Overview

PPC's filters deliver unsurpassed mechanical and electrical performance to meet the challenging requirements of today's digital cable, telephony, and high-speed data systems.

- Small physical size minimizes risk of port damage
- 7/16" hex body allows for standard tool installation
- Hermetically sealed to prevent moisture migration
- Drift proof
- 6kV surge compliant to IPS-TP-210
- Accommodates PPC port seals WS-375 and WS-500

ATP
The ATP is a precision attenuator used to apply a specific dB value across the entire forward band. The ATP offers the highest degree of precision attenuation for the headend environment, but also works excellent in the outside plant (Hubs, OTNs). It offers the highest level of surge protection available, has excellent return loss characteristics (greater than 18 dB), drift proof for outdoor applications, and utilizes our precision 360 degree female contact.

CS
PPC's cable simulators are used to correct excessive positive tilt. Typical applications include signal input correction for digital set-top converters and head-end equipment applications. A common practice for technicians to correct positive tilt is to spool extra cable (up to 100') at the drop. Cable Simulators eliminate the use of this practice.

FPA
PPC's forward path attenuators provide a fixed level of attenuation within the downstream frequencies without affecting upstream frequencies. Typical applications include attenuation of over amplified signals generated by drop amplifiers at the first input.

EQ/EQF
With the introduction of digital video, most set-top manufacturers specify a maximum slope factor in order to function properly. PPC's equalizers provide a correction to excessive cable loss and passive devices without affecting return frequencies.

SHP
PPC's High Pass Filters are used to isolate noise from the forward path. Location of a high pass filter is critical, they should only be used on the forward or downstream path. High Pass Filters also prevent ingress noise from propagating back to the node and disrupting active upstream services.

SNB
Distortion, delays and dropped calls can all be attributed to ingress, window filters suppress ingress noise allowing active services such as cable modems and STB return carriers to pass. PPC's SNB series is a major breakthrough in Windowed High Pass Filter performance. The SNB series filter allows for the attenuation of specific portions of the return path to reduce noise, and allow set top boxes and other devices to function properly.

SNBR
PPC introduces its new wide band reject filter designed to facilitate provision of high-speed, data-only service to cable system subscribers. The SNBR Wide Band Reject Filter removes the analog and digital video signals while passing the return and forward high-speed data frequencies.

SSA
PPC's Step Attenuators are used on low value taps (14 dB & below) to provide a fixed level of flat attenuation within the upstream frequencies only. Applied directly to the tap port, PPC Step Attenuators provide unity gain with all cable modems and other critical reverse transmission products like VoIP and VOD.

SNLP
The SNLP is a low pass filter designed to fully attenuate forward path frequencies allowing for accurate measurement of the upstream/return path signal.

MoCA

As in-home networking services continue to grow, you need strong protection to give your subscriber the best multi-room DVR experience. Physically isolating the home through the installation of a low-pass filter at the point-of-entry is necessary to avoid interference from near-by MoCA® users, such as a neighbor. This patented technology prevents interference between homes that use MoCA, and acts as a reflector to minimize MoCA® signal loss in the home.

6176 East Molloy Road | East Syracuse, NY 13057-0278 | TEL:315-431-7200 | FAX: 315-431-7200 | EMAIL: ppc@ppc-online.com | www.ppc-online.com

AK Assembly

Save time while reducing theft with factory assembled jumpers. PPC's AK series pre-assembled filter solution features a new patented one-piece security shield shown to reduce theft by up to 66%. AK series jumpers are pre-assembled at the factory saving up to 5 minutes per install and guaranteeing accurate assembly every time.

PPC can provide a custom trap assembly for every situation. Whether the assembly is needed in a pedestal application where space is at a premium, or in an aerial application, PPC custom trap assemblies will solve the situation.

