

TLT-4500 Series Test Loop Translator

Converters



Overview

The TLT-4500 provides the ability to “Loop back” the Satcom Tx frequency down to an associated Rx frequency. It is meant for indoor operation from 0 to 50C, 0 to 95% Relative Humidity, and up to 3000M AMSL. It borrows heavily from Comtech EF Data’s 45xx line of frequency converters, sharing the general M&C capabilities and interface.

Remote Control

The remote control interface is selectable between EIA-232 and EIA-485, as well as full Ethernet including Telnet, SNMP and pre-loaded HTML GUI. All configuration control, status retrieval, and adjustments are available as simple ASCII commands through the serial interface or through the front panel menu.

Available Models	Frequency Range
TLT-4513/E	10.95 to 11.7 GHz Output range 13.75 to 14.50 GHz Input range Note: Other Bands available, specify sub band at time of quote/order
Conversion	Single, No Inversion
Stability Over Time	$\pm 0.5 \times 10^{-9}$ /Day
Stability Over Temperature	$\pm 1 \times 10^{-9}$ 0 to 50°C, Opt $\pm 5 \times 10^{-9}$

RF Input

Return Loss	18 dB Minimum
Impedance	50 Ω
Noise Figure	25 dB Maximum at 0 dB Attenuation

RF Output

Level	
Intermodulation	-50 dBc at -5 dBm input
Impedance	50 Ω
Return Loss	18 dB Minimum

Physical (Nominal)

Dimensions (1RU) (height x width x depth)	1.75" x 19" x 22" (4.45 x 48.30 x 55.90 cm)
Weight	15 lbs (7.0 kg)

Summary Alarm

Relay Closure	Form C
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Remote Control (Rear Panel)

Comm Port RS-485 or RS-232C, RJ-45 for Ethernet

Power

Voltage	90 to 250 VAC/47-63Hz, Auto ranging, optional -48 VDC
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Transfer

Gain(0 dB Att.)	-25 dB \pm 2 dB
Attenuation Adjust	0 to 30 in 0.25 dB Steps 0.1 dB Steps Optional
Gain Stability	± 0.25 dB/Day
Mute	60 dBc

External Reference

Input, either 5 or 10 MHz Option @ +3 dBm
Optional 10 MHz Rear Panel Reference Output

Phase Noise

	Typical
100 Hz	-72
1 KHz	-79
10 KHz	-89
100 KHz	-98
1 MHz	-110

Indicators (Front Panel)

Power On	Green LED
Mute	Yellow LED
Remote	Yellow LED
Online	Yellow LED
Fault	Red LED
Stored Fault	Red LED

Test Point (Front Panel)

LO Sample Port	SMA
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