DIGITAL SPLITTERS & TAPS
Indoor/Outdoor, 1.2 GHz

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Standard Features

PCT's digital splitters and taps offer exceptional performance at 1.2 GHz and long-term reliability for drop installations, particularly in systems with cable modem applications. This newest generation enables MSOs to confidently upgrade their network hardware as they rollout services made possible by DOCSIS 3.1.

Features and Benefits

PERFORMANCE

- **Enhanced performance in the expanded return path range for DOCSIS 3.1**
  - Excellent return loss in the return band – Protects modem operation
  - Excellent port-to-port isolation in the return band – Minimizes adjacent port interference
- **Expanded bandwidth to 1218 MHz in the forward path**
  - Allows higher data rates provided by DOCSIS 3.1
- **6 kV Surge Withstand per ANSI / SCTE 81 2012**
  - IEEE C62.41-1991 Category A3
  - 6000 V, 200 A, 0.5 µs, 100 KHz ring wave surge
- **Superior intermodulation distortion and second harmonic performance after A3 surge**
  - 10 Category A3 surges to each port
  - -45 dBmV spurious signals and second harmonics with a +55 dBmV input after all surges

GENERAL CHARACTERISTICS

- **Protection against corrosion and moisture**
  - Housing passes ANSI / SCTE 143 2013 salt spray exposure for 1,000 hours
  - F ports weather-sealed to 15 psi
- **Machine threaded, flat-faced F ports**
  - Provides improved ground plane contact
- **Soldered back plate**
  - Delivers excellent RFI performance at -120 dB
- **Conforms to all applicable SCTE standards**

General Specifications

Nominal Impedance	75 Ohms
Flatness (Tap & Out)	± 0.5 dB
RFI	-120 dB
Surge Withstand	IEEE C62.41-1991 Category A3 (6000 V, 200 Amp, 0.5 µs-100 kHz Ring Wave)
Spurious Signals Including Second Harmonics	-45 dBmV, after 10 surges of A3 6 kV on each port with a +55 dBmV return input carrier
Blocking Capacitors	All ports
Operating Temperature	-40 to +140 °F (-40 to +60 °C)
Regulatory Compliance	CE, RoHS

PCT-D32, PCT-D33, PCT-D33B, PCT-D34 & PCT-D38
PCT-D3IT1-x, PCT-D3IT1V-x, PCT-D3IT2V-x & PCT-D3IT4V-x

Ordering Information

Splitter, Drop, Indoor Outdoor, 1.2 GHz

PCT-D32	2-Way
PCT-D33	3-Way
PCT-D33B	3-Way Balanced
PCT-D34	4-Way
PCT-D38	8-Way

Tap, Drop, Indoor Outdoor, 1.2 GHz

PCT-D3IT1-x	1-Way
PCT-D3IT1V-x	1-Way, Vertical
PCT-D3IT2V-x	2-Way, Vertical
PCT-D3IT4V-x	4-Way, Vertical

PCT INTERNATIONAL

AMT advanced media technologies®

DIGITAL SPLITTERS & TAPS

Indoor/Outdoor, 1.2 GHz

PCT-D32, PCT-D33, PCT-D33B, PCT-D34 & PCT-D38
PCT-D3IT1-x, PCT-D3IT1V-x, PCT-D3IT2V-x & PCT-D3IT4V-x

PCT-D3x

DIGITAL SPLITTERS	2-Way	3-Way	3-Way Balanced	4-Way	8-Way
Parameters	Typ.	Typ.	Typ.	Typ.	Typ.
Insertion Loss			Max (-dB)		
5 to 10 MHz	3.5	3.5 / 6.8	5.1	7.4	10.8
10 to 65 MHz	3.5	3.5 / 6.8	5.1	7.3	10.6
65 to 470 MHz	3.6	3.6 / 7.0	5.4	7.3	10.8
470 to 862 MHz	3.8	3.7 / 7.5	5.8	7.5	11.2
862 to 1006 MHz	3.9	3.8 / 7.8	6.1	7.7	11.5
1006 to 1200 MHz	4.2	4.0 / 8.1	6.6	8.1	12.2
Out-to-Out Isolation			Min (-dB)		
5 to 10 MHz	30.0	30.0	30.0	30.0	28.0
10 to 65 MHz	36.0	36.0	35.0	36.0	33.0
65 to 470 MHz	30.0	30.0	29.0	30.0	29.0
470 to 862 MHz	28.0	28.0	28.0	28.0	25.0
862 to 1006 MHz	26.0	26.0	26.0	26.0	24.0
1006 to 1200 MHz	23.0	23.0	23.0	23.0	23.0
Input Return Loss			Min (-dB)		
5 to 10 MHz	22.0	22.0	22.0	22.0	22.0
10 to 65 MHz	25.0	25.0	25.0	25.0	25.0
65 to 1006 MHz	22.0	22.0	22.0	22.0	22.0
1006 to 1200 MHz	22.0	22.0	22.0	22.0	22.0
Output Return Loss			Min (-dB)		
5 to 10 MHz	22.0	22.0	22.0	22.0	22.0
10 to 65 MHz	25.0	25.0	25.0	25.0	25.0
65 to 1006 MHz	22.0	22.0	22.0	22.0	22.0
1006 to 1200 MHz	22.0	22.0	22.0	22.0	22.0

