

K2M-101A complex for measurement of TRM parameters

- Complete module characterization within less than 45 seconds with 100 000 measurements
- All required measurements with a single connection of TRM
- Complex configurability for specific tasks
- Multipoint calibration with multi-channel automatic calibrator

K2M-101A measurement complexes provide measurements of transmit-receive module (TRM) parameters in continuous and pulse modes.

TRM in receive mode:

- S-parameter measurements;
- Noise figure measurements;
- IP3 measurements.

TRM in transmit mode (pulse mode):

- S-parameter measurements;
- measurement of lateral spectral components (LSC) level;
- output power and compression measurements;
- transient measurements.

TRM control:

- Configurable control bus (up to 64 lines, up to 100 MHz);
- significant ROM volume for storage of command tables and TRM status tables;
- Real-time TRM message processing;
- Synchronization of instruments and TRM;
- strict timing of measurement points, modulators and TRM status switching.

TRM power supply:

- 3 power sources;
- 750 W per channel;
- current and voltage monitoring;
- current and voltage protection.

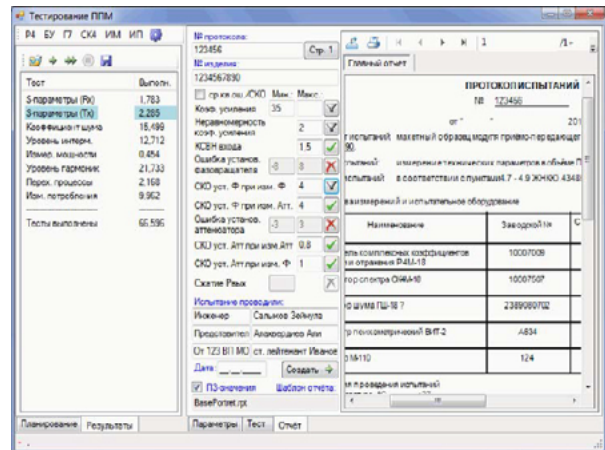
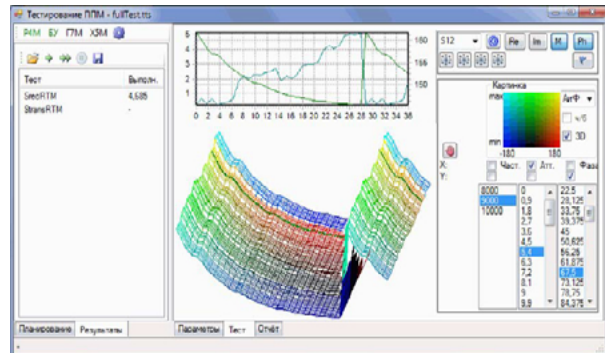
Additional capabilities:

- reading of identification data;
- ROM programming;
- sensor polling.



Software

- high performance;
- high configurability of measurement sequence;
- flexible measurement reporting and recording system;
- built-in tools for analyzing and processing of measurement data;
- use of scalar and vector calibration kits;
- measurement of multichannel TRM;
- display of intermediate results (oscillograms and spectrograms) for debugging of measurement templates;
- automatic diagnostics of complex operability;
- control and measurement COM-function library for user programs;
- inter-channel crosstalk measurement.



Specifications

Operating frequency range	100 MHz ...26,5 GHz
Frequency setting accuracy using internal reference oscillator, rel. units	$\pm 2 \times 10^{-6}$
Output power, dBm	-50...+10
Noise floor, dBm/Hz	-127
Power measurement range at DUT ports in transmission mode using VNA (at port 1 input attenuation 0 dB), dBm	-40...+40
Absolute power measurement error with VNA, less than, dB	$\pm 1,5$
Power measurement range using PM, dBm	-50...+20
Power measurement relative error using PM, %	± 7
Noise source ENR range, dB	13...16
Noise source ENR determination error, less than, dB	0,4
Reflection coefficient modulus measurement range	0,012...0,998
Reflection coefficient measurement absolute error, less than	$\pm 0,01$
Reflection coefficient phase measurement absolute error, less than	$\pm 1,7^\circ$
Transmission coefficient modulus measurement range, dB	
DUT in transmission mode (using commutation unit)	-80...+60
DUT in receive mode (using commutation unit)	-120...+30
Transmission coefficient absolute measurement error, less than, dB	$\pm 0,2$
Transmission coefficient phase absolute measurement error, less than	$\pm 1,2^\circ$
Noise figure measurement range, dB	0...24
Time intervals measurement range	50 ns ...10 s

Ordering information

Complex version depending on measurement capabilities	
K2M-101A/1	S – parameters
K2M-101A/2	S – parameters, output power level
K2M-101A/3	S – parameters, output power level, noise figure
K2M-101A/4	S – parameters, output power level, noise figure, lateral spectral and intermodulation components level
K2M-101A/5	S – parameters, output power level, noise figure, lateral spectral and intermodulation components level, measurement circuit modification capability

Ordering example

- K2M-101A/2 – complex for measurement of TRM parameters (S-parameters, output power level).