



# WTPLA100™: 6 GHz Power Line Adapter

## Product Overview

The WTPLA100™ 6 GHz Power Line Adapter provides broadband, low loss coupling of low-voltage devices to high-voltage power lines.

- ♦ Allows standard measurement equipment to connect and monitor power line signals
- ♦ Spans a wide 30 kHz to 6 GHz detection band with slow roll-off
- ♦ Detects all signals with less than 6 dB loss at any point in the detection band
- ♦ Enables low-voltage devices to inject signals onto the power line without being exposed to the high voltage
- ♦ Shields full signal path from outlet to measurement device
- ♦ Protects from continuous voltage up to 335 V<sub>RMS</sub> on each individual voltage connection



## Applications

- ♦ Power line signals detection
- ♦ Residential and commercial power line handling
- ♦ Power line signal injection

## Key Features

Feature	Advantage
<b>Signal Referencing</b>	Due to the nature of power lines, the WTPLA100™ does not reference from one connection to another. This enables a more direct view of the signal paths monitored against the measurement device's shield and still detects differential signals across the lines.
<b>Voltage Level Protection</b>	Since the WTPLA100™ references each individual leg of the power line to the shield instead of across the legs, the voltage is capped at 335 V <sub>RMS</sub> for each leg rather than at the outlet.
<b>Detection Band</b>	The WTPLA100™ detection band spans 30 kHz to 6 GHz with less than 6 dB of loss and slow roll-off, enabling the potential to detect signals beyond the band, as well.
<b>Signal Injection</b>	The WTPLA100™ can connect low-voltage devices to high-voltage power lines for signal injection without the power lines damaging the device.

