



Innovation for the Last Mile™

Coaxial CATV Drop Passives Product Selection Guide

- digital splitters
- couplers
- filters
- attenuators

PCT International, Inc.
EMEA Division



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Headquarters

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Yantai, PRC Factory



drop passives

overview, features and benefits, training and support



Innovation for the Last Mile™

overview

PCT's Genesys Mini and Genesys II drop passives offer exceptional performance and long-term reliability for drop installations, particularly in systems with cable modem applications. Genesys Series splitters were specifically designed for minimizing intermodulation distortion and spurious signals. Included with both Genesys series splitters is PCT's patented Digital Seizure Mechanism (DSM), providing significant advantages in center conductor retention, surface contact area, and electrical performance. Splitters are available in horizontal and vertical 2-way, 3-way (balanced and unbalanced), 4-way, and 8-way configurations with solder-back back plates.

Most PCT drop passive products are RoHS compliant restricting the use of certain substances in production of electrical and electronic equipment. PCT maintains the same level of quality across its product range irrespective of RoHS compliance. If you require RoHS compliant drop passives, be sure to specify RoHS at the time of ordering (see ordering information on the following pages).

features and benefits

- ✓ Superior intermodulation distortion and second harmonic performance
- ✓ Excellent return loss and port-to-port isolation in the return band
- ✓ Patented DSM seizure technology provides increased spring retention for better surface contact (patent #6450836)
- ✓ Gold-plated, beryllium copper construction for better corrosion resistance, impedance matching, and prevention of common path distortion



- ✓ 6 kV surge withstand, guaranteed second order harmonics performance after 5 surges to each port of 6 kV (per IEEE.C62.41.1991 Category A3)
- ✓ Tin-plated backplate provides minimum -130 dB shielding effectiveness and superior defense against long-term corrosion factors
- ✓ -60 dBmV spurious signals and 2nd harmonics with a +55 dBmV input carrier
- ✓ Weather-sealed "F" ports
- ✓ Machine threaded, flat "F" ports

training and support

At PCT, the support does not end after the sale, we are here to assist you every step of the way! We are dedicated to our customers and are committed to ongoing training and support. Our staff of industry experienced personnel is here to assist you every step of the way.

individualized training

PCT strives to offer each customer a unique training experience designed with their needs in mind. Our technical support personnel offer onsite training and support, ensuring everyone on your team understands and is confident in our products.

PCT's internally developed training programs allow our customers an opportunity to learn through hands-on exercises. These exercises include the use of PCT products as well as their interoperability with other leading industry manufacturers' products.

Completion of the program assures each customer of PCT is certified in the use of our products. Each training program is tailored to working with technicians and management at their

drop passives

hardened drop solution and our commitment



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facilities, assisting them with training on various products with an emphasis on proper preparation and installation on both cable and connectors. Training sessions average around two (2) hours and accommodate up to 100 trainees per session. Installation and preparation techniques learned and practiced in these sessions assist our customers in reducing trouble calls and increasing subscriber satisfaction.

hardened drop solution

PCT's collaborative approach to product development results in advances that simplify installation and maintenance; improve the integrity of HFC and fiber infrastructures; reduce truck rolls and other associated costs; and most importantly - - increase customer satisfaction and reduce churn. By working closely with customers' field engineering personnel, PCT produces equipment and components that straightforwardly address real needs and enable operators to "Harden the Drop."

PCT is dedicated to pioneering technologies related to Hardening the Drop. We recognize that most trouble tickets are derived from the drop or from the consumer's home, and while the drop is the least expensive part of the network to build, it is the most expensive to maintain. PCT is the first company to engineer, manufacture and deliver a full tap-to-set top box drop portfolio. It is the cornerstone of our commitment to eliminate the drop as the network's weakest link.