Features

- Newly patented one-piece security shield reduces theft by 66%
- Pre-assembled at the factory saving installation time and ensuring accurate installation
- Dual female filter removes need for F-81; one last chance for ingress
- AquaTight® connector with integrated port seal ensures port seal is used correctly every time – keeping moisture out
- No more confusion over indoor/outdoor F-81 and port seals

Sample Part#:

AK-QBR-29/58 8A

8	Options
A	Last impaired channel
29	First impaired channel
QBR	Band Reject
58	QoS Series
AK	AK Series Pre-assembled Trap

ATP Series
Ultra-Precision Attenuator

In today's marketplace, PVRs, Digital set-tops, VoIP, HSD, and a TV in every room is placing a strain on CATV signal levels. The ATP Series is designed to provide accurate signal levels to each device connected to the drop.

Features & Benefits

- Small physical size minimizes risk of port damage
- 7/16" hex body allows for standard tool installation
- 100% Surface Mount Technology for consistent performance
- Moisture sealed one-piece construction
- Direct mechanical ground
- Easy to read numbered labeling comes standard with optional color coding available
- Extremely Tight tolerance (.25 dB)
- Good return loss (greater than 18 dB)
- Precision four-point female seizure contact

Specifications	
Frequency	1,002 MHz minimum
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 1.65 in (4.19 cm) Diameter = 0.5 in (1.27 cm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

ATP3-1000

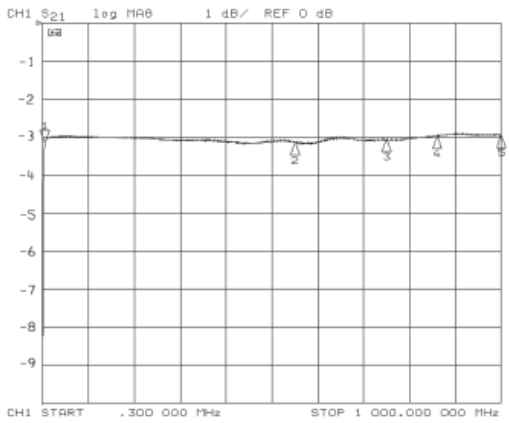
- Value in dB (1 through 20)
- Attenuator, Precision

Trap Specifications (Model Specific)

Model: **ATP3-1000** Prep. By B.O. Date: 08/04/03

Response: Sample Minimum operating frequency: 1 Ghz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1		5	3.1	3.0±0.3
2		550	3.1	3.0±0.25
3		750	3.0	3.0±0.25
4		860	3.0	3.0±0.25
5		1000	2.9	3.0±0.25



Mini Series
CBR Band Reject Tiering Filters

Band reject filters remove a series of adjacent channels. Channel segmentation allows systems to offer alternate levels of service to subscribers. PPC's "Caliber Band Reject" series filters provide electrical performance equivalent to traditional 10-pole configurations in a small, efficient package.

Available in
AK Assembly

Features

- Patented military-style hermetic glass-to-metal seals for long-term filter stability
- Small physical size minimizes risk of port damage
- Precision four-point female seizure contact
- SCTE compliant connector interfaces
- Accommodates PPC port seal WS-500
- Custom values available upon request

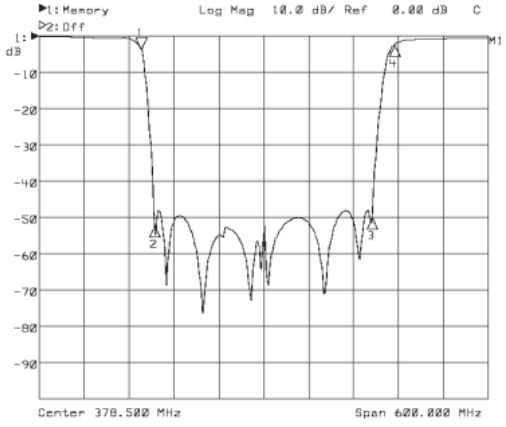
Specifications	
Minimum Operating	
Frequency	1,002 MHz minimum
Impedance	75 Ohms (nominal)
Shielding Effectiveness	> 120 dB
Dimensions	Length = 2.15 in (5.46 cm) Diameter = 0.81 in (21 mm)
Surge	6 kV per SCTE IPS-TP-210