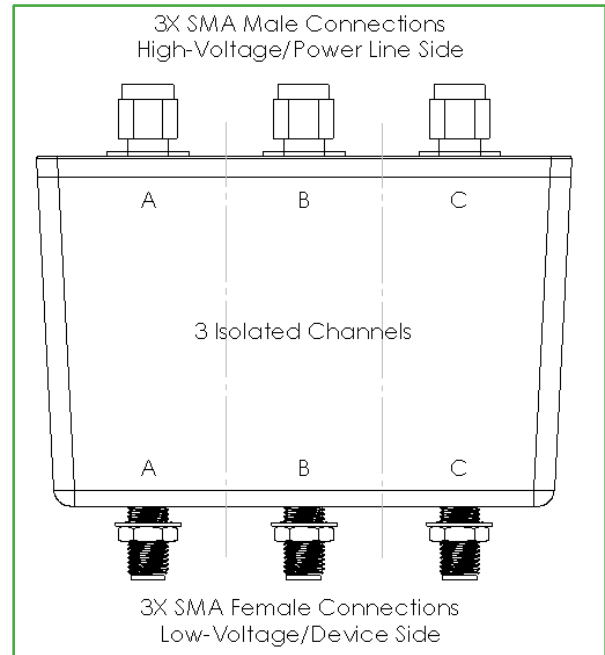


## Electrical Specifications

### Unit Ratings

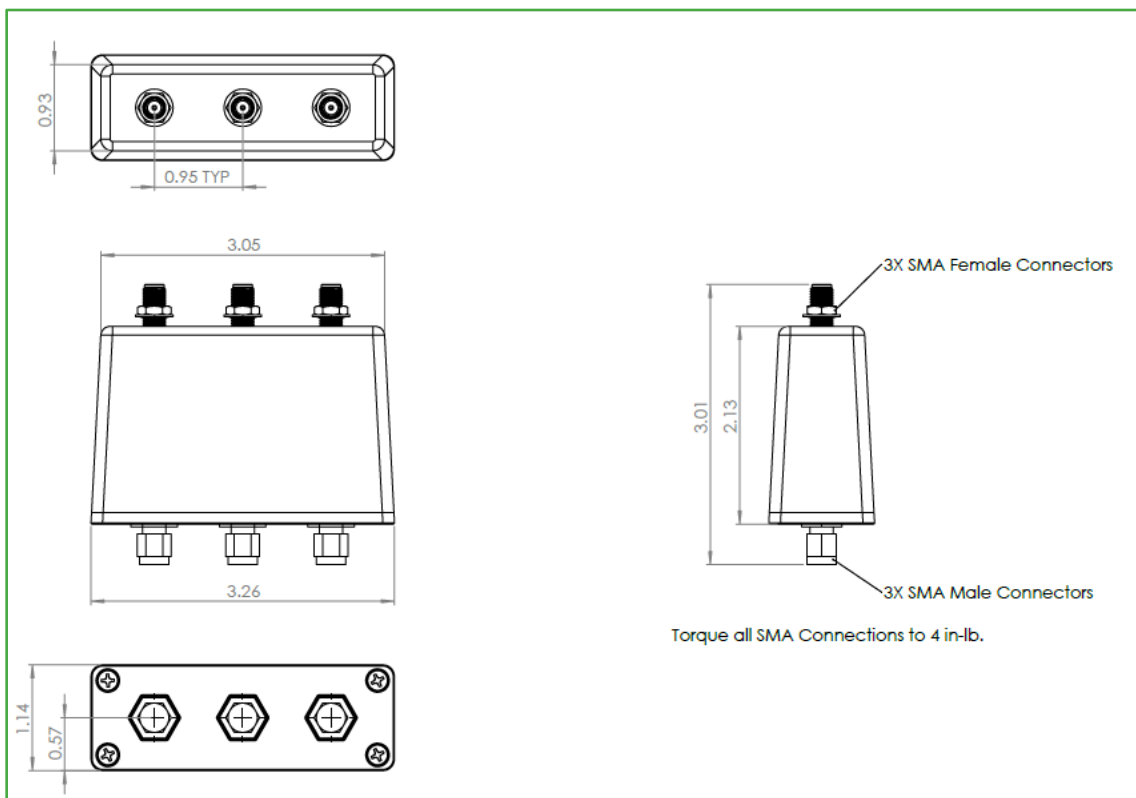
Parameter	Min.	Max.
Frequency Range	30 kHz	6 GHz
Continuous Voltage per Channel	—	335 V <sub>RMS</sub>
Temperature Range	-20° C	60° C