DIGITAL TAPS	PCT-D3IT1-x 1-Way Horizontal					PCT-D3IT1V-x 1-Way Vertical					PCT-D3IT2V-x 2-Way Vertical				PCT-D3IT4V-x 4-Way Vertical			
dB	6	9	12	16	20	6	9	12	16	20	9	12	16	20	11	14	17	20
Parameters	Typ.					Typ.					Typ.				Typ.			
Insertion Loss	Max (-dB)																	
5 to 15 MHz	2.4	1.3	1.0	0.8	0.8	2.4	1.3	1.0	0.8	0.8	2.5	1.4	1.0	0.7	3.5	2.5	1.2	0.7
15 to 85 MHz	2.4	1.3	1.0	0.8	0.8	2.4	1.3	1.0	0.8	0.8	2.5	1.4	1.0	0.7	3.5	2.5	1.2	0.7
85 to 300 MHz	2.5	1.4	1.0	0.8	0.8	2.5	1.4	1.0	0.8	0.8	2.5	1.4	1.0	0.7	3.5	2.5	1.2	0.7
300 to 600 MHz	2.6	1.7	1.0	0.8	0.8	2.6	1.7	1.0	0.8	0.8	3.0	2.3	1.3	1.0	3.7	2.7	1.5	0.8
600 to 1002 MHz	2.8	2.3	1.3	1.2	1.2	2.8	2.3	1.3	1.2	1.2	3.0	2.3	1.3	1.0	4.0	3.0	2.0	1.2
1002 to 1218 MHz	3.6	3.0	1.8	1.5	1.4	3.6	3.0	1.8	1.5	1.4	3.6	3.0	1.8	1.2	4.6	3.6	2.6	1.7
Out-to-Out Isolation	Min (-dB)																	
5 to 15 MHz	25	30	28	35	38	25	30	28	35	38	32	30	30	38	35	30	35	35
15 to 85 MHz	35	35	30	40	40	35	35	30	40	40	32	30	30	38	40	35	35	40
85 to 300 MHz	30	30	30	35	35	30	30	30	35	35	26	28	30	33	40	35	33	40
300 to 600 MHz	28	28	30	30	30	28	28	30	30	30	24	28	28	30	30	30	30	35
600 to 1002 MHz	24	28	28	30	30	24	28	28	30	30	24	28	28	30	28	26	27	30
1002 to 1218 MHz	23	25	25	26	27	23	25	25	26	27	22	25	25	26	26	24	24	26
Tap Loss	Min (-dB)																	
5 to 300 MHz	6.5 ± 1.0	9.0 ± 1.0	12.0 ± 1.0	16.0 ± 1.0	20.0 ± 1.0	6.5 ± 1.0	9.0 ± 1.0	12.0 ± 1.0	16.0 ± 1.0	19.5 ± 1.0	9.5 ± 1.0	12.0 ± 1.0	16.0 ± 1.0	20.0 ± 1.0	10.5 ± 1.0	13.5 ± 1.0	17.0 ± 1.0	19.5 ± 1.0
300 to 1002 MHz	6.5 ± 1.0	9.0 ± 1.0	12.0 ± 1.0	16.0 ± 1.0	20.0 ± 1.0	6.5 ± 1.0	9.0 ± 1.0	12.0 ± 1.0	16.0 ± 1.0	19.5 ± 1.0	9.5 ± 1.5	12.0 ± 1.2	16.0 ± 1.2	20.0 ± 1.2	10.5 ± 1.0	13.5 ± 1.0	17.0 ± 1.0	19.5 ± 1.0
1002 to 118 MHz	6.5 ± 1.3	9.0 ± 1.3	12.0 ± 1.3	16.0 ± 1.3	20.0 ± 1.3	6.5 ± 1.3	9.0 ± 1.3	12.0 ± 1.3	16.0 ± 1.3	19.5 ± 1.3	9.5 ± 2.0	12.5 ± 1.5	16.5 ± 1.5	20.0 ± 1.5	11.0 ± 1.5	13.5 ± 1.5	17.0 ± 1.5	19.5 ± 1.5
Input-Output	Min (-dB)																	
5 to 15 MHz	18	18	18	20	20	18	18	18	20	20	18	18	20	20	22	18	17	17
15 to 300 MHz	18	18	20	20	20	18	18	20	20	20	18	18	20	20	22	22	19	19
85 to 300 MHz	18	18	20	20	20	18	18	20	20	20	18	18	20	20	20	19	19	19
300 to 600 MHz	18	18	20	20	20	18	18	20	20	20	18	18	20	20	20	18	19	19
600 to 1002 MHz	18	18	20	20	20	18	18	20	20	20	18	18	20	20	20	18	18	19
1002 to 1218 MHz	16	17	17	17	17	16	17	17	17	17	16	17	18	18	17	16	17	17
Tap	Min (-dB)																	
5 to 15 MHz	20	18	20	20	20	20	18	20	20	20	18	25	25	25	25	25	25	25
15 to 300 MHz	20	18	20	20	20	20	18	20	20	20	18	20	20	20	25	25	25	25
85 to 300 MHz	18	18	20	20	20	18	18	20	20	20	18	20	20	20	22	22	22	22
300 to 600 MHz	18	18	20	20	20	18	18	20	20	20	18	20	20	20	20	20	20	20
600 to 1002 MHz	18	18	20	20	19	18	18	20	20	19	18	20	20	20	20	20	20	20
1002 to 1218 MHz	16	17	17	17	17	16	17	17	17	17	16	17	18	18	17	17	17	17