Engineering resources are directed to improve this last link to the customer through innovations in such areas as connector design; passive equipment performance; and coaxial cable quality. Manufacturing takes place at three state-of-the-art facilities in the United States and Asia, ensuring PCT maintains complete control of product quality.

our commitment to you

PCT is committed to continued excellence in customer service and stands behind each and every product we sell to our customers.



drop passives

genesys mini and genesys II

splitters and couplers



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genesys mini and genesys II

splitters and couplers

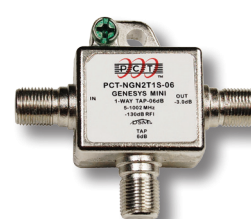
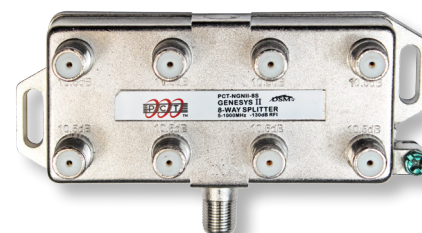
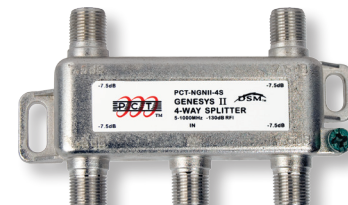
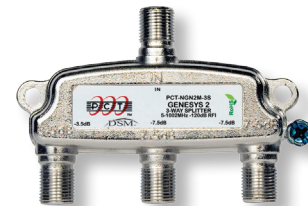
features and benefits

parameter	value
Nominal impedance	75 Ohms
Flatness (Tap & Out)	± 0.5 dB
RFI	-110 dB
Spurious signals including second harmonics	-60 dBmV measured with a +55 dBmV return input carrier (-45 dBmV, after 5 surges of 6 kV on each port measured with a +55 dBmV return input carrier)
Blocking Capacitors	All ports
Surge Withstand	IEEE C62.41-1991 Category A3 (6000 V, 200 Amp, 0.5 µs-100 kHz Ring Wave)
Operating Temperature	-40 to +60° C (-40 to +140° F)
Regulatory Compliance	Models -RH are RoHS compliant. (see ordering information)

ordering information

part number	description
PCT-NGN2M-2S	Splitter, Drop, Genesys II Mini, 2-Way Horizontal, Solder Back
PCT-NGN2M-3S	Splitter, Drop, Genesys II Mini, 3-Way Horizontal, Solder Back
PCT-NGNII-3SB	Splitter, Drop, Genesys II, 3-Way Horizontal, Solder Back, Balanced
PCT-NGNII-4S	Splitter, Drop, Genesys II, 4-Way Horizontal, Solder Back
PCT-NGNII-8S	Splitter, Drop, Genesys II, 8-Way Horizontal, Solder Back
PCT-NGN2T1S-xx	Tap, Drop, Genesys II Mini, 1-Way "T" Style (06,09,12,16,20,24) dB, Solder Back

To order RoHS compliant splitters, add an "-RH" suffix to the part number.
Example: PCT-NGN2M-2S-RH.



For information, please visit www.pctinternational.com/emea.

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drop passives

genesys mini and genesys II

splitters and couplers



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specifications

PCT-NGN2 / PCT-NGNII - DIGITAL SPLITTERS						
MHz	Tap Value (Typical / dB)					
	2-Way	3-Way Unbalanced	3-Way Balanced	4-Way	8-Way	
Insertion Loss						
5 - 15	3.5	3.5 / 7.2	5.8	7.0	10.7	
16 - 42	3.5	3.5 / 7.2	5.7	6.9	10.5	
43 - 65	3.5	3.5 / 7.2	5.7	6.9	10.5	
66 - 250	3.6	3.5 / 7.2	5.8	6.9	10.6	
251 - 450	3.6	3.5 / 7.2	5.9	6.9	10.6	
451 - 550	3.8	3.5 / 7.2	5.9	6.9	10.6	
551 - 750	3.8	3.7 / 7.9	6.1	7.3	11.1	
751 - 860	3.8	3.7 / 7.9	6.3	7.3	11.2	
861 - 1002	3.8	3.7 / 7.9	6.4	7.5	11.5	
Out-to-Out Isolation						
5 - 15	24	23	25	42	33	
16 - 42	40	37	35	44	36	
43 - 65	40	37	35	44	36	
66 - 250	25	28	30	41	30	
251 - 450	25	28	26	35	25	
451 - 550	25	28	24	33	25	
551 - 750	24	25	22	32	22	
751 - 860	24	25	22	31	22	
861 - 1002	24	25	22	31	22	
Input Return Loss						
5 - 15	22	28	25	29	23	
16 - 42	28	30	31	34	28	
43 - 65	28	28	31	35	28	
66 - 250	24	28	27	29	28	
251 - 450	24	28	25	28	28	
451 - 550	22	28	23	28	26	
551 - 750	22	28	22	27	26	
751 - 860	22	28	22	27	26	
861 - 1002	22	28	21	26	26	
Output Return Loss						
5 - 15	22	30	23	33	27	
16 - 42	32	35	32	36	33	
43 - 65	32	35	34	35	32	
66 - 250	24	28	26	31	29	
251 - 450	24	28	24	31	29	
451 - 550	22	28	23	31	29	
551 - 750	22	28	22	30	27	
751 - 860	22	28	22	29	26	
861 - 1002	22	28	21	28	26	

