A	
Specification	Freq (MHz)	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ
Insertion Loss											
Maximum (dB)	5-14	3.5	3.3	3.5 / 7.0	3. / 6.5	5.8	5.5	7.0	6.8	11.2	10.8
	15-40	3.5	3.3	3.6 / 7.0	3.3 / 6.5	5.8	5.5	7.2	6.8	11.0	10.8
	41-200	3.6	3.3	3.6 / 7.2	3.3 / 6.8	5.8	5.5	7.2	6.8	11.0	10.8
	201-550	3.7	3.5	3.8 / 7.5	3.5 / 6.9	6.0	5.8	7.4	7.0	11.5	11.1
	551-750	3.8	3.7	4.0 / 7.7	3.6 / 7.2	6.2	6.0	7.6	7.2	12.0	11.6
	751-1002	4.2	3.8	4.2 / 8.5	3.8 / 7.8	6.8	6.3	8.5	7.6	12.5	12.2
Isolation											
Minimum (dB)	5-14	24	30	24	30	24	30	24	30	24	28
	15-40	35	40	35	40	35	40	35	40	35	40
	41-200	30	38	30	35	30	35	28	32	25	30
	201-550	25	35	25	35	25	28	25	30	25	28
	551-750	25	30	25	30	25	28	25	30	23	28
	751-1002	23	28	23	28	23	25	23	28	23	26
Input Return Loss											
Minimum (dB)	5-14	20	22	20	22	20	25	20	25	20	22
	15-40	25	30	23	28	23	28	20	25	22	25
	41-200	23	30	23	30	20	25	20	25	20	25
	201-550	20	28	20	25	20	25	20	25	20	25
	551-750	20	25	20	25	20	25	20	25	20	25
	751-1002	20	25	20	25	20	25	20	25	20	25
Output Return Loss											
Minimum (dB)	5-14	20	25	20	25	20	25	20	25	20	23
	15-40	35	40	30	38	30	38	30	38	30	35
	41-200	25	38	24	30	24	30	24	30	24	30
	201-550	22	28	20	28	20	25	20	25	20	25
	551-750	20	25	20	25	20	25	20	24	20	24
	751-1002	20	25	20	25	20	25	20	24	20	24



Electrical Specifications CMC2000VC-A Series Splitter

Model #		CMC2002VC-A		CMC2003VC-A		CMC2004VC-A		CMC2006VC-A		CMC2008VC-A	
Specification	Freq (MHz)	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ
Insertion Loss											
Maximum (dB)	5-14	3.5	3.3	3.5 / 7.0	3.3 / 6.8	7.0	6.8	9.2	9.0	11.0	10.8
	15-40	3.5	3.3	3.5 / 7.0	3.4 / 6.8	7.2	6.8	9.4	9.0	11.0	10.8
	41-200	3.6	3.5	3.6 / 7.2	3.4 / 7.0	7.4	7.0	9.6	9.2	11.0	10.8
	201-550	3.8	3.5	3.8 / 7.4	3.6 / 7.2	7.6	7.2	9.8	9.4	11.5	11.0
	551-750	3.9	3.6	4.0 / 7.8	3.8 / 7.4	7.8	7.4	10.2	9.6	12.2	11.2
	751-1002	4.3	3.8	4.4 / 8.3	4.0 / 8.0	8.2	7.8	10.5	10.0	12.5	12.0
Isolation											
Minimum (dB)	5-14	22	25	22	25	22	25	22	25	22	25
	15-40	35	40	35	40	35	40	30	35	35	40
	41-200	25	35	25	30	28	35	25	30	28	35
	201-550	25	28	25	28	25	28	25	28	25	28
	551-750	25	28	25	28	25	26	25	26	25	26
	751-1002	23	25	23	25	23	25	23	25	23	25
Input Return Loss											
Minimum (dB)	5-14	20	25	20	25	20	25	20	22	20	22
	15-40	25	30	23	28	22	25	22	25	22	25
	41-200	20	28	20	28	20	28	20	25	20	25
	201-550	20	25	20	25	20	25	20	25	20	25
	551-750	20	25	20	25	20	25	20	25	20	25
	751-1002	20	25	20	25	20	25	20	25	20	25
Output Return Loss											
Minimum (dB)	5-14	20	25	20	25	20	25	20	25	20	25
	15-40	30	35	30	35	30	35	28	35	28	35
	41-200	22	28	22	28	22	28	20	25	20	25
	201-550	20	25	20	25	20	25	20	25	20	25
	551-750	20	22	20	22	20	22	20	22	20	22
	751-1002	20	22	20	22	20	22	20	22	20	22



Specifications

1 GHz Horizontal & Vertical Digital Splitters

General	
Nominal Impedance	75 Ω
RFI Minimum	120 dB
F-Connector Type	SCTE Compliant ECT F-Port
Environmental	
Pressure Seal	15 psi
Operating Temperature	-40 °C to 60 °C
Surge Protection	6kV Combination Wave Surge, IEEE C62.41 Cat B3 at Input Port 6 kV Ring Wave Surge, IEEE C62.41 Cat. A3 on all Ports
Second Harmonics	-45 dBmV after Surge with a +55 dBmV Return Input Carrier
Corrosion Resistance	Meets SCTE/ANSI Specification

Physical			
Dimensions (Tol. ± 0.5 mm)	Length (mm)	Width (mm)	Depth (mm)
Model			
CMC2002HC-A	1.9 (48.0)	2.4 (61.0)	0.6 (16.2)
CMC2003HC-A CMC2003BHC-A CMC2004HC-A	1.9 (48.0)	3.4 (86.0)	0.6 (16.5)
CMC2008HC-A	2.1 (52.3)	4.0 (101.4)	1.2 (31.0)
CMC2002VC-A	1.4 (36.5)	2.3 (57.5)	1.1 (30.0)
CMC2003VC-A CMC2004VC-A	1.6 (41.0)	3.3 (85.0)	1.2 (31.0)
CMC2006VC-A CMC2008VC-A	2.8 (70.0)	3.5 (89.0)	1.2 (31.0)



Ordering Information

CMC20XXXXC-A

Style
 BH - Balanced Horizontal (H) – 3-way only
 H - Horizontal
 V - Vertical
 Number of Ports
 02, 03, 04, 06, 08 or 16
 Capacitively coupled 1
 GHz splitter

(Ex.) CMC2003BHC-A: 3-way horizontal splitter with balanced outputs