Trap Specifications (Model Specific)

Model: **CBR-23/78** Prep. By T.H. Date: 11/02/04

Passband insertion loss: 1 dB Minimum operating frequency: 1 GHz

Marker #	Freq. Desc.	Freq. (MHz)	Typical Loss (dB)	Limits (dB)
1	13 aud.	215.75	3.7	5.5 max.
2	25 aud.	233.75	52	45 min.
3	74 vid.	523.25	50	45 min.
4	79 vid.	553.25	2.4	4.5 max.
5				
6				
7				
8				



Sample Part#:

CBR-23/78 HRC

- Reserved for options
- Last degraded channel
- First degraded channel
- CBR = Caliber Band Reject

The Silencer Series
CS Cable Simulators

PPC's cable simulators are used to correct excessive positive tilt. Typical applications include signal input correction for digital set-top converters and head-end equipment applications.

Features

- Small physical size minimizes risk of port damage
- 7/16" hex allows for standard tool installation
- 100% Surface Mount Technology for consistent performance
- Precision four-point female seizure contact
- Moisture-sealed connector interfaces
- SCTE compliant connector interfaces

Specifications	
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 1.65 in (4.19 cm) Diameter = .50 in (1.27 cm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

CS4-860

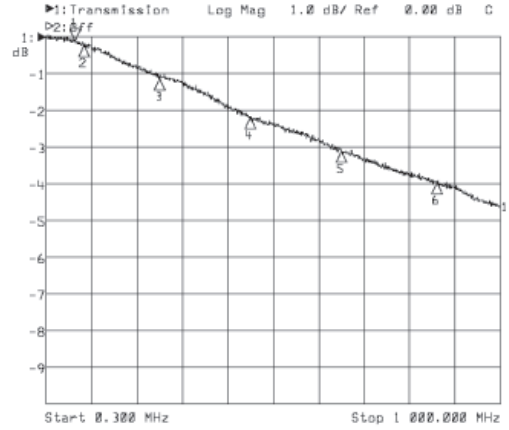
- Operating frequency in MHz
- Level of attenuation in dB
- CS = Cable Simulator

Trap Specifications (Model Specific)

Model: **CS4-860** Prep. By B.O. Date: 8/24/01

Response: Sample Minimum operating frequency: 860 Mhz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1		65	0.1	0.5 max.
2		85	0.2	0.7 max.
3		250	1.1	1.2±.5
4		450	2.2	2.1±.5
5		650	3.1	3.0±.5
6		860	4.0	4.0±.5



The Silencer Series
EQF Equalizers

With the introduction of digital video, most set-top manufacturers specify a maximum slope factor in order to function properly. PPC's equalizers provide a correction to excessive cable loss and passive devices without affecting return frequencies.

Features

- Small physical size minimizes risk of port damage
- 7/16" hex allows for standard tool installation
- 100% Surface Mount Technology for consistent performance
- Precision four-point female seizure contact
- Moisture-sealed connector interfaces

Specifications	
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 1.915 in (4.86 cm) Diameter = .50 in (1.27 cm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

EQF10-54/860

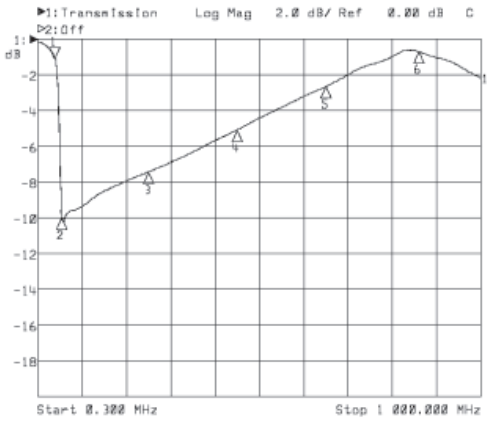
- Stop frequency in MHz
- Start frequency in MHz
- attenuation level at start freq.
- Equalizer, downstream only

