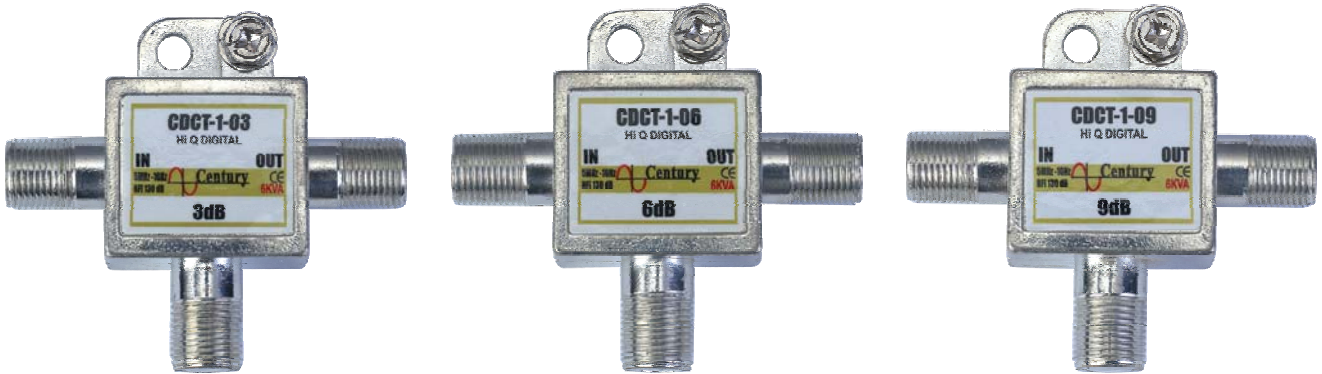


## CDCT-1 Series 1 GHz Directional Coupler



### Description:

This Hi-Q series directional coupler is a “T-Type” that can be used in many head-end and subscriber applications where mounting is critical, and has many other applications in the CATV plant. This series is ideally suited for precision signal management in digital two-way plants. Designed for superior performance in systems transporting both digital and analog signals where the highest isolation and RF performance are required. The Hi-Q design features SMT technology combined with premium quality ferrites and blocking capacitors on all ports for long-term stability in performance. It is available in tap values of 3, 6, 9, 12, 16, 20, and 24dB.

### Features:

- T-type directional coupler
- Output tap values: 3, 6, 9, 12, 16, 20, & 24dB
- 5-1010 MHz bandwidth
- 6KVA rated capacitors on output F ports that comply to IEE spec (C62.41 Cat A3)
- 360° degree 24K gold plated contacts
- Sealed F-ports that comply to SCTE specifications
- Low inter-modulation > 110dB
- -120 dB RFI shielding
- Corrosion resistant die cast plated zinc housing
- Convenient 3-way (Slot, Hex, Robertson) mounting screws included
- Excellent quality, 100% factory QC tested
- CE approved

