

PCT-VC-F14A

MoCA Bypass Amplifier, 5-Ports (1+4), Active Return with MoCA Filter



Parameter	Unit	PCT-VC-F14A			
DOWNSTREAM					
Forward Path Frequency Range	MHz	54	552	750	1002
Amplification Device	--	RF Amplification IC - GaAs pHEMT (TAT7461*2)			
Gain (typical)	dB	1.75 (1.25 to 3.25)	4.75 (3.75 to 6.0)	5.75 (4.25 to 7.0)	6.75 (5 to 8)
Return Loss	dB	≥ 18			
Isolation ³	dB	≥ 22			
Group Delay	ns	< 30 / 3.58 MHz			
Noise Figure	dB	≤ 10			
Distortion	CSO ¹	dBc < -62			
	CTB ¹	dBc < -73			
	X MOD ¹	dBc < -75			
Hum Modulation	dBc	dBc < -75			
UPSTREAM					
Return Path Frequency Range	MHz	5 to 15	15 to 40	40 to 42	
Amplification Device	--	Push-Pull Amplifier			
Gain (typical)	dB	-6.25 (-4.25 to -8.25)	-5.5 (-4.25 to -7.25)	-5.5 (-4.25 to -8.25)	
Rated Input Level	dBmV	55 @ 2 Channels			
Return Loss	Input	dB	≥ 18	≥ 22	≥ 18
	Output	dB	≥ 18	≥ 20	≥ 18
Isolation	dB	≥ 24			
Group Delay	5 to 6.5 MHz	ns	< 20 / 1.5 MHz		
	6.5 to 40 MHz	ns	< 10 / 1.5 MHz		
	40 to 42 MHz	ns	< 30 / 2 MHz		
Noise Figure	dB	≤ 15			
Distortion	DSO ²	dBc	≤ -65		
	DTO ²	dBc	≤ -62		
Hum Modulation	dBc	dBc ≤ -65			
MODEM PORT PATH					
Frequency Range	MHz	5 to 1002			
Insertion Loss (Max)	dB	6.0			
Return Loss	dB	≥ 18			
MoCA					
Frequency Range	MHz	1125 to 1525			
Insertion Loss	Between output ports	dB	< 30		
	Modem port to any output ports	dB	< 30		
	Any output port to input port ³	dB	≥ 36		
Isolation	Input port to any output port ⁴	dB	≥ 23		
	1125 to 1225 MHz	dB	≥ 26		
	1225 to 1525 MHz	dB	≥ 30		
Between modem port and input port ⁵	dB	≥ 30			
GENERAL					
Input Voltage	VDC	12 to 16			
Power Adapter	--	APA1260515U			
Power Consumption	W	< 10.0			
RFI Shielding	dB	> 110			
Nominal Impedance	Ohm	75			
Operational Temperature	°C (°F)	-40 to +60 (-40 to +140)			
Surge Withstand	RF Ports and Power Adapter	--	Conforms to ANSI/SCTE 81 2003, IEEE C62.41 Cat. B3 Waveform		
	Power Port	--	Conforms to ANSI/SCTE 81 2003, IEEE C62.41 Cat. A3 Waveform		
F Ports	Seal	PSIG	≥ ±15		
	Seizure	--	Patented DSM Seizure Mechanism		
	Tightening Torque Withstand	--	60 in-lbs		
Current Draw (Max)	mA	500			

ORDERING INFORMATION
PCT-VC-F14A Amplifier, MoCA Bypass, 5-Ports (1+4), Active Return, with MoCA Filter

Notes 1: 79 analog channels (54 to 552 MHz) at 10 dBmV/ch. + 33 digital channels (552 to 750 MHz) at -6 dBc (total channel power) relative to analog carriers. All channels flat. 2: Test procedure per ANSI/SCTE 115 2006 – CW carriers at 13 MHz and 19 MHz, +55 dBmV per carrier. 3: Minimum upstream isolation, any amplified output port to input port. 4: Minimum downstream isolation, input port to any amplified output port. 5: Minimum bi-directional isolation, passive modem port <-> input port.

