TFN®SERIES 100A

ANTENNA FEEDER SPECTRUM TESTER

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SPECTRUM TESTER

- SEVEN-INCH JUMBO TOUCH SCREEN
- 8 HOURS LONG ENDURANCE
- FIVE MODULES FUNCTION

TFN®

TFN SERIES ANTENNA FEEDER SPECTRUM TESTER IS A COMPREHENSIVE INSTRUMENT INTRODUCED BY TFN FOR ANTENNA, FEEDER, CABLE TESTING, RF POWER TESTING, AND SPECTRUM ANALYSIS AND MEASUREMENT. THE 100A ANTENNA FEED FUNCTION CAN TEST THE STANDING WAVE RATIO AND MATCHING OF THE BASE STATION ANTENNA AND FEEDER, LOCATE THE CABLE LOSS AND LONG-DISTANCE FAULT, QUICKLY EVALUATE THE CONDITION OF THE TRANSMISSION LINE AND ANTENNA SYSTEM, AND SHORTEN THE INSTALLATION AND DEBUGGING TIME REQUIRED BY THE NEW BASE STATION. 1 MHZ - 6 GHZ ULTRA WIDE TEST FREQUENCY RANGE, 60 DB LARGE DYNAMIC RANGE, A VARIETY OF OPTIONS TO FUNCTION IS WIDELY USED IN 2 G / 3 G / 4 G / 5 G/WLAN/WIFI/WIMAX SYSTEM UNDER TEST. THE SPECTRUM ANALYSIS MODULE COVERS A FREQUENCY RANGE OF 300MHZ~4GHZ AND A LARGE DYNAMIC RANGE OF 100DB, PROVIDING SPECTRUM TESTING, INTERFERENCE TROUBLESHOOTING AND OTHER TESTS. THE 100 SERIES IS DESIGNED WITH A 7-INCH SUPER-LARGE TOUCH SCREEN AND HAS AN ULTRA-LONG BATTERY LIFE OF 8 HOURS, PROVIDING EXCELLENT USER EXPERIENCE. 100 SERIES IS A NEW GENERATION OF WIRELESS NETWORK CONSTRUCTION, UPGRADE, MAINTENANCE ESSENTIAL MEASUREMENT TOOLS.

PRODUCT CHARACTERISTICS

PRODUCT FEATURES

- SUPPORT ANTENNA FEEDER, SPECTRUM ANALYZER, CW SIGNAL SOURCE, TPM POWER METER, DPM POWER METER FIVE MODULE FUNCTIONS
- ANTENNA FEED FUNCTION COVERS 1MHZ~6GHZ,60DB SUPER DYNAMIC RANGE
- SPECTRUM FUNCTION COVERS 300MHZ~4GHZ, 100DB SUPER DYNAMIC RANGE
- ANTENNA FEED FUNCTION AND SPECTRUM FUNCTION SHARE PORT TEST, CONVENIENT AND QUICK
- IS WIDELY USED IN 2 G / 3 G / 4 G / 5 G/WLAN/WIFI/WIMAX SYSTEM UNDER TEST
- LIMIT LINE/MARK LINE/CURVE CALCULATION ISOMETRIC LINE INTELLIGENT JUDGMENT FUNCTION
- 8 HOURS LONG ENDURANCE
- 7 INCH LCD COLOR TOUCH LARGE SCREEN DISPLAY

MULTIPLE MEASUREMENT MODES ARE SUPPORTED

MULTIPLE MEASUREMENT MODES

SUPPORT FAULT DISTANCE RETURN LOSS, FAULT DISTANCE STANDING WAVE RATIO, FREQUENCY RETURN LOSS, FREQUENCY STANDING WAVE RATIO, CABLE LOSS, SMITH CHART, PHASE, RADIO FREQUENCY POWER METER AND SPECTRUM ANALYZER A VARIETY OF MEASUREMENT MODES THE MAIN INTERFACE DESIGN IS EXQUISITE, EASY TO OPERATE

A VARIETY OF OPTIONS ARE AVAILABLE

MULTIPLE MEASUREMENT MODES

USB, HIGH-PRECISION POWER METER PROBE CAN BE CONNECTED TO THE METER TO REALIZE THE POWER TEST AND DISPLAY, AND CAN BE SEPARATELY CONNECTED TO THE PC TERMINAL, TO ACHIEVE THE TEST RESULTS DISPLAY AND ANALYSIS, GREATLY MEET THE NEEDS OF CUSTOMERS IN MANY ASPECTS. TERMINAL POWER METER, THROUGH THE SPECTRUM POWER METER CAN INTUITIVELY AND CLEARLY MEASURE A VARIETY OF SIGNALS TO MEET THE NEEDS OF DIFFERENT LEVELS OF CUSTOMERS.

