

# VF TIMS Module

## MTT-6B

### Data Sheet



The VF TIMS Module is part of a family of Plug-In Modules for the MTT and SunSet xDSL test sets.

The MTT-6B VF TIMS Module, part of the Modular Test Toolkit (MTT) family of products, is a rugged, battery-operated handheld test solution suitable for special services technicians installing and troubleshooting analog services. The voice frequency transmission impairment measurement (VF TIMS) test set performs a wide variety of key functions including frequency and level measurement, noise measurement, signal-to-noise measurement and power influence measurement. In addition, the module is capable of placing calls in loop start, ground start and direct inward dialing modes.

## KEY FEATURES

- 2-wire and 4-wire interface
- 600Ω and 900Ω impedances
- Transmit and receive frequency and level measurement
- Noise and Signal-to-Noise ratio measurement
- Power influence
- Impulse noise measurement
- Loop voltage and current
- Signaling
  - Loop start (PBX only)
  - Direct Inward Dialing (DID)
  - Ground start

## BENEFITS

- Leverages existing MTT platform
- Handheld and portable
- Cost effective and future proof

## SPECIFICATIONS

TIMS Interface: RJ-11

Impedances: 600Ω, 900Ω

Interface: 2-wire/4-wire

Talk/Listen

Handset/Headset jack: RJ-9 connector

Chassis built-in microphone/speaker

### Transmit Frequency Measurements

Transmit Frequency

Range: 50 Hz to 20 kHz

Resolution: 1 Hz

Accuracy:  $\pm 0.5$  Hz

Transmit Level

Range: +10 dBm to -40 dBm (600Ω), +8 dBm to -40 dBm (900Ω)

Resolution: 0.1 dBm

Accuracy:  $\pm 0.5$  dB

Transmit Modes

Fixed Frequency from 50 Hz to 20 kHz

Frequency Sweep: Programmable Start/Stop Frequency, Step

Rate, & Step Increment with programmable frequency skip

3- Tone Slope: 404 Hz, 1004 Hz, and 2804 Hz

Quiet

## Receive Frequency Measurements

Receive Frequency

Range: 50 Hz to 20 kHz

Resolution: 1 Hz

Accuracy:  $\pm 0.5$  Hz

Receive Level

Range: +10 to -70 dBm (600 $\Omega$ ), +8 dBm to -70 dBm (900 $\Omega$ )

Accuracy:  $\pm 0.5$  dB

## Receive Noise Measurements

Range: 90 dBrn to 10 dBrn

Resolution: 1 dBrn

Accuracy

$\pm 1$  dB from 90 dBrn to 20 dBrn

$\pm 2$  dB from 20 dBrn to 10 dBrn

Weighting Filters: C-Message, 3.4 kHz flat, D filter

## Receiver Signal-to-Noise Measurements

Signal Level Range: -10 dBm to -40 dBm

Noise Level Range: +10 dBrn to +70 dBrn

Ratio Range: 10 dB to 45 dB

Ratio Resolution: 1 dB

Accuracy:  $\pm 2$  dB

Weighting Filters: C-Message, 3.4 kHz flat, D filter

Notch Filter: > 50 dB rejection at 1004 Hz

## Receiver Power Influence (Noise-to-Ground) Measurements

Range: 40 dBrn to 130 dBrn

Resolution: 1 dBrn

Accuracy:  $\pm 1.5$  dB from 40 dBrn to 130 dBrn

Weighting Filters: C-Message, 3.4 kHz flat, D filter

## Three Level Impulse Noise Measurements

Threshold: 96 dBrn to 30 dBrn

Threshold Resolution: 1 dBrn

Threshold Spread: Three Level (low/mid/high)

Programmable from 2 dB to 6 dB, with 1 dB step

Threshold Accuracy:  $\pm 1$  dB

Weighting Filters: C-Message, 3.4 kHz flat, D filter

Notch Filter: > 50 dB rejection at 1004 Hz

## Loop Current/Voltage

DC Voltage

Range: 300V Max

Current

Range: 0mA to 110mA

## Dial Mode

Signaling: Loop Start, Ground Start\*, Direct Inward Dial\*

\*Dialing function only

PBX and CO emulation for Ground Start and Direct Inward Dial

Programmable Flash duration from 300 to 1000 ms

Dial Method: DTMF, MF, and Dial Pulse

Dial Signals (Digits): 0 to 9, \* and #

Line Hold Circuit: DC Resistance approximately 200 $\Omega$

## Call Analysis

Caller ID with Number, Name and timestamp

Call waiting Caller ID

3-way Caller ID

Call Completion time/setup time

Delay: Dial Tone, Post Dialing, and Voice

Digit Capture/Analysis (Loop Start and DID)

Level Range: -2 dBm to -20 dBm

## General

Module Size: 5.0" (W) x 3.5" (L) x 0.9" (H) [12.6 cm x 9 cm 2.2 cm]

Operating Temperature: 32°F to 122°F [0°C to 50°C]

Storage Temperature: -4°F to 158°F [-20°C to 70°C]

Humidity: 5% to 85% noncondensing

## ORDERING INFORMATION

SSMTT-6B VF TIMS Module

## Replacement Cables

SA269 Cable, RJ11 (6 pin) to Dual Bantam, 6 ft

SA273 Cable, RJ11 (6 pin) to 4 Probe Clips and Ground Clip, 6 ft

For more information or a directory of sales offices: [info@sunrisetelecom.com](mailto:info@sunrisetelecom.com) | [www.sunrisetelecom.com](http://www.sunrisetelecom.com)