

Features and Benefits

ANTRONIX®

1 GHz Directional Taps/Couplers CMCDT2100 Series

The CMCDT2100 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 CMCDT2100 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. Every port on each directional coupler is 6 kV ring wave protected. 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**
All ports are protected against multiple 6 kV ring wave surges per IEEE specification C62.41 Category A3.
- **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 reliable & 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

CMCDT2100T/L Series Directional Taps

Model Tap Value	CMCDT (dB)	2104 4		2106 6		2109 9		2112 12		2116 16		2120 20		2124 24		2127 27		2130 30			
		Freq (MHz)	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	
Tap Loss Tolerance (+/-dB)	5-14	0.8	0.6	1.6	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	
	15-40	0.8	0.6	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	
	41-550	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	
	551-750	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	
	751-1002	1.0	0.8	1.2	1.0	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	
Insertion Loss Max (dB)	5-14	3.6	3.5	2.5	2.3	1.6	1.3	1.0	0.8	1.0	0.8	0.6	0.4	0.6	0.4	0.8	0.4	0.8	0.4	0.8	0.4
	15-40	3.6	3.5	2.5	2.3	1.4	1.2	0.8	0.7	0.8	0.6	0.6	0.4	0.6	0.4	0.6	0.4	0.6	0.4	0.6	0.4
	41-550	3.9	3.6	2.8	2.4	1.8	1.5	1.2	1.0	0.9	0.7	0.9	0.6	0.8	0.5	0.8	0.4	0.8	0.4	0.8	0.4
	551-750	4.3	3.7	3.0	2.6	2.1	1.8	1.5	1.2	1.3	0.9	1.3	0.7	1.2	0.7	1.2	0.7	1.2	0.7	1.2	0.7
	751-1002	4.3	4.0	3.0	2.7	2.1	1.9	1.5	1.2	1.3	1.0	1.3	1.0	1.2	1.0	1.2	1.0	1.2	1.0	1.2	1.0
Isolation Min (dB)	5-14	22	24	22	27	25	27	25	28	25	30	33	35	38	40	38	42	42	44	42	44
	15-40	35	38	30	35	30	35	35	37	30	32	33	35	38	40	40	42	42	44	42	44
	40-65	30	32	30	32	30	32	30	32	30	32	30	32	32	34	35	37	38	40	38	40
	65-550	26	28	22	28	25	28	26	30	26	28	28	32	30	34	32	37	34	40	34	40
	550-750	26	28	22	28	25	28	25	28	26	28	26	30	30	32	30	34	32	36	32	36
	750-1002	23	25	22	24	22	25	23	25	24	26	26	28	28	30	30	32	32	34	32	34
Input RL Min (dB)	5-14	20	22	20	22	20	22	20	22	18	22	18	22	20	22	18	22	18	22	18	22
	15-40	22	24	22	24	20	22	25	27	25	27	25	27	25	27	25	27	25	27	25	27
	41-550	20	22	20	22	20	22	20	22	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	20	22	20	22	20	22	20	22
	751-1002	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22
Output RL Min (dB)	5-14	20	22	20	22	20	22	20	22	18	22	18	22	20	22	18	22	18	22	18	22
	15-40	30	32	25	27	25	27	26	30	26	30	26	30	26	30	26	30	26	30	26	30
	41-550	20	22	20	22	20	22	20	22	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	20	22	20	22	20	22	20	22
	751-1002	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22
Tap RL Min (dB)	5-14	20	22	20	22	18	22	20	22	20	22	20	22	18	22	20	22	20	22	20	22
	15-40	30	32	22	24	25	27	25	30	25	30	25	30	25	32	25	30	25	30	25	30
	41-550	20	22	18	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22
	551-750	20	22	18	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22
	751-1002	20	22	18	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22	20	22



Specifications subject to change without notice

Specifications

CMCDT2100T/L 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 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	Exceeds ANSI/SCTE 143 Specification for 1000 Hours

Physical			
Dimensions (Tol. ± 0.5mm)	Length (mm)	Width (mm)	Depth (mm)
Model			
CMCDT2100L	1.7 (43.0)	1.6 (39.5)	1.1 (29.2)
CMCDT2100T	1.8 (45.9)	2.1 (52.3)	0.6 (14.4)

Ordering Information

CMCDT21XX-X

Style
 L : L-Type Housing
 T : T-Type Housing

dB Value
 4, 6, 9, 12, 16
 20, 24, 27, 30

Ex. CMCDT2106T: 6dB Directional Coupler, T-type housing