PCT-NGN2T1 and PCT-NGNII-IT1 1-WAY DIRECTIONAL COUPLERS					
MHz	Tap Value (Typical / dB)				
	6	9	12	16	20
Insertion Loss ±1.5 dB					
5 - 15	2.1	1.3	0.9	0.7	0.5
16 - 42	1.9	1.3	0.9	0.7	0.5
43 - 65	1.9	1.3	0.9	0.7	0.5
66 - 250	1.9	1.8	0.9		0.7
251 - 450	2.2	1.8	0.9		0.7
451 - 550	2.2	1.8	0.9		0.7
551 - 750	2.2	2.3	1.5	0.9	0.7
751 - 860	2.2	2.3	1.5		1.1
861 - 1002	2.2	2.4	1.5		1.1
Out-to-Out Isolation					
5 - 15				21	
16 - 42	38			36	
43 - 65	38			36	
66 - 1002				21	
Input Return Loss					
5 - 15			21		
16 - 42	27			26	
43 - 65	27			26	
66 - 1002			21		
Output Return Loss					
5 - 15			21		
16 - 65	27			26	
66 - 1002			21		
Tap Return Loss					
5 - 15	22			21	
16 - 65			31		
66 - 1002			21		

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gold series - splitters

features and benefits

True performance

- ✓ Guaranteed minimum specifications
- ✓ 1 GHz bandwidth
- ✓ Flat frequency response
- ✓ High return loss
- ✓ -120 dB shield effectiveness (RFI)
- ✓ Printed circuit board construction

Convenience and installation ease

- ✓ Individually plastic packaged with screws
- ✓ Machine threaded ports
- ✓ Half moon boss at port base
- ✓ Solder back or tongue/groove housings

Protection and prevention

- ✓ Zinc alloy die-cast housing, tin plated

general specifications

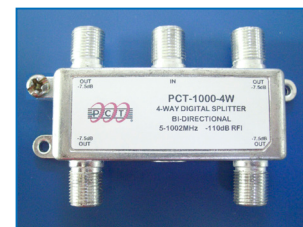
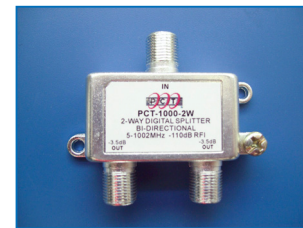
parameter	value
Nominal impedance	75 Ohms
Insertion loss flatness	± 0.5 dB

ordering information

part number	description
PCT-1000-2W	Splitter, gold series, 1 GHz, 2-way, solder back
PCT-1000-3W	Splitter, gold series, 1 GHz, 3-way, solder back
PCT-1000-3WB	Splitter, gold series, 1 GHz, 3-way bal, solder back
PCT-1000-4W	Splitter, gold series, 1 GHz, 4-way, solder back
PCT-1000-6W	Splitter, gold series, 1 GHz, 6-way, solder back
PCT-1000-8W	Splitter, gold series, 1 GHz, 8-way, solder back

specifications

MHz	PCT-1000-xW					
	Tap Value (Typical / dB)					
	2-way	3-way	3-way balanced	4-way	6-way	8-way
Insertion Loss						
5 - 47	3.5	3.5 / 6.9	5.8	6.9	9.3	10.3
48 - 450	3.9	3.9 / 7.3	6.2	7.3	9.6	11.0
451 - 750	3.9	3.9 / 7.5	6.5	7.5	9.9	11.5
751 - 1002	4.0	4.0 / 8.0	7.0	8.0	11.0	12.5
Isolation Loss						
5 - 47	20	25	25	25	25	25
48 - 450	26	24	25	24	24	24
451 - 750	22	23	24	23	22	22
751 - 1002	22	21	22	21	21	21
Return Loss (In/Out)						
5 - 47	20	18	18	18	18	18
48 - 450	22	21	21	20	22	22
451 - 750	20	21	21	20	20	20
751 - 1002	18	18	18	18	18	18





