Datasheet

# PIM S1L Analyzer - TETRA & UHF


- Test Modes: Field Mode, Analyzer, multi PIM display, Rx sweep, PIM vs. Time, Single Carrier for insertion loss (IL) measurements.
- Embedded DTP option. Distance to PIM, VSWR, DTF.
- High PIM sensitivity: -165 dBc @ 2x 43 dBm carriers.
- Data recording: CSV, PDF, BMP screen shots.
- Output power adjustable: 2 x 15 dBm to 44 dBm.
- Large 10.2" Touch Screen Display

PIM S1L TETRA & UHF analyzers are important tools for analyzing telecommunication infrastructure, like antennas, cables and components. They are ideal for component testing in laboratory and quality assurance, but are also valuable field tools, providing vital test results in TETRA & UHF networks. Specifications and measurement accuracy are exceptional and of PIM S1L analyzers deliver reliable results. They are very easy to operate; just the touch of a button to start predefined tests.

## Models

| Model | Description | Tx Range (MHz) | Rx Range (MHz) |
|---|---|---|---|
| PS1L400 MK2 | TETRA 400 | 390 ~ 400 | 380 ~ 385 |
| PS1L400E MK2 | E-TETRA | 420 ~ 430 | 410 ~ 412 |
| PS1L385 MK2 | TETRA 385 | 385 ~ 400 | 410~ 425 |
| PS1L450 | Band 31, 450-470 Guard | 460 ~ 470 | 450 ~ 455 |

Other TETRA & UHF frequency combinations can be provided. Contact AWT Global or your next customer representative for more information.

Our PIM S1L analyzers deliver constant CW Power signals during PIM measurements. This makes them fully conform to PIM specification IEC 62037, the standard for PIM testing. PIM S1L analyzers offer variable measurement signal output power from 15 dBm to 44 dBm. They provide even a Single-Carrier-Mode, ideal for Insertion Loss and coverage measurements.

Market leading dynamic range and low receiver noise level makes these analyzers perfect for testing, pinpointing and eliminating PIM. Results can be stored as PDF, BMP screen shots, or as CSV files. Our patented DTP measurement is highly accurate, and immediately available just at the push of a button.

"When public safety officers assign their staff to critical missions, they rely on the performance of their TETRA & UHF networks. Communication and data transmission must not experience any PIM distortion. PIM S1L MK2 TETRA & UHF helps to establish highest quality networks".

### RF & Microwave Technology

AWT - Global offers advanced telecommunication technology products and analyzers for a variety of RF and Microwave applications.

### TETRA

TETRA (TErrestrial Trunked RAdio) has been designed to fulfill the requirements of users in Private Mobile Radio (PMR), Land Mobile Radio (LMR), Public-Access Mobile Radio (PAMR) and public safety and security applications such as police, border patrol and coast guard, fire departments and ambulances. This ETSI based standard is applied in most regions of the world.

### PIM Analyzers -Types

AWT offers a wide variety of PIM analyzers for many different applications. These include single, double, triple and quadruple band analyzers for standard frequencies and customized frequency bands.

AWT Global
Advanced Microwave Technology

# Technical Specifications

| Transmitter | |
|---|---|
| Frequencies | Model dependent |
| Frequency increments | 100 kHz |
| Frequency accuracy | 2 ppm |
| Power (per tone) | 15 - 44 dBm adjustable |
| Power Accuracy | +/- 0.35 dB |
| Reverse Pwr. Protection | +43 dBm for 5 sec |

| Receiver | |
|---|---|
| Measurement Method: | Reverse (reflected) PIM<br>IM 3rd, 5th, 7th, 11th, 13th, 15th ,17th order<br>(up to 4 simultaneously) |
| Measurement Range | -45 dBm to - 120 dBm |
| | -88 dBc to -163 dBc |
| Noise Floor | <-132 dBm typ ( @ 300 Hz) |
| Dynamic Range (typical) | 80 dB (ref: -90 dBm) |
| Max Input Power | 0 dBm |
| Measurement Accuracy | +/- 1.0 dB (typ.) |
| Protection | +43 dBm for 5 sec. |

| Interfaces | |
|---|---|
| RF Port | DIN 7/16 (f) |
| Internal Data Storage | SSD |
| Communication & External Data Storage | 3x USB |
| LAN | Ethernet |
| Display | Touch Screen 10.2" |

| Distance to PIM / Distance to VSWR (Opt) | |
|---|---|
| DTP / DTF resolution | 0.1 m |
| DTP Accuracy | 1 m (typ.) |
| DTF Accuracy | 1 m (typ.) |
| Cable Types | Pre stored types, user can also add new cable types |

| Electrical | |
|---|---|
| Main Power | 100 to 240V, 50 / 60Hz |
| Power Consumption | 750 VA max |

| Dimensions / Weight | |
|---|---|
| Dimensions | 504 x 398 x 276 (mm)<br>19.8 x 15.7 x 10.9 (inch) |
| Weight / with POPT1 | 28.5 kg / 30.5 kg |

| Environmental | |
|---|---|
| Operating Temperature | 0° C to +40° C |
| Storage Temperature | -20° C to +60° C |
| Ingress Protection | IP20 |
| Relative humidity | 85% max<br>(non condensing) |

# Options & Accessories

| Type | Description |
|---|---|
| POPT1 | Embedded option for Distance-to-PIM (DTP), Return Loss, VSWR and Distance-to-Fault |
| PACC2L | Accessory Kit: low PIM cable 3m DIN(m)-DIN(m), low PIM Load 100W, PIM <-163dBc , 380-2800 MHz, torque wrench DIN7/16, (4) low PIM adaptors, cleaning tabs, hard carrying case IP66 |
| PIMGEN | PIM generator, preset PIM value 80 dBm (+/-10) for quick system tests |
| PLOAD100L | Low PIM load 100W, PIM < -165 dBc, 380 - 2800 MHz, with handle |
| PLOAD50 | Low PIM load 50W / 10W (30 mins / permanent), PIM < -165 dBc, 690 - 2800 MHz, -dual port DIN(m)-DIN(f), with ear for carabiner or strap |
| ADA-DMDF | Low PIM adapter, PIM < -165dBc, DIN(m)-DIN(f), Connector Saver |
| LIC308-DMDM-3M | Low PIM cable, Length: 3 meter (10 ft), PIM < -165dBc, DIN(m)-DIN(m) |
| LIC308-DMDM-1M | Low PIM cable, Length: 1 meter (3 ft), PIM < -165dBc, DIN(m)-DIN(m) |

**Product Quality**

AWT is committed to providing our customers with products meeting the highest quality standards. All AWT products undergo thorough quality checks and are ISO 9001 and ISO 14001 certified.

For more information on any of our products or services please visit our Web site: **www.awt-global.com**

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