Trap Specifications (Model Specific)

Model: **EQF10-54/860** Prep. By B.O. Date: 03/26/02

Response: Sample Minimum operating frequency: 860 Mhz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1		40	1.5	2.0 max.
2		55.25	10.1	10±1.0
3		250	7.5	7.5±0.5
4		450	5.0	5.0±0.5
5		650	2.5	2.5±0.5
6		860	0.7	1.0 max.



Silencer Series
Forward Path Attenuators

PPC's forward path attenuators provide a fixed level of attenuation within the downstream frequencies without affecting upstream frequencies. Typical applications include attenuation of over amplified signals generated by drop amplifiers at the first input.

Features

- Small physical size minimizes risk of port damage
- 7/16" hex body allows for standard tool installation
- 100% Surface Mount Technology for consistent performance
- Precision four-point female seizure contact
- Moisture-sealed connector interfaces
- SCTE compliant connector interfaces

Specifications	
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 1.92 in (4.88 cm) Diameter = 0.5 in (1.27 cm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

FPA10-54

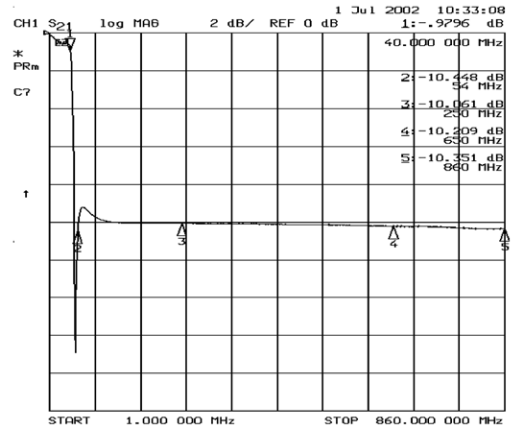
54	Start frequency in MHz
10	Level of attenuation in dB
FPA	Forward Path Attenuator

Trap Specifications (Model Specific)

Model: **FPA10-54** Prep. By B.O. Date: 07/01/02

Response: Sample Minimum operating frequency: 860 Mhz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1		40	1.0	1.5 max.
2		54	10.4	10±1.0
3		250	10.0	10±.7
4		650	10.2	10±.7
5		860	10.3	10±.7



QoS® Series
QBR Band Reject Tiering Filters

PPC takes insertion loss and return loss seriously. Poor return loss can affect modem performance, QoS® Series QBR filters have an industry leading minimum return loss of -16 dB (typically -20 dB). QBR filters also have an insertion loss of -0.5 dB (typically -0.2 dB) which reduces the need to install costly drop amps. Drop cable, connectors splitters and ground blocks all have a -16 dB return loss. Why shouldn't your filters too?

Available in AK Assembly

Features

- Minimum Return Loss of -16 dB (typically -20 dB)
- Minimum Insertion Loss of -0.5 dB (typically -0.2 dB)
- Laser engraved part number and production date
- Dual female interface or integrated 7/16" hex for flexibility (optional)
- Small physical size minimizes risk of port damage
- Precision four-point female seizure contact
- SCTE compliant connector interfaces
- Accommodates PPC port seal and WS-500
- Custom values available upon request

Specifications	
Minimum Operating	
Frequency	1,002 MHz minimum
Impedance	75 Ohms (nominal)
Shielding Effectiveness	> 120 dB
Dimensions	Length = 2.2 in (5.6 cm) Diameter = 0.081 in (21 mm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part

