DROP AMPLIFIERS Passive Forward & Active Return PCT-MA2-RA10



Innovation for the Last Mile®



INTRODUCTION

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

Features & Benefits

- Passive forward path and active return path amplfier for specialized applications requiring additional return path gain
- ✓ 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

Provard Path Frequency Range	Specifications			PCT-MA2-RA10
Provard Path Frequency Range			Unit	Details
Passive Forward Insertion Loss dB ≥ -1.5 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss 54 to 60 MHz ns < 20 / 3.58 MHz	Forward Path			
Flatness (Peak-to-Valley)	Forward Path Frequency Range		MHz	54 to 1002
Return Loss dB ≥ 18 Group Delay 54 to 60 MHz 60 to 1002 MHz ns < 20 / 3.58 MHz Return Path Return Path Frequency Range MHz 5 to 42 Gain dB 10 Gain Tolerance dB ± 1 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss dB ± 18 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz	Passive Forward Insertion Loss		dB	≥ -1.5
Group Delay 54 to 60 MHz 60 to 1002 MHz ns < 20 / 3.58 MHz Return Path Frequency Range MHz MHz 5 to 42 Gain dB 10 Gain Tolerance dB ± 1 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss dB ± 18 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz	Flatness (Peak-to-Valley)		dB	± 0.5
Group Delay 60 to 1002 MHz < \$ / 5 / 3.58 MHz Return Path Return Path Frequency Range MHz 5 to 42 Gain dB 10 Gain Tolerance dB ± 1 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss dB ± 18 Return Losy dB ± 18 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz ms < 20 / 1 MHz Oise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz ms < 20 / 1 MHz Discrete Second Order Distortions 1 dBc < -68 Discrete Second Order Distortions 1 dBc < -62 Hum Modulation dBc < -62 Hum Modulation dBc < -75 General Distortions Max mA 200 FIS Shielding MB ≥ 110 Nominal Impedance<	Return Loss		dB	≥ 18
Return Path Return Path Frequency Range MHz 5 to 42 Gain dB 10 Gain Tolerance dB ± 1 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss dB ± 0.5 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz ns < 20 / 1 MHz	Group Delay	54 to 60 MHz	ns	< 20 / 3.58 MHz
Return Path Frequency Range MHz 5 to 42 Gain dB 10 Gain Tolerance dB ± 1 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss dB ± 18 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz		60 to 1002 MHz		< 5 / 3.58 MHz
Gain dB 10 Gain Tolerance dB ± 1 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss dB ≥ 18 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz	Return Path			
Gain Tolerance dB ± 1 Flatness (Peak-to-Valley) dB ± 0.5 Return Loss dB ≥ 18 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz	Return Path Frequency Range		MHz	5 to 42
Flatness (Peak-to-Valley)	Gain		dB	10
Return Loss dB ≥ 18 Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz	Gain Tolerance		dB	± 1
Rated Output Level dBmV 50 @ 2 channels Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz	Flatness (Peak-to-Valley)		dB	± 0.5
Noise Figure (Typical) dB 5.5 Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz	Return Loss		dB	≥ 18
Group Delay 5 to 10 MHz, 36 to 42 MHz 10 to 36 MHz ns < 20 / 1 MHz Discrete Second Order Distortions 1 Discrete Third Distortions 1 Discrete Third Order Distortions 1 Discrete Third Order Distortions 1 Discrete Third Order Distortions 1 Discrete Third Distortions 1 Discrete Third Distortions 1 Discrete Third Distortions 1 Discrete Third Distortions 1 Distortions 1 Distortions 1 Discrete Third Distortions 1 Distortions	Rated Output Level		dBmV	50 @ 2 channels
Source Second Order Distortions Second Or	Noise Figure (Typical)		dB	5.5
Discrete Second Order Distortions	Group Delay	5 to 10 MHz, 36 to 42 MHz	ns	< 20 / 1 MHz
Discrete Third Order Distortions ¹ dBc < -62				< 5 / 1 MHz
