

Features and Benefits

ANTRONIX®

1 GHz Directional Taps/Couplers CMCDT2100L/TC-A Series

The CMCDT2100L/TC-A Series Directional Taps provide users with a variety of installation options. The L-type housing is perfect for in-wall installations where dimensions have been minimized by removing the mounting tabs. The T-type housing includes a mounting tab. Both styles are SCTE compliant.

The Antronix CMCDT2100L/TC-A Series directional taps have been designed with today's two-way broadband networks in mind. Our proprietary ferrites resist re-magnetization and remain ultra linear for consistent performance throughout its lifetime.

Additionally, our directional couplers are among the most robust in the industry. To ensure years of reliable operation, the couplers are encased in a Zinc Alloy diecast housing, plated with a proprietary Nickel Alloy which provides superior protection versus tin-plating. Each port is sealed to 15 psi to prevent water migration and meets SCTE specifications.

- **6 kV Ring Wave Surge Protected**

The input port is rated for 6 kV combination wave surges while all ports are rated for 6 kV ring wave surges.

- **Excellent Distortion Performance**

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 such as VoIP and DOCSIS 3.0.

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

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

- **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.

- **Flat 15 psi Sealed, SCTE Compliant F-ports**

Prevents water migration, while meeting SCTE standards.

- **UV Resistant Label**

- **Integrated Mounting Tabs**

The T-type housing incorporates the mounting tab.

- **75Ω Nominal Impedance**



Electrical Specifications

CMCDT2100L/TC-A Series Directional Taps

Model #	CMCDT	2106		2109		2112		2116		2120		2123	
Tap Value	(dB)	6		9		12		16		20		23	
Specification	Freq (MHz)	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ
Tap Loss Tolerance													
(+/-dB)	5-14	1.8	1.6	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
	15-40	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
	41-550	1.2	1.0	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
	551-750	1.5	1.3	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
	751-1002	1.5	1.3	1.5	1.3	1.5	1.3	1.5	1.3	1.5	1.3	1.5	1.3
Insertion Loss													
Maximum (dB)	5-14	2.8	2.6	1.6	1.4	1.0	0.8	1.0	0.8	0.6	0.4	0.6	0.4
	15-40	2.5	2.3	1.6	1.4	0.8	0.6	0.8	0.6	0.6	0.4	0.6	0.4
	41-550	2.6	2.4	1.7	1.5	1.0	0.8	0.8	0.6	0.8	0.6	0.6	0.4
	551-750	2.8	2.6	2.0	1.8	1.2	1.0	1.0	0.8	1.0	0.8	0.8	0.6
	751-1002	3.2	3.0	2.4	2.2	1.5	1.3	1.3	1.1	1.3	1.1	1.3	1.1
Isolation													
Minimum (dB)	5-14	24	26	25	27	25	27	30	32	32	35	33	40
	15-40	26	28	30	35	30	37	30	32	33	35	33	40
	41-65	20	23	25	27	28	30	28	30	30	32	32	34
	66-550	20	23	25	27	28	30	28	30	30	32	32	34
	551-750	20	23	22	24	25	27	25	26	26	28	30	32
	751-1002	20	23	20	23	20	23	22	24	24	26	26	28
Input Return Loss													
Minimum (dB)	5-14	18	20	18	20	18	20	18	20	18	20	18	20
	15-40	22	24	20	22	25	27	25	27	25	27	25	27
	41-550	20	20	20	22	20	22	20	22	20	22	20	22
	551-750	18	20	20	22	20	22	18	20	18	20	18	20
	751-1002	18	20	20	22	18	20	18	20	18	20	18	20
Output Return Loss													
Minimum (dB)	5-14	18	20	18	20	18	20	18	20	18	20	18	20
	15-40	25	27	25	27	26	30	26	30	26	30	26	30
	41-550	20	22	20	22	20	22	20	22	20	22	20	22
	551-750	20	22	20	22	20	22	20	22	20	22	20	22
	751-1002	18	20	20	22	20	22	20	22	18	22	20	22
Tap Return Loss													
Minimum (dB)	5-14	18	20	18	20	18	20	18	20	18	20	18	20
	15-40	22	24	25	27	25	30	25	30	25	30	25	30
	41-550	20	22	20	22	20	22	20	22	20	22	20	22
	551-750	18	20	20	22	18	20	18	20	18	20	18	20
	751-1002	18	20	18	20	18	20	18	20	18	20	18	20

Specifications subject to change without notice

Specifications

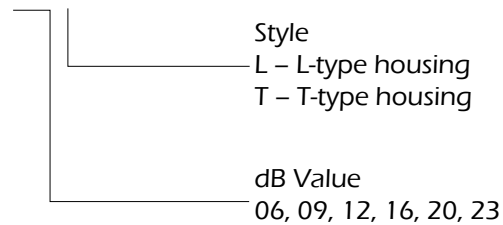
CMCDT2100L/TC-A Series Directional Taps

General	
Nominal Impedance	75 Ω
F-connector Type	ANSI/SCTE-01 Compliant ECT F-port
Recommended Torque	30 in. lbs.
Surge Withstand	-6 kV Combination Wave Surge per IEEE C62.41 Category B3 for Input Port 6 kV Ring Wave Surge per IEEE C62.41 Category A3 for all Ports
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	Exceeds ANSI/SCTE 143 Specification for 1000 Hours

Physical			
Dimensions (Tol. ± 0.5 mm)	Length (mm)	Width (mm)	Depth (mm)
Model			
CMCDT2100LC-A	1.7 (43.0)	1.6 (39.5)	1.1 (29.2)
CMCDT2100TC-A	1.8 (45.9)	2.1 (52.3)	0.6 (14.4)

Ordering Information

CMC21XXXC-A



(Ex.) CMCDT2106TC-A: 6dB Directional Coupler, T-type housing