

BYPASS AMPLIFIERS

Uninterrupted Service

PCT-VC-5P, PCT-VC-9P, PCT-VC-5U, PCT-VC-9U



Innovation for the Last Mile®



STANDARD FEATURES

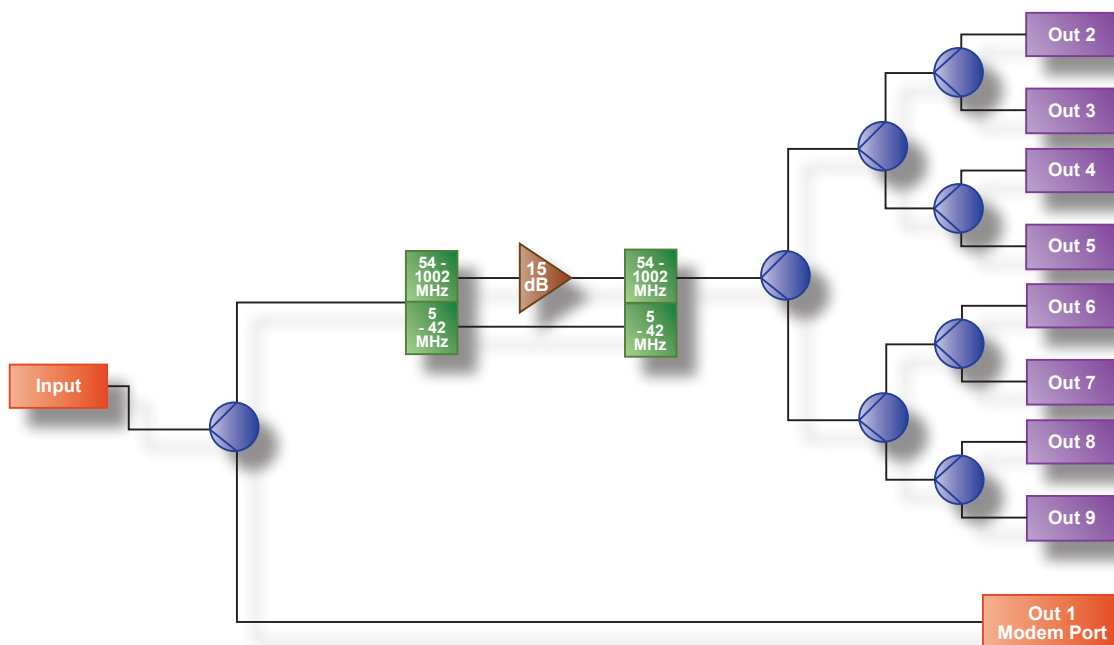
Provides uninterrupted service at all times for critical applications, such as telephony, that require high reliability networks in a tight, compact housing

Advanced Features

- Patented DSM seizure technology provides increased spring retention for better surface contact
 - Increased spring retention for better surface contact even after repeated entry across maximum to minimum center conductor diameters
 - Gold-plated, beryllium copper construction for better corrosion resistance, impedance matching, and less common path distortion
- Bypass function
 - Bypass is accomplished through a passive modem port
 - Provides uninterrupted service at all times for critical applications, such as cable telephony, that require high reliability networks
- Available in four configurations
 - 4 outputs + 1 modem port with passive reverse
 - 8 outputs + 1 modem port with passive reverse
 - 4 outputs + 1 modem port with unity gain
 - 8 outputs + 1 modem port with unity gain
- RoHs compliant
- F-port tightening torque withstand of > 60 in lbs

Ordering Information

- PCT-VC-5P - Bypass Amplifier with Modem Port, 5-Port (1 + 4) Passive Return
- PCT-VC-9P - Bypass Amplifier with Modem Port, 9-Port (1 + 8) Passive Return
- PCT-VC-5U - Bypass Amplifier with Modem Port, 5-Port (1 + 4) Unity Gain
- PCT-VC-9U - Bypass Amplifier with Modem Port, 9-Port (1 + 8) Unity Gain



Block Diagram - PCT-VC-9P



Specifications

Parameters	Unit	PCT-VC-5P	PCT-VC-9P	PCT-VC-5U	PCT-VC-9U
Downstream					
Forward Path Frequency Range	MHz	54 - 1002			
Amplification Device	--	GaAs pHEMT			
Gain (Typical) 54 - 1002 MHz	dB	5.0	1.5	0.5	0.0
Gain Tolerance	dB	+ 2 / - 1			
Flatness (Peak-to-Valley)	dB	± 0.8			
Return Loss	dB	≥ 18			
Isolation	dB	≥ 22			
Group Delay					
54 to 60 MHz	ns	< 20 / 3.58 MHz			
60 to 66 MHz		< 10 / 3.58 MHz			
66 to 1002 MHz		< 5 / 3.58 MHz			
Noise Figure	dB	8 (max)			≤ 9
Composite Second Order Distortions ¹	dBc	< -62			
Composite Triple Beat Distortions ¹	dBc	< -75			
Cross Modulation Distortions	dBc	< -75			
Hum Modulation	dBc	< -75			
Upstream					
Return Path Frequency Range	dB	5 - 42			
Amplification Device	dB	NA		Push-Pull Amplifier	
Gain (Typical)	dB	- 11.5	- 14.5		0.5
Gain Tolerance	dB	NA	NA		+ 2 / - 1
Flatness (Peak-to-Valley)	dB	± 0.8			
Isolation					
5 to 15 MHz	dB	> 20			
16 to 40 MHz		> 25			
41 to 42 MHz		> 20			
Noise Figure	dB	NA		≤ 14	≤ 17
Return Loss Input	dB	≥ 18	≥ 22		≥ 18
Return Loss Oupt	dB	≥ 18	≥ 22		≥ 18
Group Delay					
5 to 10 MHz	ns	< 20 / 1 MHz			
10 to 36 MHz		< 5 / 1 MHz			
36 to 42 MHz		< 20 / 1 MHz			
Discrete Second Order Distortions ⁴	dBc	NA	NA		< -68
Discrete Third Order Distortions ⁴	dBc	NA	NA		< -62
Hum Modulation	dBc	NA	NA		< -75
Modem Port Path					
Frequency Range	MhZ	5 - 1002			
Insert Loss	dB	4.8			
Return Loss	dB	≥ 18			
General					
Input Voltage	VDC	12 - 16			
Power Consumption	W	3.2			6.5
RFI Shielding	dB	≥ 110			≥ 110
Nominal Impedance	Ohm	75			
Operating Temperature	°C	-40 to +60			
Surge Withstand	-	RF Ports: Conforms to ANSI/SCTE 81 2003, IEEE C62.41 Cat. B3 Waveform with power adapter Power Port: Conforms to ANSI/SCTE 81 2003, IEEE C62.41 Cat. A3 Waveform			
F-Port Tightening Torque Withstand	in lb	> 60			
F-Port	-	≥ ±15 PSIG; Patented DSM Seizure Mechanism			
Regulatory Standards	-	RoHs Compliant. CE Compliant. (EN50083-2:2006)			

Notes 1: Note 1: 79 each VSB-AM active video signals (54 – 552 MHz) at 10 dBmV/ch together with 33 each 256-QAM signals (552 – 750) at 4 dBmV/ch, all channels flat. 2: Output-to-Output. 3: Device's noise figure. 4: Test condition: 2 channel at rated output. 5: Modem Output-to-TV Output Port.