



# DAS Products

DATA SHEET

## High Power Low PIM Attenuator

ATI-77-xx-xx



- CCI's high power low PIM attenuator support 100W across a wideband from 698 to 2700 MHz
- Excellent return loss performance
- Wide range of attenuation values from 6 to 20 dB
- Available in 7-16 DIN, and 4.3-10 Connectors
- Modular, high reliability design
- Designed for ultra low PIM performance
- RoHS compliant
- Optional 19 inch rack mount kit
- Available heat shield for laboratory applications and conditions

### Overview

CCI's ATI-77 series of high power low PIM attenuators cover a broad frequency range from 698 to 2700 MHz, while delivering high power performance of up to 100 Watts. Each model has a nominal and highly accurate attenuation value with excellent return loss performance. The units are offered in a wide range of attenuation values from 6 to 20 dB and are ideal for optimizing RF power distribution, which is often required for distributed antenna systems (DAS).

The extremely wide frequency range allows use with multiband and broadband antennas as well as leaky cable systems. The high power handling makes these attenuators well-suited for use with wireless base stations. The attenuators have been designed and constructed with minimal solder joints which assures the correct dissipative loss and enhances the overall reliability.

The attenuators can be wall mounted with the included bracket or rackmount in a single or twin configuration with the optional rack mount kit. The RF ports can be configured with either DIN 7-16 or 4.3-10 connectors.

CCI filter and combiner products are designed and produced to ISO 9001 certification standards for reliability and quality at our state-of-the-art engineering and manufacturing facilities.



## SPECIFICATIONS

### High Power Low PIM Attenuator

ATI-77-xx-xx

#### Electrical Specification

Connector type	Models			
DIN 7-16 Female	ATI-77-06-F1	ATI-77-10-F1	ATI-77-15-F1	ATI-77-20-F1
4.3-10 Female	ATI-77-06-F2	ATI-77-10-F2	ATI-77-15-F2	ATI-77-20-F2
RF Parameter				
Frequency Range	698 - 2700 MHz			
Attenuation	6.0 dB	10.0 dB	15.0 dB	20.0 dB
Accuracy	±0.8 dB	±0.8 dB	±1.0 dB	±1.0 dB
Directivity	≥ 20 dB typ	≥ 20 dB typ	≥ 20 dB typ	≥ 20 dB typ
Return Loss	≤ -18 dB typ	≤ -18 dB typ	≤ -18 dB typ	≤ -18 dB typ

General Characteristics by Model	ATI-77-xx-F1	ATI-77-xx-F2
Continuous Average Power	100 W	100 W
Peak Envelope Power	3 kW maximum	3 kW maximum
Impedance	50 ohms	
Intermodulation Performance	<-117 dBm (-160 dBc) min; (2 x +43 dBm tones)	

#### Environmental Specification

Operating Temperature	-10°C to +65°C
Enclosure	IP20 Indoor rated
MTBF	>500,000 hours
Lightning Protection	8/20us, ±20KA max, 10 strikes each, IEC61000-4-5

#### Mechanical Specification

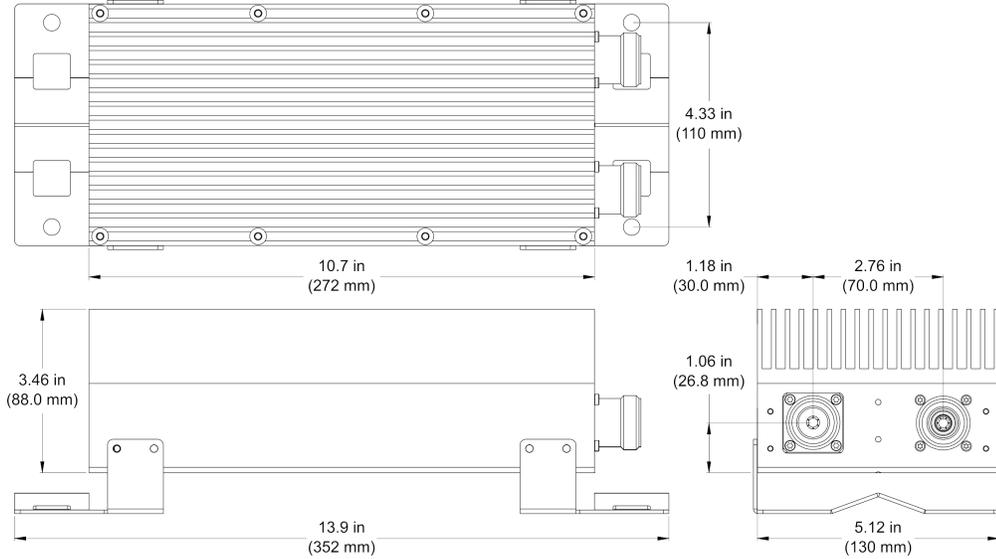
Model	ATI-77-xx-F1	ATI-77-xx-F2
Connectors	DIN 7-16 Female x 2	4.3-10 Female x 2
Enclosure Dimensions	272 x 130 x 88 mm (10.7 x 5.12 x 3.46 in.)	272 x 130 x 88 mm (10.7 x 5.12 x 3.46 in.)
Dimensions w/ Wall Mount	352 x 134 x 110 mm (13.9 x 5.28 x 4.34 in.)	352 x 134 x 110 mm (13.9 x 5.28 x 4.34 in.)
Weight	3.0 Kg (6.6 lbs)	3.0 kg (6.6 lbs)



