RF & MICROWAVE TECHNOLOGY

AWT-Global offers advanced wireless technology for wireless, telecommunication and Radar applications. Products are available from frequencies ranges from 9 kHz to 40 GHz.

S1L PIM TEST SYSTEMS

Laboratories and Quality Control Departments demand accurate and reliable test instruments. With this in mind, AWT has introduced the S1L PIM tester series. This product line offers a wealth of features that are ideal for test and research. These instruments easy to operate and can document test results as PDF, CSV or JPG (Screen Shot). The wide adjustable Tx power range (15dBm to 44 dBm) allows to test conform to IEC62037 specification, but it allows also to measure low power rating components.

PIM ANALYZERS FOR PRODUCTION

PIM Production analyzers have to perform 24/7. AWT - Global offers single and dual band PIM analyzers for this job. Also available: expandable systems for up to four frequency bands.

PIM S1L - PIM Analyzer for Lab & QA

PIM S1L Series are ideal for Laboratory and Quality Assurance. These testers are available in a wide variety of frequency bands.

- Test Modes Include: Diagnostic, Analyzer, PIM-over-Time, Sweep Mode, Distance to PIM (option), Distance to Fault (option).
- First PIM Tester with embedded Distance to PIM (DTP) and Distance to Fault (VSWR) capability.
- Intermodulation Products: IM3, IM5 IM7, IM9, IM11 and IM13.
- Output Power (Adjustable): 15 dBm to 44 dBm.
- Very high PIM sensitivity: -172 dBc @ 2x 43 dBm carriers.

Passive Intermodulation (PIM) is an unwanted mixing effect caused by non-linearity of passive components in the RF path of telecommunication systems. PIM diverts signal energy to other frequencies (spurious signals). This can generate interfering signals that may fall into receiving bands causing serious degradation of system performance.

Causes of PIM:

- Dissimilar metals with different electrical properties as well as corroded components and structures.
- Ferromagnetic metals like iron, nickel and steel, show hysteresis effects when RF energy is applied.
- Irregular contact areas, even on a microscopic scale, cause an inconsistent flow of electrons, generating inhomogeneous electrical fields.
- Spark discharges that may happen by accidental “hot” connections and disconnections create craters on the connectors’ surfaces and lead to chemical reactions.

PIM S1L testers are ideal for component testing in the laboratory and/or during quality control. They provide a wealth of features that deliver accurate and reliable results. They are very easy to operate; it takes just one click to start a predefined test.

Modern telecommunication technologies demand PIM testing of network infrastructures and their components. Low PIM components are particularly important when wireless frequencies are combined. Signal degradation caused by PIM causes loss of capacity, which translates directly into dissatisfied customers as well as reduced revenues for the operators. Low PIM components are key to network optimization. .

AWT Global
Advanced Microwave Technology

PIM S1L Models

Model	Technologies	Tx Frequency (MHz)	Rx Frequency (MHz)
PS1L-700U	LTE700-U	730 ~ 759	776 ~ 788
PS1L-700D	LTE700-L	728 ~ 759	698 ~ 716
PS1L-850	CDMA850	869 ~ 896	824 ~ 851
PS1L-900	GSM900	935 ~ 960	890 ~ 915
PS1L-900E	EGSM900	925 ~ 960	880 ~ 915
PS1L-1500	LTE-JP1500	1488 ~ 1520	1456 ~ 1480
PS1L-1800	DCS/GSM1800	1805 ~ 1880	1710 ~ 1785
PS1L-1900	PCS1900	1930 ~ 1990	1850 ~ 1910
PS1L-2100AWS	AWS	2010 ~ 2155	1710 ~ 1755
PS1L-2000TD	TD-SCDMA(2000)	2010 ~ 2025	1900 ~ 1920
PS1L-2100UMTS	UMTS/W-CDMA	2110 ~ 2170	1920 ~ 2060
PS1L-2160JP	W-CDMA-JP	2150 ~ 2170	2110 ~ 2140
PS1L-2600LTE	LTE2600, IMT-E(2600)	2620 ~ 2690	2500 ~ 2570
Options & Accessories			
POPT001	VSWR/DTF/DTP (Distance to Fault / PIM) Option. Embedded in the tester		
POPT002	Accessory Kit: (2) low PIM cables 3m / 10ft, low PIM load 100W, adapters, torque wrench with hard carry case		
POPT003	Low PIM Load 100W, <-165 dBc		
POPT004	PIM Generator, 90dBm (133dBc) for quick system tests.		

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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Specifications

Receiver	
Reverse IM	-129 dBm / -172 dBc
Noise Floor	-138 dBm (300 Hz BW) -132 dBm (1200 Hz BW)
Dynamic Range (typical)	96 dB (ref: -90 dBm)
Reverse Power Protection	+43 dBm for 5 sec
Operational Input Power	-45 dBm RMS
Max Input Power	-10 dBm
Measurement Accuracy	+/- 2dB @ 2 x 43 dBm

Transmitter	
Carrier Power	+15 to +44 dBm (46dBm opt)
Power Accuracy	+/- 0.35 dB
Frequency Accuracy	200 ppm
Reverse Pwr. Protection	+43 dBm for 5 sec

Distance to PIM / Distance to VSWR (Option)	
DTP Accuracy	0.5 m (typ.) 1.5m
DTF Accuracy	0.5 m
Cable Types	Select from list or add new cable types

Dimensions / Weight / Environment / Electrical	
Dimensions	521 x396 x 236 (mm) 20.5 x 15,6 x 9.3 (inch)
Weigh	25.3 kg
Temperature	0 °C to +45 °C
Humidity	85% (non-condensing)
Protection closed / during operation	IP20
AC Power	100 to 240V 50 / 60 Hz
Power Consumption	640 Watts (VA)

Specifications subject to change without further notification

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