QBR-29/58 8A

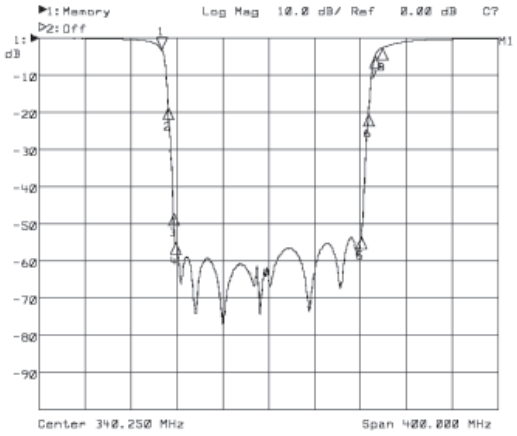
- 8A — Options
- 58 — Last impaired channel
- 29 — First impaired channel
- QBR — Band Reject
- QoS® Series

Trap Specifications (Model Specific)

Model: **QBR-29/58-8A** Prep. By T.H. Date: 10/24/07

Passband insertion loss: 0.5 dB Minimum operating frequency: 1 GHz

Marker #	Freq. Desc.	Freq. (MHz)	Typical Loss (dB)	Limits (dB)
1	28 vid.	247.25	3.0	3.6 max.
2	29 vid.	253.25	18	12 min.
3	29 aud.	257.75	47	42 min.
4	30 vid.	259.25	54	50 min.
5	57 vid.	421.25	54	50 min.
6	58 vid.	427.25	19	16 min.
7	59 vid.	433.25	5.0	6.2 max.
8	60 vid.	439.25	2.7	3.5 max.



DATA ONLY

QoS® Series
SBS Band Reject Tiering Filters

A few subscribers choose to pay for high-speed Internet or telephony without video services. To prevent unauthorized reception of analog video services, a filter is typically used. PPC's new SBS Data Only filter effectively removes the analog tier while ensuring no impairments are introduced over DOCSIS frequencies.

Available in
AK Assembly

Features

- Minimum -16 dB return loss (typically -20 dB)
- Minimum -1.2 dB insertion loss (typically -1.5 dB)
- Small physical size minimizes risk of port damage
- Precision four-point female seizure contact
- SCTE compliant connector interfaces

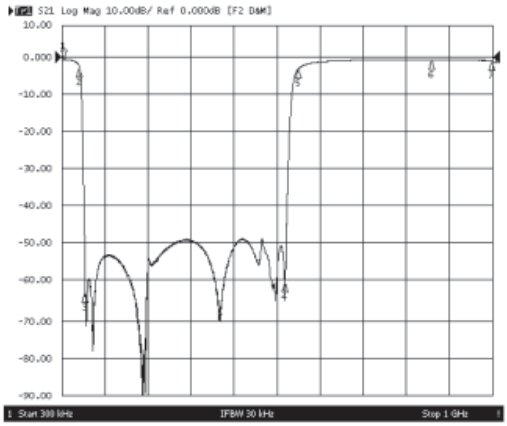
Specifications	
Frequency	Direct Current
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 2.15 in (5.46 cm) Diameter = 0.81 in (21 mm)
Surge	6 kV per SCTE IPS-TP-210

Trap Specifications (Model Specific)

Model: **SBS-2/78** Prep. By S.S. Date: 5/21/08

Typical passband insertion loss:0.6 dB Minimum operating frequency:1 GHz

Marker #	Freq. Desc.	Freq. (MHz)	Typical Loss (dB)	Limits (dB)
1		5.0	0.6	
2		42	2.8	3.5 max.
3	2 vid.	55.25	64	45 min.
4	73 vid.	517.25	62	45 min.
5		550	3.0	3.5 max.
6		860	0.6	
7		1000	0.9	
8				



Sample Part #:

SBS-2/78

- Last degraded channel
- First degraded channel
- SBS = Super Band Reject

The Silencer Series
SHP High Pass Filters

PPC's High Pass Filters are used to isolate upstream frequencies for subscribers who do not require return path services. High Pass Filters also prevent ingress noise from propagating back to the node and disrupting active upstream services. PPC's SHP series filters represent a major technological breakthrough by being the first to offer such outstanding electrical performance in the compact Silencer® Series packaging.