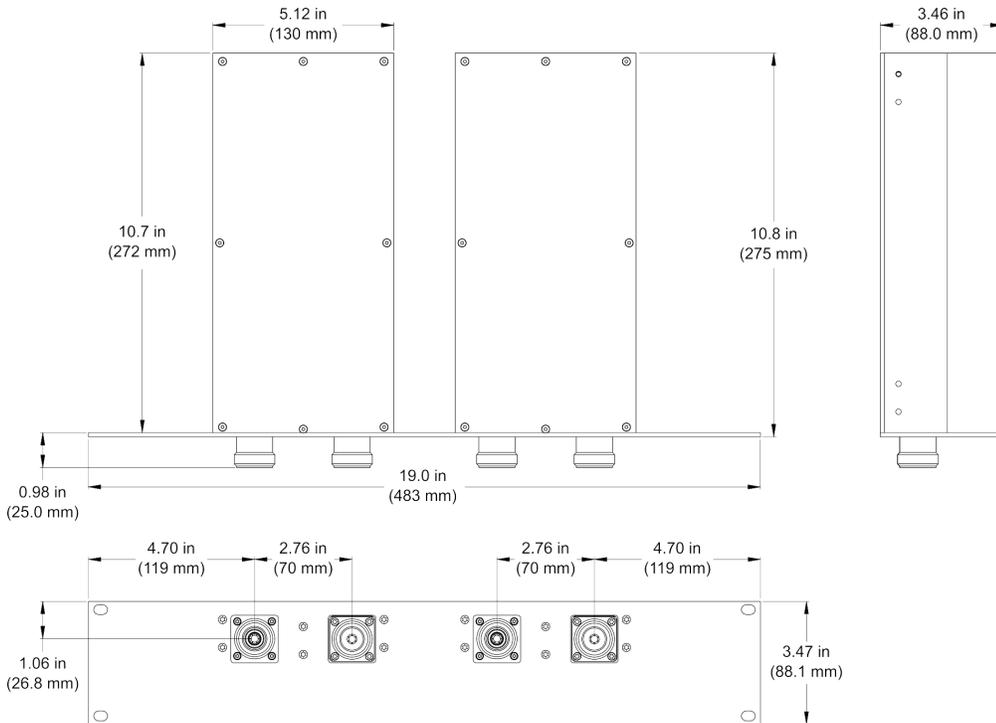
## SPECIFICATIONS

### High Power Low PIM Attenuator

ATI-77-xx-xx



High Power Attenuator with DIN Female Connector (AT-77-xx-F1) Outline Drawing



High Power Attenuator shown with Rack Mount Bracket Kit (BKT-ATI-RM-K) Outline Drawing



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## STANDARDS & CERTIFICATIONS

### High Power Low PIM Attenuator

ATI-77-xx-xx

#### Parts & Accessories

<b>ATI-77-06-F1</b>	High Power, Low PIM 6dB Attenuator with DIN 7-16 Female Connectors
<b>ATI-77-10-F1</b>	High Power, Low PIM 10dB Attenuator with DIN 7-16 Female Connectors
<b>ATI-77-15-F1</b>	High Power, Low PIM 15dB Attenuator with DIN 7-16 Female Connectors
<b>ATI-77-20-F1</b>	High Power, Low PIM 20dB Attenuator with DIN 7-16 Female Connectors
<b>ATI-77-06-F2</b>	High Power, Low PIM 6dB Attenuator with 4.3-10 Female Connectors
<b>ATI-77-10-F2</b>	High Power, Low PIM 10dB Attenuator with 4.3-10 Female Connectors
<b>ATI-77-15-F2</b>	High Power, Low PIM 15dB Attenuator with 4.3-10 Female Connectors
<b>ATI-77-20-F2</b>	High Power, Low PIM 20dB Attenuator with 4.3-10 Female Connectors
<b>BKT-ATI-RM-K</b>	Rackmount Bracket Kit for Low PIM Attenuator accommodates two Attenuators with 7-16 or 4.3-10 Female Connectors
<b>HS-ATI-RM-K</b>	Heat Shield Kit for Low PIM Attenuator

#### Standards & Compliance

<b>Safety</b>	EN 60950-1, UL 60950-1
<b>Emission</b>	EN 55022
<b>Immunity</b>	EN 55024
<b>Environmental</b>	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC-60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29, IEC 60068-02-30, IEC 60068-2-52, IEC 60068-2-64, GR-63-CORE 4.3.1, EN 60529 IP20

#### Certifications

Federal Communication Commission (FCC) Part 15 Class B, CE, CSA US, ISO 9001



**CCI** Communication Components Inc.  
EXTENDING WIRELESS PERFORMANCE