



VHF Polarizer Module

Phase shifter

Product Overview

The TT-RF-PL-001, VHF Phase Shifter Board is a precision RF module designed to provide controllable phase adjustment of VHF signals while maintaining low insertion loss, excellent impedance matching, and high signal integrity. The board is intended for generating vertical(V), horizontal (H), Right Circularly Polarizer (RHCP) and Left Circularly Polarized (LHCP) signals.

Application Domains

Amateur (HAM) radio applications, base station receiving systems, satellite and telemetry ground stations etc.

Product Identification

Part Number	TT-RF-PL-001
Description	VHF polarizer module
Device Category	Phase shifter

Electrical Specifications

Impedance	50 Ω
Operating frequency range	144-146 MHz
Insertion loss	< 0.5 dB
Input return loss	< -10dB
Device operating voltage	13.8 V
Connector Type	SO-239

Environmental and Mechanical Characteristics

Housing Material	Aluminium Alloy (6061)
Mounting Type	Chassis-mount enclosure
Ingress Protection	IP69
Weight	500 gm

Standard Status

RF Compliance	Industry standard
Declaration of Conformity	RoHS, CE

Operation

The TT-RF-PL-001 is a software controlled polarizer. The user can select the desired polarization mode viz. Horizontal (H), Vertical (V), Left-Hand Circular Polarization (LHCP), or Right-Hand Circular Polarization (RHCP), through the software interface. Control commands and power are communicated to the polarizer via the integrated GX16 control connector, allowing seamless remote operation from a host controller or PC. For optimum system performance, it is recommended to use the polarizer in conjunction with a TT-ANT-VY-010 dual polarized antenna and TT-RF-AR-013 rotator, enabling both electronic polarization selection and mechanical antenna positioning. To protect the polarizer and connected RF equipment from lightning-induced surges and static discharge, it is strongly recommended to install a suitable RF surge arrester TT-RF-SA-015 in the coaxial feed line and ensure that the antenna mast and surge arrester are properly grounded in accordance with local electrical and lightning protection regulations.

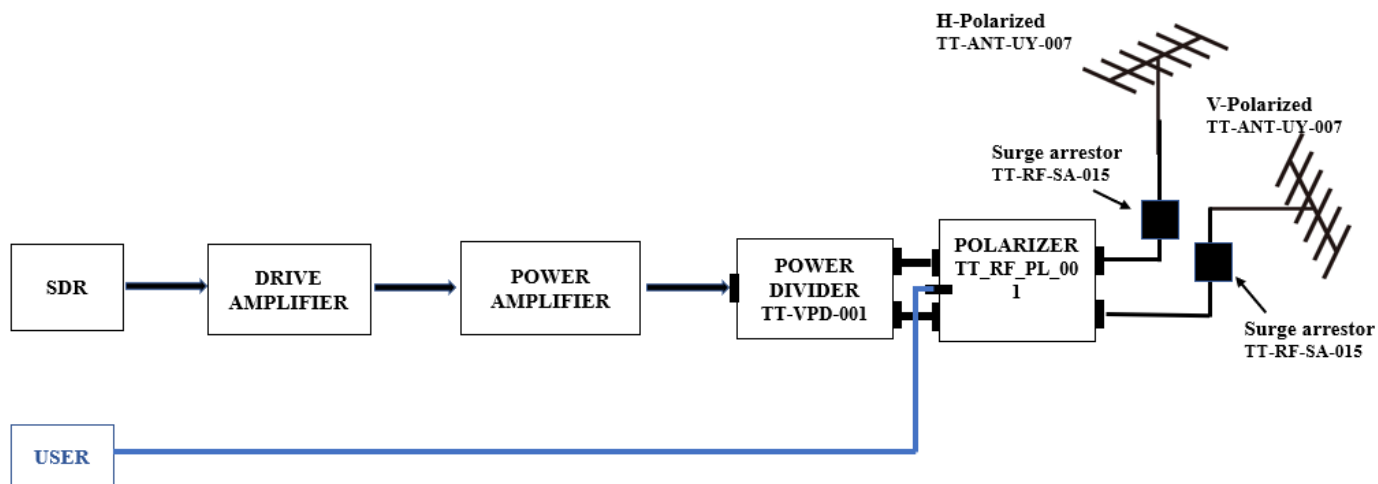


Figure 1: User setup

<https://tejtronics.com/product/TEJ-1774702126794>

Product Visuals

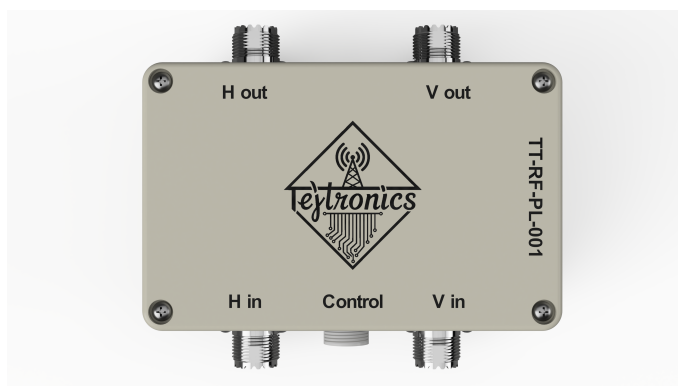


Figure 2: Front View

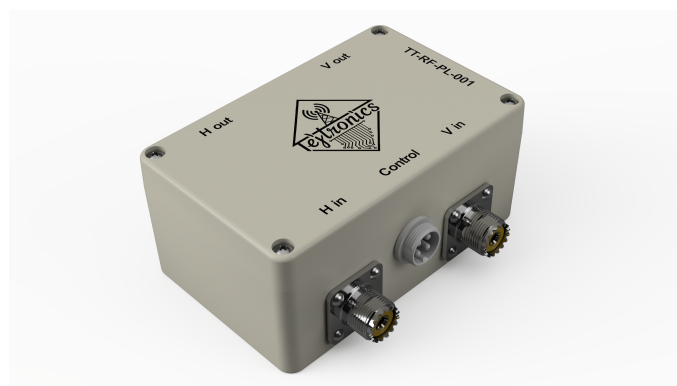


Figure 3: Side view