gold series - taps

features and benefits

True performance

- ✓ Guaranteed minimum specifications
- ✓ 1 GHz bandwidth
- ✓ Flat frequency response
- ✓ High return loss
- ✓ -120 dB shield effectiveness (RFI)
- ✓ Printed circuit board construction

Convenience and installation ease

- ✓ Individually plastic packaged with screws
- ✓ Machine threaded ports
- ✓ Half moon boss at port base
- ✓ Solder back or tongue/groove housings

Protection and prevention

- ✓ Zinc alloy die-cast housing, tin plated

general specifications

parameter	value
Nominal impedance	75 Ohms
Shielding effectiveness	120 dB

ordering information

part number	description
PCT-IT1W-xx	Tap, gold series, 1-way, xx dB
PCT-IT2W-xx	Tap, gold series, 2-way, xx dB
PCT-IT3W-xx	Tap, gold series, 3-way, xx dB
PCT-IT4W-xx	Tap, gold series, 4-way, xx dB
PCT-IT8W-xx	Tap, gold series, 8-way, xx dB

How to configure part numbers:

Replace "xx" with tap value suffix indicator shown below.

Example: PCT-IT2W-08 = 1 GHz, Gold Series 2-Way Drop Tap @ 08 dB

drop passives

gold series

taps



Innovation for the Last Mile™

specifications

MHz	PCT-IT1W-xx							PCT-IT2W-xx									
	Tap Value (Typical / dB)																
Tap Loss (In-Tap)	6	8	11	12	14	17	20	23	26	8	12	14	16	20	24		
5 - 1002	± 1.5																
Insertion Loss																	
5 - 40	2.0		1.1				1.0			0.8	3.5	2.0	1.4		1.0		
41 - 470	2.8	1.8		1.0				0.8		0.9	3.7	1.8	1.4	1.0	0.8		
471 - 550	2.8	2.2	1.3	1.4	1.2		1.1			0.9	3.7	1.8	1.4	1.0	0.8		
551 - 750	3.0	2.2	1.3	1.4	1.2		1.1			1.0	3.9	2.2	1.5	1.4	1.1		
751 - 860	3.0	2.5	2.1	1.6	1.4		1.3			1.0	4.5	2.5	2.0	1.6	1.3		
861 - 1002	3.2	2.5	2.1	1.6	1.4		1.3			1.0	4.5	2.5	2.0	1.6	1.3		
Isolation Loss (Tap-Tap)																	
5 - 40		23		26		27		31		35		39			20		
41 - 470		23		26		27		31		35		36			26		
471 - 550	22	20		22		24		26		30		33			26		
551 - 750	22	20		22		24		26		30		33			24		
751 - 860			20				21		25		30				20		
861 - 1002			20				21		25		30				20		
Isolation Loss (Tap-Out)																	
5 - 40	23	23	26		27		31		35	39	23	27	30	31	35	39	
41 - 470		23	26		27		31		35	36	25	27	28	31	35	38	
471 - 550	22	20		22		24		26		30	23	25	27	28	31	35	38
551 - 750	22	20		22		24		26		30	23	25	27	28	31	35	38
751 - 860			20				21		25		30	20	22	23	26	30	
861 - 1002	20	22			23			26	30	20	22	22	23	26	30		
Return Loss (In/Out/Tap)																	
5 - 40		16			18			20	18	16		18			20		
41 - 470		18				20				18			20				
471 - 550		18				20				18			20				
551 - 750		18				20				18			20				
751 - 860		16				18				16			18				
861 - 1002		16				18				16			18				



