

## RF & MICROWAVE TECHNOLOGY

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

## PORTABLE PIM TEST SYSTEMS

Field use demands ruggedized yet accurate, test instruments. Our portable PIM testers are designed for this environment and withstand tough conditions. An embedded module for accurate Distance to Fault (VSWR) and Distance to PIM measurements is available (optional). The wide Tx power range from 15dBm to 44dBm makes this tester ideal for DAS installations.

## PIM ANALYZERS FOR PRODUCTION

Production analyzers have to endure 24/7 operation. AWT - Global offers single and dual band PIM analyzers. Also available are expandable systems for up to four frequency bands.

# Portable PIM Test System



- Five Test Modes: Field Diagnostic, Analyzer, 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 settable 15 dBm to 44 dBm. Ideal for DAS Installations.
- Very high PIM sensitivity: -172 dBc @ 2x 43 dBm carriers.
- PIM vs. Time Graph and Maxhold feature.

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.

AWT's Portable PIM testers are powerful yet compact tools for testing and analyzing telecommunications network infrastructure. These testers are ruggedized and can withstand harsh environmental conditions and are accurate, reliable and very easy to operate; furthermore, they provide a wealth of features ideal for work in the field.

Leading Global wireless carriers use PIM analyzers to improve their network quality. Low PIM installations are particularly important when wireless networks operate at high capacity where signal degradation directly affects revenue streams due to loss of capacity.

## 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](http://www.awt-global.com)

## SALES OFFICES

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## Models / Types

Model Number / Type	Tx Frequency (MHz)	Rx Frequency (MHz)
LTE700-U	730 ~ 759	776 ~ 788
LTE700-L	728 ~ 759	698 ~ 716
CDMA850	869 ~ 896	824 ~ 851
GSM900	935 ~ 960	890 ~ 915
EGSM900	925 ~ 960	880 ~ 915
LTE-JP1500	1488 ~ 1520	1456 ~ 1480
DCS/GSM1800	1805 ~ 1880	1710 ~ 1785
PCS1900	1930 ~ 1990	1850 ~ 1910
AWS	2010 ~ 2155	1710 ~ 1755
TD-SCDMA(2000)	2010 ~ 2025	1900 ~ 1920
UMTS/W-CDMA	2110 ~ 2170	1920 ~ 2060
W-CDMA-JP	2150 ~ 2170	2110 ~ 2140
IMT-E(2600)	2620 ~ 2690	2500 ~ 2570
WiBro-KR	2110 ~ 2170 2300 ~ 2390	1910 ~ 1990
Options & Accessories		
Opt. 1	VSWR/DFP (Distance to Faulty PIM) Option	
Opt. 2	Accessory Kit: (2) low PIM cables 3m / 10ft, (1) low PIM cable 1m / 3ft, low PIM load 100W, adapters, torque wrench with hard carry case	
Opt. 4	PIM Generator, preset value. Quick measurement and system test.	

## Specifications

Receiver		Dimensions / Weight / Environment / Electrical	
Reverse IM	-129 dBm / -172 dBc	Dimensions	457 x 305 x 500 (mm) 18.0 x 12.0 x 19.7 (inch)
Noise Floor	-138 dBm (300 Hz BW)	Weight (freq > 1 GHz)	27 kg (26 kg)
Dynamic Range (typical)	96 dB (ref: -90 dBm)	Temperature	-10 °C to +50 °C
Reverse Power Protection	+43 dBm for 5 sec	Humidity	90%
Operational Input Power	-45 dBm RMS	Protection closed / during operation	IP66 / IP20
Max Input Power	-10 dBm	AC Power	100 to 240V 50 / 60 Hz
Measurement Accuracy	+/- 2dB @ 2 x 43 dBm	Power Consumption	640 Watts (VA)
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		