Features & Benefits

- Small physical size minimizes risk of port damage
- 7/16" hex allows for standard tool installation
- 100% Surface Mount Technology for consistent performance
- Precision four-point female seizure contact
- Moisture-sealed connector interfaces
- SCTE compliant connector interfaces

Specifications	
Frequency	1,002 MHz minimum
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 1.65 in (4.19 cm) Diameter = 0.5 in (1.27 cm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

SHP3-50

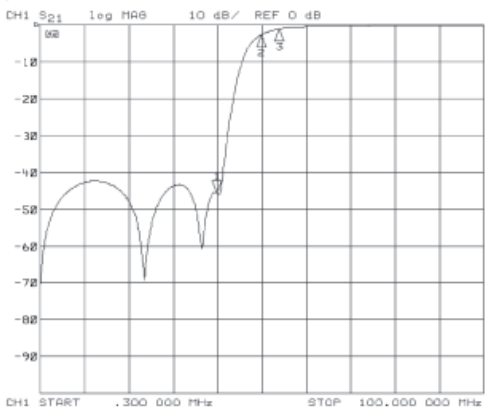
- Beginning passband freq. in MHz
- Number of poles
- Silencer Series High Pass

Trap Specifications (Model Specific)

Model: **SHP3-50** Prep. By B.O. Date: 08/01/06

Response: Actual Minimum operating frequency: 1 GHz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1		40	45	40 min.
2		50	2.8	3.5 max.
3		54	1.2	1.5 max.



The Silencer Series
SNBR Wide Band Reject Filters

PPC introduces its new Wide Band Reject Filter designed to facilitate provision of high-speed, data-only service to cable system subscribers. The SNBR Wide Band Reject Filter removes the analog tier while passing downstream and upstream DOCSIS frequencies.

Available in
AK Assembly

Features

- 100% Surface Mount Technology for consistent performance
- Compact, single-piece construction
- Improved insertion loss over downstream pass band minimizing modem dropout
- Precision four-point female seizure contact
- Moisture-sealed connector interfaces
- SCTE compliant connector interfaces
- 7/16 hex allows for standard tool installation

Specifications	
Frequency	1,002 MHz minimum
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	1.94 in (4.93 cm) long 0.50 in (1.27 cm) diameter
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

SNBR-2/78

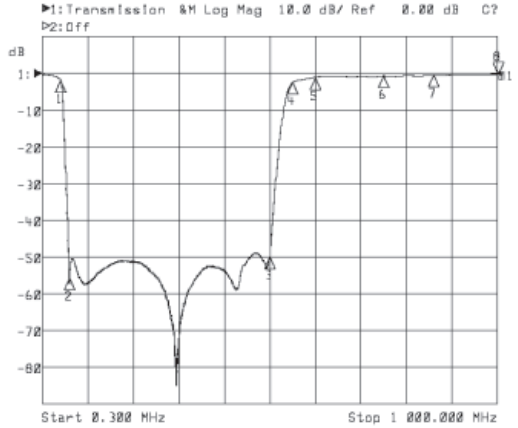
- Stop frequency in MHz
- Stop frequency in MHz
- SNBR Series

Trap Specifications (Model Specific)

Model: **SNBR-2/78** Prep. By S.S. Date: 5/21/2008

Response: Sample Minimum operating frequency: 1 Ghz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1		42	2.0	4.0 max.
2	3 Vid.	61.25	56	48 min.
3	70 Vid.	499.25	50	40 min.
4	79 Vid.	553.25	2.6	4.0 max.
5		600	1.1	1.1 ref.
6		750	0.8	0.8 ref.
7		860	0.6	0.6 ref.
8		1000	0.4	0.4 ref.



