

# MoCA AMPLIFIERS

## PCTMA2F-11P, PCTMABF-11A, PCTMABF-14P



Innovation for the Last Mile™

### STANDARD FEATURES

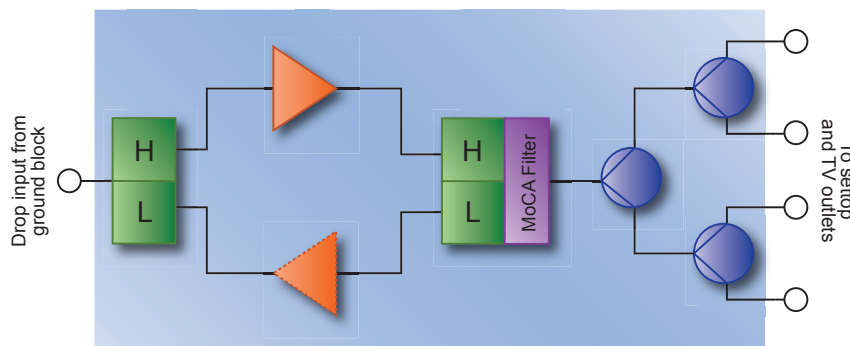
PCT's multimedia MoCA drop amplifier series provide ultra-low noise amplification of broadband signals for subscriber drop installations, and the built-in LPF filter ensures the MoCA signals (1125 to 1525 MHz) are constrained to the home network.



MoCA Connected Home

### Features and Benefits

- Integrated MoCA filter
  - Keeps MoCA signals within the home network and blocks them from going up the drop
  - Reduces the loss of MoCA passband frequencies (1125 to 1525 MHz) within the in-home network
- Patented DSM® seizure technology provides increased spring retention for better surface contact.
  - Patented design to increase 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
- Drop amplifiers available in the following configurations:
  - Single output with passive reverse
  - Single output with active reverse
  - Four outputs with passive reverse
- RoHS Compliant
- F-Port is 60 in-lbs tightening and loosening



Passbands (MHz): H 54 to 1002, L 5 to 42

### Applications

- Distribution of video in the house for applications with multi-room DVR
- Home high speed networking (allowing internet service, videos, and gaming to share bandwidth without losing speed and quality)
- High definition video streaming from the internet

### Ordering Information

- PCTMA2F-11P - Drop Amplifier, 1-Port Passive Return with MoCA Filter
- PCTMABF-11A - Drop Amplifier, 1-Port Active Return with MoCA Filter
- PCTMABF-14P - Drop Amplifier, 4-Port Passive Return with MoCa Filter

## Specifications

Parameters	Unit	PCTMA2F-11P	PCTMABF-11A Details	PCTMABF-14P
<b>Downstream</b>				
Forward Path Frequency Range	MHz		54 - 1002	
Amplification Device	--		RF Amplification IC – GaAs MESFET	
Gain (Typical)				
0 - 54 MHz		11.5	11.5	3.5
54 - 552 MHz	dB	13.5	13.5	6.25
552 - 750 MHz		14.0	14.0	6.75
750 - 1002 MHz		15.0	15.0	7.5
Gain Tolerance	dB		± 1.0	
Flatness (Peak-to-Valley)	dB		± 0.5	
Minimum Downstream Isolation (1125 – 1525 MHz)	dB	≥ 16	≥ 16	≥ 26
Return Loss	dB		≥ 18	
Group Delay (55.25 - 67.25 MHz)	ns		< 30 / 3.58 MHz	
Group Delay (77.25 - 1002 MHz)	ns		< 5 / 3.58 MHz	
Noise Figure	dB		≤ 4	
Composite Second Order Distortions <sup>1</sup>	dBc		< -62	
Composite Triple Beat Distortions <sup>1</sup>	dBc		< -73	
Cross Modulation Distortions	dBc		< -75	
Hum Modulation	dBc		< -75	
<b>Upstream</b>				
Return Path Frequency Range	dB		5 - 42	
Amplification Device	dB	None	Push-Pull Amplifier	None
Gain (Typical)				
5 - 15 MHz	dB	- 0.6	4.5	- 7.0
15 - 40 MHz		- 0.5	4.5	- 7.0
40 - 42 MHz		- 1.2	5.0	7.5
Gain Tolerance	dB	NA	± 1.0	NA
Flatness (Peak-to-Valley)	dB	± 0.5	± 0.6	± 0.5
Minimum Upstream Isolation (1125 – 1525 MHz)	dB		≥ 36	
Return Loss Input (Typical)				
5 - 15 MHz	dB		≥ 18	
15 - 40 MHz		≥ 25	≥ 25	≥ 22
40 - 42 MHz			≥ 18	
Return Loss Output	dB	≥ 18	≥ 25	≥ 18
Group Delay (5 – 6.5 MHz)	ns		< 20 / 1.5 MHz	
Group Delay (6.5 - 40 MHz)	ns		< 10 / 1.5 MHz	
Group Delay (40 - 42 MHz)	ns		< 30 / 1.5 MHz	
Noise Figure	dB	NA	≤ 6	NA
Rated Input Level	dBmV		Reverse in port 42 dBmV per carrier, five carriers	
Composite Second Order Distortions <sup>2</sup>	dBc		< -65	
Composite Triple Beat Distortions <sup>2</sup>	dBc		< -62	
Cross Modulation Distortions	dBc		< -65	
Hum Modulation	dBc		< -75	
<b>General</b>				
Input Voltage	VDC		12 - 16	
Power Consumption	W		≤ 5.5	
RFI Shielding	dB		≥ 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 Torque	-	60 in-lbs tightening and loosening		
F-Port	-	Conforms to ANSI/SCTE 01 2006, sealed; able to hold 15 PSI; 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: Five non-synchronous CW carriers at T-channels T-8 through T-12.



DSM: Pat No. 6,450,836 B1 and Pat. No. 6,250,960

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