### Channel Connections



## Mechanical Specifications

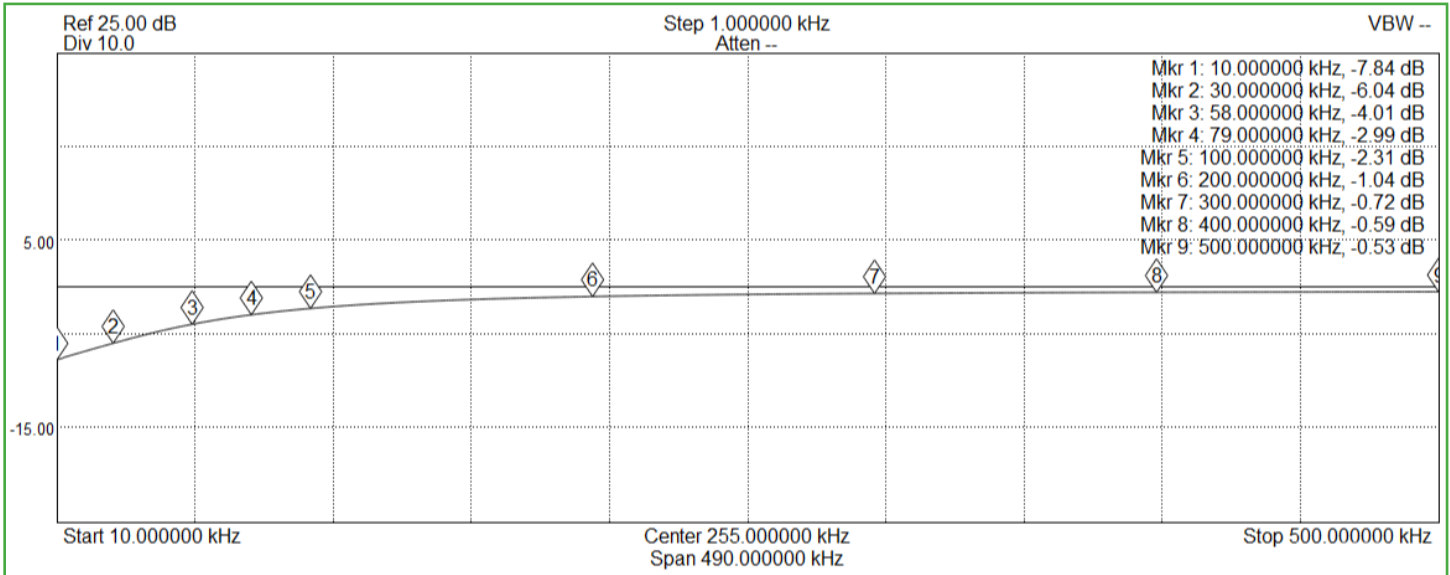
### Outline Drawings



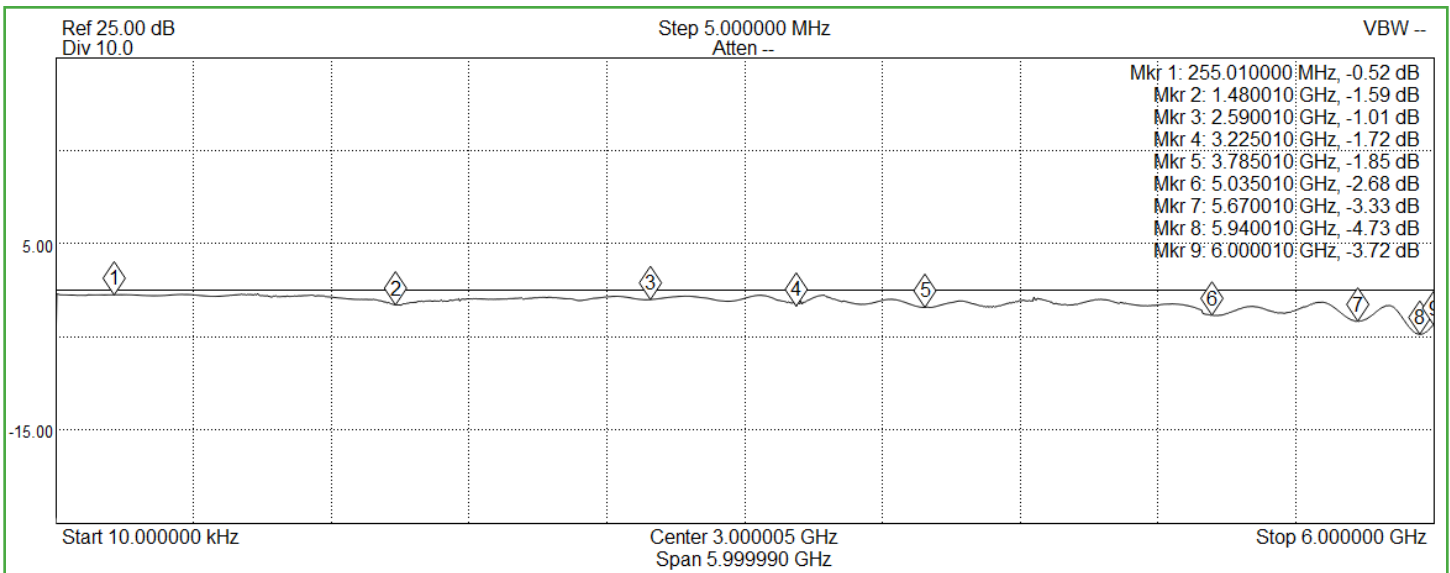


## RF Performance Plots

### Low Band: 10 kHz – 500 kHz



### Broadband: 10 kHz – 6 GHz





## Safety Guidelines



**DANGER: High Voltage**  
Contact may cause electric shock or burn.

**DISCLAIMER:** Exceeding voltage ratings can cause bodily harm and cause destruction to the WTPLA100™ and/or connected devices. Keep away from wet conditions and keep the connectors clear of debris. Do not open the WTPLA100™ device enclosure for any reason.

**Before connecting to the wall outlet**, connect the input cables to the WTPLA100™'s high-voltage side A, B, and C channels for safe operation.

**When changing any connections on WTPLA100™**, unplug the device from the wall outlet to protect test equipment from potential floating voltages.

**Do not exceed voltage ratings for the device** (see Key Features section on page 1 and Electrical Specifications section on page 2 for more information).

**Failure to follow proper instructions and procedures may cause bodily harm and damage your test equipment.**

## Customizations and Accessories

Woodsong Technologies, LLC can customize the WTPLA100™ to user requirements. Its small cores can be added to any outlet style, and its form factor can be modified to fit various use cases. The WTPLA100™ supports the addition of switching matrices and variation in the measurement references. Contact us to discuss specific design modifications and/or development of custom accessories.

## Warranty and Service

Woodsong Technologies, LLC offers the original owner of the WTPLA100™ a 1-year limited replacement warranty for manufacturer defects in materials or workmanship. This warranty does not cover the damage resulting from modifications, alterations, or unauthorized repair to the WTPLA100™. Woodsong Technologies, LLC expressly disclaims all other warranties, whether express, implied, statutory or otherwise, regarding the product. In no event shall Woodsong Technologies, LLC's total liability arising out of this agreement exceed the aggregate of the amounts paid or owed by customer after sale. Woodsong Technologies, LLC offers lifetime support for issues and repairs. Contact us to arrange service.

**Need additional WTPLA100™s?** Contact us via phone or email to order additional units.