



5 Band reversed/transmitted

Product Description

PIT (Passive intermodulation test set) provides an easy way to precisely determine the intermodulation characteristics of

- Antenna
- Transmission Line
- Connector
- Jumper
- Filter and Combiner
- Splitter
- Other Passive Components

which operates in AMPS, EGSM, DCS, PCS, UMTS and WiMAX frequency range (according to customers' requirements) .

This PIT is specially designed for the use in production lines to measure the reversed/transmitted 3rd, 5th, 7th and 9th order intermodulation products. The PIT is equipped with a System Controller including PIM (Passive Intermodulation) Test Software and a suitable Spectrum Analyzer/ Receiver. The test setup complies with the test methods suggested by proposal paper IEC 62037(IEC SC 46D.WG6).

IM Test Performance

General

Detected Signal:	Reversed/Transmitted 3 rd , 5 th , 7 th and 9 th order intermodulation product
Test Signals:	
- Frequency:	AMPS, EGSM, DCS, PCS, UMTS and WiMAX
- Power at test port:	2 x up to min. +37 ... +46 dBm
- Output power accuracy:	±0.35dB
-IM-level (2x 43dBm, S/N = 10 dB) :	< -171 dBc (standard)

IM-0810-BB Signal Source

Broadband Power Amplifier

Frequency range:	800 ... 1000 MHz
Output power:	min. +50 dBm (typ. +51 dBm)

Includes Integrated Synthesizer

IM-1822-BB Signal Source

Broadband Power Amplifier

Frequency range:	1800 ... 2200 MHz
Output power:	min. +50 dBm (typ. +51 dBm)

Includes Integrated Synthesizer

IM-FI-800 Filter Unit

TX frequency range:	869 ... 894 MHz
RX frequency range:	824 ... 849 MHz
ANT interface (DUT):	7/16 female
IM-level (2 X 43dBm, S/N=10 dB)	< -171 dBc (standard)

IM-FI-900 Filter Unit

TX frequency range:	925 ... 960 MHz
RX frequency range:	880 ... 915 MHz
ANT interface (DUT):	7/16 female
IM-level (2 X 43dBm, S/N=10 dB)	< -171 dBc (standard)

IM-FI-1800 Filter Unit

TX frequency range:	1805 ... 1880 MHz
RX frequency range:	1710 ... 1785 MHz
ANT interface (DUT):	7/16 female
IM-level (2 X 43dBm, S/N=10 dB)	< -171 dBc (standard)

IM-FI-1900 Filter Unit

TX frequency range:	1930 ... 1990 MHz
RX frequency range:	1850 ... 1910 MHz
ANT interface (DUT):	7/16 female
IM-level (2 X 43dBm, S/N=10 dB)	< -171 dBc (standard)

IM-FI-2100 Filter Unit

TX frequency range:	2110 ... 2170 MHz
RX frequency range:	1920 ... 2060 MHz
ANT interface (DUT):	7/16 female
IM-level (2 X 43dBm, S/N=10 dB)	< -171 dBc (standard)

IM-SOFT System Software

Operational Modes	- Standard mode - Advanced mode(R&D mode/ Engineering mode)
Measurement Modes	- Two Tone measurement mode - Sweep measurement mode
Adjustable Parameters	- frequencies and sweep range - frequency step - Carrier power - Spectrum Analyzer parameter (RBW, Span, Amplitude) - Attenuation Adjust

PASSIVE INTERMODULATION ANALYZER

IM-08Rt/09Rt/18Rt/19Rt/21Rt/

Remote Control

- Panel Lock
- System parameters can be stored
- GPIB
- USB
- LAN (TCP/IP)

Spectrum Analyzer / Receiver

Recommended type

Rhode & Schwarz Type: FSL Var. 3 (3GHz) with FSL-B22, FSL-B7, FSL-B4 and FSL-B10
Optional Analyzers and/or Driver Modules can be supplied or used on request

Printer

Recommended type

printer with USB port

Temperature Range

Max. allowable operating temperature range
Recommended operating temperature range

+5 ... +45°C
+15 ... +25°C

Power Supply

100 ... 240 VAC, 50/60 Hz, 1100VA

Warm-up Time

Minimum 15 minutes for specified accuracy

Part-number designation

IM-08Rt/09Rt/18Rt/19Rt/21Rt

- IM: Intermodulation
- 08: AMPS (CDMA 800)
- 09: EGSM, GSM 900
- 18: DCS (GSM 1800)
- 19: PCS (GSM 1900)
- 21: UMTS (WCDMA)
- R: Reversed Measurement
- t: Transmitted Measurement

PASSIVE INTERMODULATION ANALYZER

IM-08Rt/09Rt/18Rt/19Rt/21Rt/

explain: Frequency followed by letter R means reversed measurement only; frequency followed by both R and t means both reversed and transmitted measurement.

e.g. IM-09R/18Rt means in EGSM and GSM 900, only reversed measurement can be adopted; while in DCS, both reversed and transmitted measurement can be adopted.

remark: IM-Spectrum Analyzer, IM-System Controller and other accessories are not included.

