

# DROP AMPLIFIERS

## Active Forward & Active Return

### PCT-MA-B1015-1A



Innovation for the Last Mile®



## INTRODUCTION

PCT's Multimedia Drop Amplifiers provide low noise amplification of broadband signals for subscriber drop installations.

## Features & Benefits

- ✓ Patented DSM seizure technology used in all F ports
- ✓ 6kV surge withstand on all ports
- ✓ Lightweight powder coated and weather sealed housing for superior corrosion protection

## Specifications

Parameters	Unit	PCT-MA-B1015-1A Details
<b>Forward Path</b>		
Forward Path Frequency Range	MHz	54 to 1002
Amplification Device	--	RF Amplification IC – GaAs pHEMT
Gain (Typical)	dB	14
Gain Tolerance	dB	+ 2 / - 1
Flatness (Peak-to-Valley)	dB	± 0.5
Rated Output Level	dBmV	24
Return Loss	dB	≥ 18
Group Delay	54 to 60 MHz	< 22 / 3.58 MHz
	61 to 66 MHz	< 8 / 3.58 MHz
	67 to 1002 MHz	< 5 / 3.58 MHz
Effective Noise Figure (Max.) <sup>2</sup>	dB	4
Composite Second Order Distortions <sup>3</sup>	dBc	< -62
Composite Triple Beat Distortions <sup>3</sup>	dBc	< -75
Cross Modulation Distortions <sup>1</sup>	dBc	< -75
Hum Modulation	dBc	< -75
<b>Active Return Path</b>		
Return Path Frequency Range	MHz	5 to 42
Amplification Device	--	Push-Pull Amplifier
Gain (Typical)	dB	14
Gain Tolerance	dB	+ 2 / - 1
Flatness (Peak-to-Valley)	dB	± 0.5
Return Loss	dB	≥ 18
Group Delay	5 to 10 MHz, 36 to 42 MHz	< 20 / 1 MHz
	10 to 36 MHz	< 5 / 1 MHz
Noise Figure	dB	5
Discrete Second Order Distortions <sup>3</sup>	dBc	< -68
Discrete Third Order Distortion <sup>3</sup>	dBc	< -62
XMOD <sup>1</sup>	dBc	< -62
Hum Modulation	dBc	< -75
<b>General</b>		
Input Voltage	VDC	12 to 16
Power Consumption	W	6.5
RFI Shielding	dB	≥ 110
Nominal Impedance	Ohm	75
Operating Temperature	°C (°F)	-40 to +60 (-40 to 140)
Surge Withstand	--	Conforms to ANSI/SCTE 81 2003; IEEE C62.41 Cat. B3 Waveform
F-Port Tightening Torque Withstand	in lbs	> 60
F-Port	-	≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism
Regulatory Standards	-	RoHS Compliant. CE Compliant. (EN50083-2:2006)

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 condition-2 ch at rated output PCT-MA-B1015-1A, 2A, 4A, PCT-BEMA-B1015-1A, 2A, 4A: NF @ 21° C (70° F). 3) PCT-BEMA-B1015-1A, 2A, 4A: Test condition: 79 analog +33 digital NTSC Ch. loading, 70 dBmV input. 4) PCT-MA-B1015-1A, 2A, 4A: Channel Loading, 45 dBmV input PCT-BEMA-B1015-1A, 2A, 4A: Test condition: 2 Ch. loading, 105 dBmV input, Test condition: 3 Ch. loading, 105 dBmV input. 5) 1.5 MHz ea, @ 2 Channels.

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