MHz	PCT-IT3W-xx					PCT-IT4W-xx				PCT-IT8W-xx						
	Tap Value (Typical / dB)															
Tap Loss (In-Tap)	10	12	16	20	24	8	12	16	20	24	14	17	20	23	26	29
5 - 1002	± 1.5															
Insertion Loss																
5 - 40	3.5	3.0	1.5	1.0		--	3.0	1.5	0.8	1.0	3.5	3.0			1.7	
41 - 470	3.7	3.2	1.7	1.0		--	3.2	1.5	0.8	1.0	3.8	2.8	1.6		1.4	
471 - 550	3.9	3.5	2.0	1.0		--	3.5	1.7	1.2	1.0	4.0	3.2	2.0		1.8	
551 - 750	4.0	3.5	2.2	1.0		--	3.5	2.2	1.2	1.0	4.0	3.2	2.0		1.8	
751 - 860	4.2	3.8	2.4	1.1		--	3.8	2.4	1.4	1.0	4.2	3.4	2.4		2.0	
861 - 1002	4.5	4.0	2.5	1.3		--	4.0	2.6	1.6	1.3	4.5	3.5	2.5		2.0	
Isolation Loss (Tap-Tap)																
5 - 40			25					25							26	
41 - 470			25					25							23	
471 - 550			25					25							23	
551 - 750			23					22							22	
751 - 860			20					20						20		21
861 - 1002			20					20						20		21
Isolation Loss (Tap-Out)																
5 - 40	26	28	32	36	40	--	26	30	34	42	25	28			30	
41 - 470	24	26	30	34	40	--	28	32	36	40	24	27			28	
471 - 550	24	26	30	34	38	--	26	30	34	38	21	24			25	
551 - 750	22	24	28	32	36	--	22	26	30	34	21	24			25	
751 - 860	20	22	25	28	32	--	22	26	30	34	20	22			25	26
861 - 1002	20	22	25	28	32	--	22	24	28	32	20	22			25	26
Return Loss (In/Out/Tap)																
5 - 40		18						18							15	
41 - 470		18						18			16				18	
471 - 550		18						18							18	
551 - 750		17						16							18	
751 - 860		17						16			16				18	
861 - 1002		17						16			16				18	

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filters - high pass

features and benefits

- Ultra-sharp frequency cut
- Return Loss: 16 dB minimum
- Moisture proof housing and male F-port
- 75 Ohm input and output impedance

ordering information

part number	description
PCT-HPF-50-NNH	High Pass Filter, 50 MHz, without Nut, with Hex
PCT-HPF-80-NNH	High Pass Filter, 80 MHz, without Nut, with Hex
PCT-HPF-50A	High Pass Filter, 50 MHz
PCT-HPF-80A	High Pass Filter, 80 MHz

attenuators - in-line



general specifications

parameter	value
Bandwidth	5 to 1002 MHz
Insertion Loss	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 16, 20 db
Flatness	± 0.5 dB (PCT-FNAM-12, -16, -20 ±1.5 dB)
Return Loss	> 18 dB
Impedance	75 Ω
Operational Temp. Range	-40° to + 60° C (-40° to +140° F)
Connectorization	3/8 – 32UNE F Female Fixed nut, 7/16 in hex, F Male
Center Conductor Diameter	0.7 mm (0.0276 in)
Length	30.6 mm (1.2 in)

ordering information

part number	description
PCT-FNAM-01	In-line Attenuator, Fixed Nut, 1 dB
PCT-FNAM-02	In-line Attenuator, Fixed Nut, 2 dB
PCT-FNAM-03	In-line Attenuator, Fixed Nut, 3 dB
PCT-FNAM-04	In-line Attenuator, Fixed Nut, 4 dB
PCT-FNAM-05	In-line Attenuator, Fixed Nut, 5 dB
PCT-FNAM-06	In-line Attenuator, Fixed Nut, 6 dB
PCT-FNAM-07	In-line Attenuator, Fixed Nut, 7 dB
PCT-FNAM-08	In-line Attenuator, Fixed Nut, 8 dB
PCT-FNAM-09	In-line Attenuator, Fixed Nut, 9 dB
PCT-FNAM-10	In-line Attenuator, Fixed Nut, 10 dB
PCT-FNAM-12	In-line Attenuator, Fixed Nut, 12 dB
PCT-FNAM-16	In-line Attenuator, Fixed Nut, 16 dB
PCT-FNAM-20	In-line Attenuator, Fixed Nut, 20 dB

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