Accessories

7/16 male to 7/16 female adapter	Order Number: 60 S 101-K50 N1
7/16 Male to 7/16 male adapter	Order Number: 60 S 101-S50 N1
7/16 female to 7/16 female adapter	Order Number: 60 K 101-K50 N1
7/16 male to N female adapter	Order Number: 60 S 153-K50 N1
7/16 female to N male adapter	Order Number: 53 S 160-K50 N1
-110dBm standard adapter for AMPS	Order Number: 60S110-k008
-110dBm standard adapter for EGSM	Order Number: 60S110-k009
-110dBm standard adapter for DCS	Order Number: 60S110-k018
-110dBm standard adapter for PCS	Order Number: 60S110-k019
-110dBm standard adapter for UMTS	Order Number: 60S110-k021
Test Cable 7/16 male/ 7/16 male 1.5m	Order Number: L73-C014-1500
Test Cable 7/16 male/ N male 1.5m	Order Number: L73-C007-1500
Test Cable N male/ N male 1.5m	Order Number: L73-C011-1500
32# torque wrench	Order Number: 60W000-000
18# torque wrench	Order Number: 53W008-000

Available Options

Description	Reversed Measurement	Reversed /Transmitted	Optional Transmitted (Reversed measurement is required)
800 Filter Unit	IM-FI-800	IM-FI-800-RT	IM-FI-800-OT
900 Filter Unit	IM-FI-900	IM-FI-900-RT	IM-FI-900-OT
1800 Filter Unit	IM-FI-1800	IM-FI-1800-RT	IM-FI-1800-OT
1900 Filter Unit	IM-FI-1900	IM-FI-1900-RT	IM-FI-1900-OT
2100 Filter Unit	IM-FI-2100	IM-FI-2100-RT	IM-FI-2100-OT

Further bands and multiband solutions are available on request.

Order information

	Part Number	Description	
Mainframe	IM-08R	AMPS800 Reversed Analyzer	
	IM-08Rt	AMPS800 Reversed/Transmitted Analyzer	
	IM-09R	EGSM900 Reversed Analyzer	
	IM-09Rt	EGSM900 Reversed/Transmitted Analyzer	
	IM-18R	DCS1800 Reversed Analyzer	
	IM-18Rt	DCS1800 Reversed/Transmitted Analyzer	
	IM-19R	PCS1900 Reversed Analyzer	
	IM-19Rt	PCS1900 Reversed/Transmitted Analyzer	
	IM-21R	UMTS2100 Reversed Analyzer	
	IM-21Rt	UMTS2100 Reversed/Transmitted Analyzer	
	IM-MPX	Multiplexer for automatically frequency switch	
		60Z150-001	Low PIM termination
	Accessories	60S101-K50N1	7/16 Male to 7/16 Female adapter
60S101-S50N1		7/16 Male to 7/16 Male adapter	
60K101-K50N1		7/16 Female to 7/16 Female adapter	
60S153-K50N1		7/16 Male to N Female adapter	
53S160-K50N1		7/16 Female to N Male adapter	
60S110-k008		-110dBm standard adapter for AMPS	
60S110-k009		-110dBm standard adapter for EGSM	
60S110-k018		-110dBm standard adapter for DCS	
60S110-k019		-110dBm standard adapter for PCS	
60S110-k021		-110dBm standard adapter for UMTS	
L73-C014-1500		Test Cable 7/16 male/ 7/16 male 1.5m	
L73-C007-1500		Test Cable 7/16 male/ N male 1.5m	
L73-C011-1500		Test Cable N male/ N male 1.5m	
60W000-000		32# torque wrench	
53W008-000		18# torque wrench	

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Chr. Entsfellner	08.11.06	Marshal	04.12.2007	a	-----	Ren Wei	30.11.2007
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