Step Attenuators

PPC's Step Attenuators provide a fixed level of flat attenuation within the upstream frequencies only. Low value taps produce the majority of ingress and trouble calls within a typical HFC network. This is due to the lack of sufficient reverse attenuation found in higher-value taps. Applied directly to the tap port, PPC Step Attenuators provide unity gain with all cable modems and other critical reverse transmission products like digital voice and high-speed Internet.

Features

• **Ingress Noise Attenuation:** Attenuating the return path frequencies instructs the CMTS to raise the modem transmit level. This provides an improved signal to noise ratio; as the noise floor remains suppressed by the step attenuator.

• **Micro-reflection Attenuation:** Effectively reduces micro-reflections by two times the step attenuator value. Example: A 6 dB step attenuator will provide a 12 dB reduction in micro reflections.

• **Dynamic Range Enhancement for FP Laser:** Since the step attenuator reduces the ingress noise, the FP Laser performance margin is greatly improved, thereby reducing the risk for laser clipping.

Specifications	
Frequency	1,002 MHz minimum
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 1.65 in (4.19 cm) Diameter = 0.5 in (1.27 cm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

SSA12-54

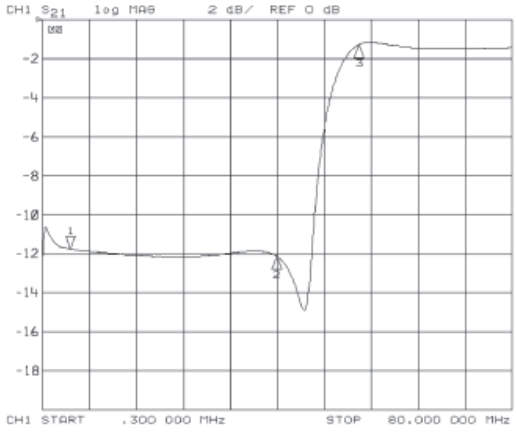
- Beginning passband freq. in MHz
- Level of attenuation in dB
- SSA Series Return Path Attenuator

Trap Specifications (Model Specific)

Model: **SSA12-54** Prep. By B.O. Date: 08/12/04

Response: Sample Minimum operating frequency: 1 Ghz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1		5.0	11.8	12±1.0
2		40.0	12.1	12±1.0
3		54.0	1.3	1.5 max



Mini Series
UBR Band Reject Tiering Filters

Band reject filters remove a series of adjacent channels. Channel segmentation allows systems to offer alternate levels of service to subscribers. PPC's "Ultra Band Reject" series filters provide electrical performance equivalent to traditional 12-pole configurations in a small, efficient package.

Available in AK Assembly

Features

- Patented military-style hermetic glass-to-metal seals for long-term filter stability
- Small physical size minimizes risk of port damage
- Precision four-point female seizure contact
- SCTE compliant connector interfaces

Specifications	
Frequency	1,002 MHz minimum
Impedance	75 Ohms
Shielding Effectiveness	> 120 dB
Dimensions	Length = 2.75 in (6.989 cm) Diameter = 0.81 in. (21 mm)
Surge	6 kV per SCTE IPS-TP-210

Sample Part #:

UBR-37/58 HRC

- Reserved for options
- Last degraded channel
- First degraded channel
- Ultra Band Reject

Trap Specifications (Model Specific)

Model: **UBR-37/58** Prep. By H.B. Date: 5/21/2008

Response: Actual Minimum operating frequency: 1 Ghz

Marker #	Freq. Desc.	Freq. Mhz	Typ. Loss(dB)	Limits(dB)
1	36 vid	295.25	3.8	5.0 max
2	38 vid	307.25	56	50 min
3	57 vid	421.25	51	50 min
4	59 vid	433.25	5.1	6.0 max
5				
6				
7				
8