

## TLT(A) Series

### Single Band Test Loop Translators



### Test Loop Translator Products;

<b>TLT600</b>	C-Band (TX) to L-Band
<b>TLT672</b>	Super extended C-Band (TX) to L-Band
<b>TLT642, 2225</b>	C-Band (TX) to C-Band (RX)
<b>TLT585</b>	Extended C-Band (TX) to C-Band (RX), Inverted and non-inverted spectrum available
<b>TLT790</b>	X-Band (TX) to L-Band
<b>TLT742</b>	X-Band (TX) to X-Band (RX)
<b>TLT127</b>	Ku-Band (TX; 12.75 to 13.50GHz) to L-Band
<b>TLT137</b>	Ku-Band (TX; 13.75 to 14.50GHz) to L-Band
<b>TLT140</b>	Ku-Band (TX; 14.00 to 14.50GHz) to L-Band
<b>TLT1000</b>	Ku-Band (TX) to Ku-Band (RX)
<b>TLT142</b>	Ku-Band (RX) to C-Band (RX)
<b>TLT180</b>	DBS-Band (TX) to L-Band
<b>TLT184</b>	Extended DBS-Band (TX) to L-Band

For other 'non-standard' frequency requirements, please contact the factory.

For multiple-range TLT units please see TLT(B) series datasheet.

For equivalent units with full user interface, remote control and digital attenuation, please see TLTH(A) series datasheet.




For equivalent remote mount units, please see TLTR(A) series datasheet.

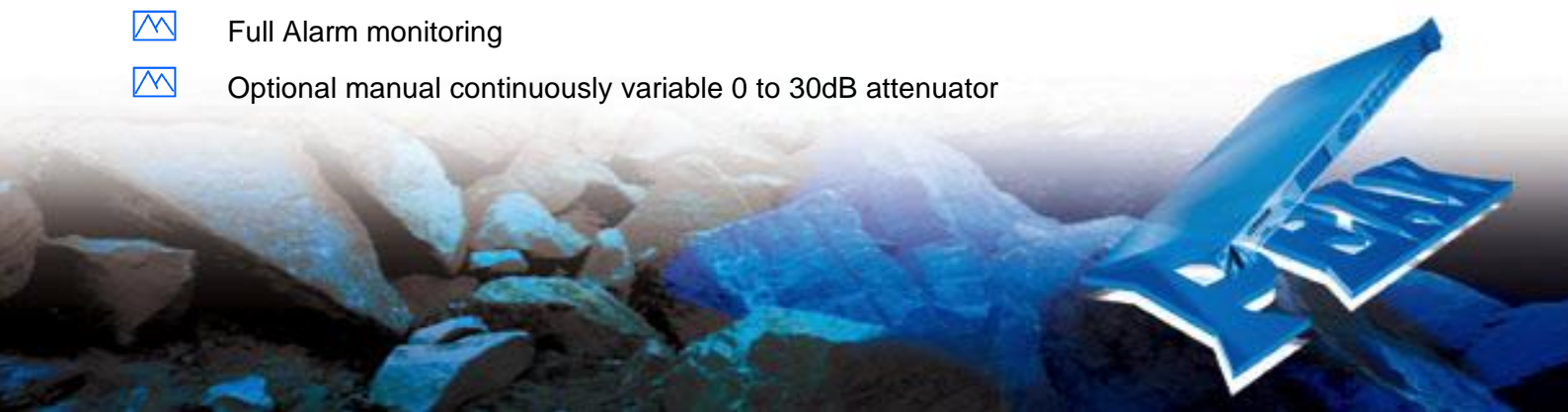
A Test Loop Translator is used to convert from one frequency to another for test purposes. No filters are included in the unit and the output of the unit contains all mixing products. Frequency converters with the same input and output frequencies and with filtered outputs are also available.

The **TLT(A) Series** of units are designed to take a sample of the TX signal and convert it to a frequency at which it can be monitored or analysed. The optional 0 to 30dB variable attenuator control is used to balance the incoming power with the monitoring system. The unit consists of an RF strip, which is a single mixer stage and a control PCB to monitor the system and provide a stable reference for the Local Oscillator.