Cross Modulation dBc < -62 Hum Modulation dBc < -75 General Input Voltage VDC 12 to 16 Power Consumption, Max mA 200 RFI Shielding dB ≥ 110 Nominal Impedance Ohm 75 Operating Temperature °C (°F) -40 to +60 (-40 to 140) Surge Withstand RF ports and power adapter Power port Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevom F-Port Tightening Torque Withstand in Ibs > 60 F-Port ≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism	Discrete Second Order Distortions ¹		dBc	< -68
Hum Modulation dBc < -75 General Input Voltage VDC 12 to 16 Power Consumption, Max mA 200 RFI Shielding dB ≥ 110 Nominal Impedance Ohm 75 Operating Temperature °C (°F) -40 to +60 (-40 to 140) Surge Withstand RF ports and power adapter Power port Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. B3 Waveform Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port ± ±15 PSIG; Patented DSM® Digital Seizure Mechanism	Discrete Third Order Distortions 1		dBc	< -62
General Input Voltage VDC 12 to 16 Power Consumption, Max mA 200 RFI Shielding dB ≥ 110 Nominal Impedance Ohm 75 Operating Temperature °C (°F) -40 to +60 (-40 to 140) Surge Withstand RF ports and power adapter Power port Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. B3 Waveform Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port - ≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism	Cross Modulation		dBc	< -62
Input Voltage VDC 12 to 16 Power Consumption, Max mA 200 RFI Shielding dB ≥ 110 Nominal Impedance Ohm 75 Operating Temperature °C (°F) -40 to +60 (-40 to 140) Surge Withstand RF ports and power adapter Power port - Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port - ≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism	Hum Modulation		dBc	< -75
Power Consumption, Max mA 200 RFI Shielding dB ≥ 110 Nominal Impedance Ohm 75 Operating Temperature °C (°F) -40 to +60 (-40 to 140) Surge Withstand RF ports and power adapter Power port Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. B3 Waveform Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port ± ±15 PSIG; Patented DSM® Digital Seizure Mechanism	General			
RFI Shielding dB ≥ 110 Nominal Impedance Ohm 75 Operating Temperature °C (°F) -40 to +60 (-40 to 140) Surge Withstand RF ports and power adapter Power port - Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port - ≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism	Input Voltage		VDC	12 to 16
Nominal Impedance Ohm 75 Operating Temperature °C (°F) -40 to +60 (-40 to 140) Surge Withstand RF ports and power adapter Power port Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. B3 Waveform Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in lbs > 60 F-Port ± ±15 PSIG; Patented DSM® Digital Seizure Mechanism	Power Consumption, Max		mΑ	200
Operating Temperature Surge Withstand Power port F-Port Tightening Torque Withstand OC (°F) -40 to +60 (-40 to 140) Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. B3 Waveform Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm in lbs > 60 E-Port - ≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism	RFI Shielding		dB	≥ 110
Surge Withstand Power port Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. B3 Waveform Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port Spring Spr	Nominal Impedance		Ohm	75
F-Port Tightening Torque Withstand in Ibs Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port	Operating Temperature		°C (°F)	-40 to +60 (-40 to 140)
F-Port Tightening Torque Withstand in Ibs Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm F-Port Tightening Torque Withstand in Ibs > 60 F-Port	Surge Withstand	RF ports and power adapter		Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. B3 Waveform
F-Port - ≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism				Conforms to ANSI/SCTE 81 2012; IEEE C62.41 Cat. A3 Wavevorm
	F-Port Tightening Torque Withstand		in lbs	> 60
Regulatory Standards - RoHS Compliant. CE Compliant. (EN50083-2:2006)	F-Port		-	≥ ±15 PSIG; Patented DSM® Digital Seizure Mechanism
	Regulatory Standard	5	-	RoHS Compliant. CE Compliant. (EN50083-2:2006)

Note: 1) 2 channels @ rated output.