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# Century Electronics

## Specifications:

| PARAMETER   | FREQUENCY<br>(MHz)  | CDCT-1-03 |      | CDCT-1-06 |      | CDCT-1-09 |      | CDCT-1-12 |      | CDCT-1-16 |      | CDCT-1-20 |      | CDCT-1-24 |      |
|---|---|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|------|
|   |   | TYP.      | QA.  | TYP.      | QA.  | TYP.      | QA.  | TYP.      | QA.  | TYP.      | QA.  | TYP.      | QA.  | TYP.      | QA.  |
| Tap Loss<br>Input to Tap<br>Maximum (dB)                | 5-15  | 3.6       | 3.7  | 6.6       | 6.7  | 9.6       | 9.7  | 12.7      | 12.8 | 16.6      | 16.7 | 20.6      | 20.7 | 24.6      | 24.7 |
|   | 15-50   | 3.6       | 3.7  | 6.6       | 6.7  | 9.6       | 9.7  | 12.7      | 12.8 | 16.6      | 16.7 | 20.6      | 20.7 | 24.6      | 24.7 |
|   | 50-550  | 3.7       | 3.8  | 6.7       | 6.8  | 9.7       | 9.8  | 12.8      | 12.9 | 16.7      | 16.8 | 20.7      | 20.8 | 24.7      | 24.8 |
|   | 550-750   | 3.7       | 3.8  | 6.7       | 6.8  | 9.7       | 9.8  | 12.8      | 12.9 | 16.7      | 16.8 | 20.7      | 20.8 | 24.7      | 24.8 |
|   | 750-1010  | 3.8       | 4.0  | 6.9       | 7.0  | 9.8       | 10.0 | 12.9      | 13.0 | 16.8      | 17.0 | 20.8      | 21.0 | 24.8      | 25.0 |
| Insertion Loss<br>Input to Output<br>Maximum (dB)       | 5-15  | 3.5       | 3.7  | 2.3       | 2.6  | 1.2       | 1.6  | 0.8       | 1.0  | 0.5       | 0.6  | 0.5       | 0.6  | 0.5       | 0.6  |
|   | 15-50   | 3.5       | 3.7  | 2.2       | 2.6  | 1.2       | 1.6  | 0.8       | 1.0  | 0.5       | 0.6  | 0.5       | 0.6  | 0.5       | 0.6  |
|   | 50-550  | 3.6       | 3.8  | 2.5       | 2.6  | 1.4       | 1.7  | 0.8       | 1.0  | 0.5       | 0.6  | 0.6       | 0.8  | 0.6       | 0.8  |
|   | 550-750   | 3.6       | 3.8  | 2.6       | 2.8  | 1.8       | 2.0  | 1.0       | 1.2  | 0.6       | 0.8  | 0.7       | 0.8  | 0.7       | 0.8  |
|   | 750-1010  | 3.8       | 4.0  | 2.6       | 3.2  | 1.8       | 2.1  | 1.2       | 1.3  | 0.8       | 1.0  | 0.8       | 1.0  | 0.8       | 1.0  |
| Port/Port Isolation<br>Output to Tap<br>Minimum(dB)     | 5-15  | 25        | 24   | 28        | 25   | 26        | 25   | 32        | 30   | 32        | 30   | 36        | 35   | 35        | 32   |
|   | 15-50   | 30        | 28   | 30        | 28   | 28        | 26   | 32        | 30   | 32        | 30   | 38        | 36   | 35        | 32   |
|   | 50-550  | 30        | 28   | 32        | 27   | 27        | 25   | 30        | 28   | 30        | 28   | 35        | 32   | 35        | 32   |
|   | 550-750   | 26        | 25   | 25        | 24   | 26        | 24   | 28        | 26   | 28        | 26   | 35        | 32   | 32        | 30   |
|   | 750-1010  | 26        | 25   | 25        | 23   | 25        | 24   | 26        | 25   | 26        | 25   | 34        | 28   | 32        | 30   |
| Return Loss<br>Input / Output<br>Minimum(dB)            | 5-15  | 22        | 22   | 22        | 20   | 22        | 20   | 20        | 19   | 19        | 18   | 25        | 24   | 20        | 19   |
|   | 15-50   | 26        | 24   | 25        | 23   | 25        | 24   | 22        | 20   | 20        | 19   | 29        | 28   | 25        | 19   |
|   | 50-550  | 25        | 24   | 24        | 21   | 24        | 23   | 26        | 24   | 22        | 20   | 29        | 28   | 22        | 20   |
|   | 550-750   | 24        | 22   | 22        | 21   | 23        | 22   | 24        | 22   | 21        | 20   | 25        | 24   | 21        | 20   |
|   | 750-1010  | 24        | 22   | 22        | 20   | 23        | 22   | 22        | 21   | 21        | 20   | 22        | 20   | 21        | 20   |
| Return Loss<br>Tap Port<br>Minimum(dB)                  | 5-15  | 22        | 22   | 22        | 20   | 22        | 20   | 20        | 19   | 19        | 18   | 25        | 24   | 20        | 19   |
|   | 15-50   | 26        | 24   | 25        | 23   | 25        | 24   | 22        | 20   | 20        | 19   | 29        | 28   | 25        | 19   |
|   | 50-550  | 25        | 24   | 24        | 21   | 24        | 23   | 26        | 24   | 22        | 20   | 29        | 28   | 22        | 20   |
|   | 550-750   | 24        | 22   | 22        | 21   | 23        | 22   | 24        | 22   | 21        | 20   | 25        | 24   | 21        | 20   |
|   | 750-1010  | 24        | 22   | 22        | 20   | 23        | 22   | 22        | 21   | 21        | 20   | 22        | 20   | 21        | 20   |
| RFI (dB)  | 5-1010  | -130      | -120 | -130      | -120 | -130      | -120 | -130      | -120 | -130      | -120 | -130      | -120 | -130      | -120 |
| Impedance   | 5-1010  | 75 Ohm    |      |           |      |           |      |           |      |           |      |           |      |           |      |
| Spurious Signals<br>Including 2 <sup>nd</sup> Harmonics | -45dBmV after 6KV ring wave surge<br>Measuring with a 55dBmV return input carrier |           |      |           |      |           |      |           |      |           |      |           |      |           |      |
| Surge Protection  | 6KV Ring Wave Surge, IEEE C62,41 Cat A3   |           |      |           |      |           |      |           |      |           |      |           |      |           |      |
| Waterproof Test (Min)                                   | 15 PSI  |           |      |           |      |           |      |           |      |           |      |           |      |           |      |
| Operating Temperature                                   | -40 degrees C to +60 degrees C  |           |      |           |      |           |      |           |      |           |      |           |      |           |      |
| Corrosion Resistance                                    | Meets SCTE/ANSI Specification   |           |      |           |      |           |      |           |      |           |      |           |      |           |      |

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