The unit is housed in 19 inch 1'U' high chassis, suitable for rack mounting, is 400 mm deep and may be fitted with rack slides if required.

### Peak Features

-  High stability and excellent phase noise
-  Full Alarm monitoring
-  Optional manual continuously variable 0 to 30dB attenuator



## TLT(A) series – Typical Specification

### Models;

#### TLT600

Input Frequency 5.85-6.65GHz  
Output Frequency 950-1750MHz

#### TLT672

Input Frequency 5.85-6.725GHz  
Output Frequency 950-1825MHz

#### TLT2225

Input Frequency 5.85-6.425GHz  
Output Frequency 3.625-4.2GHz

Note; spurious performance limited to -40dBc typ.

#### TLT642

Input Frequency 6.425-6.725GHz  
Output Frequency 3.4-3.7GHz

#### TLT585

Input Frequency 5.85-6.65GHz  
Output Frequency 3.4-4.2GHz

Note; spurious performance limited to -40dBc typ.

#### TLT585I

Input Frequency 5.85-6.65GHz  
Output Frequency 4.2-3.4GHz (Inverted Spectrum)

#### TLT790

Input Frequency 7.9-8.4GHz  
Output Frequency 950-1450MHz

#### TLT742

Input Frequency 7.9-8.4GHz  
Output Frequency 7.25-7.75GHz

#### TLT127

Input Frequency 12.75-13.50GHz  
Output Frequency 950-1700MHz

#### TLT137, 140

Input Frequency 13.75-14.50, 14.00-14.50GHz  
Output Frequency 950-1700, 950-1450MHz

#### TLT1000

Input Frequency 13.75-14.50GHz  
Output Frequency 11.85-12.60GHz

Note; for other output ranges please consult the factory.

#### TLT142

Input Frequency 12.25-12.75GHz  
Output Frequency 3.7-4.2GHz

#### TLT180

Input Frequency 17.3-18.1GHz  
Output Frequency 950-1750MHz

#### TLT184

Input Frequency 17.3-18.4GHz  
Output Frequency 950-2050MHz

### Rear Panel View



### Manual Attenuation (Option 1)

Attenuation range 30dB  
Control Continuously variable from front panel.

### Input

Connector SMA (f), 50Ω  
Option 2a; N-type (f), 50Ω  
Return Loss >21dB  
1dB GCP +15dBm

### Output

Connector SMA (f), 50Ω  
Option 2b; N-type (f), 50Ω  
Return Loss 15dB

### Transfer characteristics

Conversion Loss 20dB ±2dB at 0dB attenuation

### RF Performance

LO phase noise (typical) 75dBc/Hz @ 100Hz  
-92dBc/Hz @ 1kHz  
-100dBc/Hz @ 10kHz  
-107dBc/Hz @ 100kHz  
-125dBc/Hz @ 1MHz

### External Reference Input (Option 4)

Frequency 10MHz (5MHz factory settable)  
Level 0dBm ±3dB  
Connector BNC (f), 50Ω

### Mechanical

Width 19" standard rack mountable  
Height 1U (1.75")  
Depth ~400mm (15.7"), plus connectors  
Construction Aluminium chassis  
Weight 4.5kgs (10lbs)

### Control System Interface

Alarms PSU fail (form C)  
LO fail (form C)  
Connector D-type standard 15-way

### Environmental

Operating temp 0°C to +50°C  
EMC EN 55022 part B & EN 50082-1  
Safety EN 60950

### Power Supply

Voltage 90-264VAC  
Frequency 47-63Hz  
Power 30 Watts max

### Options

- 1a) Manual Variable Attenuator, 0-30dB, at L-band
- 1b) Manual Variable Attenuator, 0-30dB, at SHF
- 2a) N-type (f) Input Connection
- 2b) N-type (f) Output Connection
- 4) External 10MHz Reference input

Note; some of the above options have an impact on the performance specification, for details please contact the factory if this is thought to be critical.



Peak Communications reserves the right to alter the specifications of this equipment without prior notice. TLT(A)series-260112.

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