INTELLIGENT ANALYSIS AND JUDGMENT OF TEST CURVE

INTELLIGENT ANALYSIS AND JUDGMENT OF TEST CURVE

SUPPORT SINGLE AND MULTI-SEGMENT LIMIT LINE ANALYSIS, MARK LINE ANALYSIS AND CURVE OPERATION ANALYSIS OF THE TEST CURVE, THE RESULTS ARE ACCURATE AND CLEAR.

CONVENIENT AND ACCURATE CALIBRATION

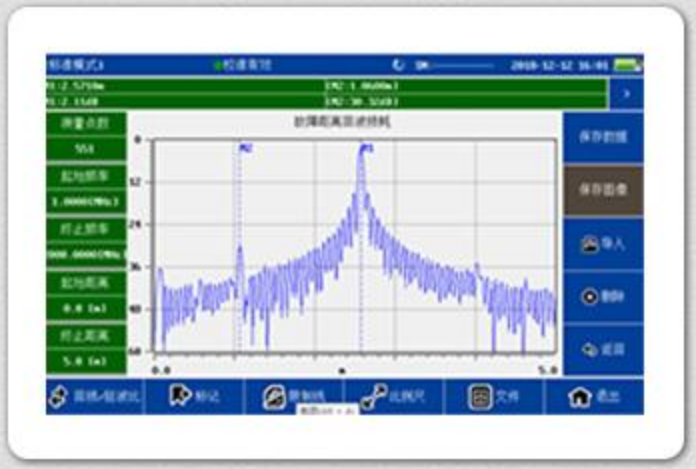
CONVENIENT AND ACCURATE CALIBRATION METHOD

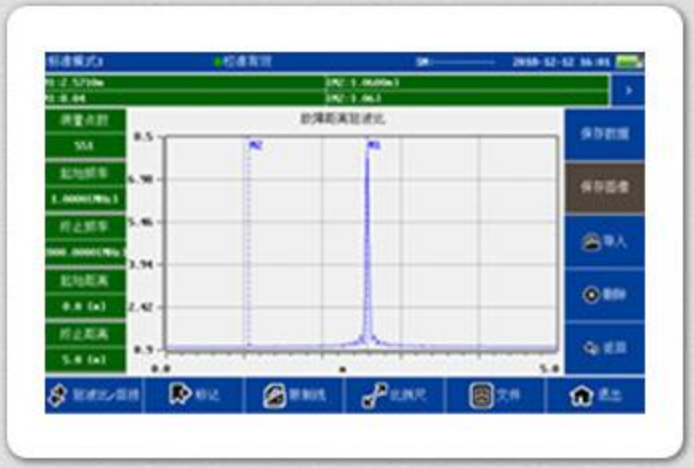
T DESIGN, SINGLE PORT CALIBRATION, CONVENIENT AND ACCURATE. AND AFTER CALIBRATION, THERE IS NO NEED TO RECALIBRATE WHEN THE NUMBER OF SCANNING POINTS IS REDUCED, WHICH GREATLY FACILITATES THE ON-SITE USE EFFICIENCY OF CUSTOMERS. ECAL ELECTRONIC CALIBRATOR PROVIDES CONSISTENT CALIBRATION RESULTS. REMOVE CALIBRATION ERRORS THAT MAY BE INTRODUCED BY MANUAL CALIBRATION.

INSTANT SWITCH OF LOSS/STANDING WAVE RATIO

REAL TIME SWITCHING OF RETURN LOSS / VSWR

THE RETURN LOSS AND STANDING WAVE RATIO CAN BE TESTED SIMULTANEOUSLY, AND THE OBSERVATION RESULTS CAN BE SWITCHED BY CLICKING, WHICH GREATLY IMPROVES THE WORKING EFFICIENCY





CAN REALIZE BATCH PROCESSING TEST FILES

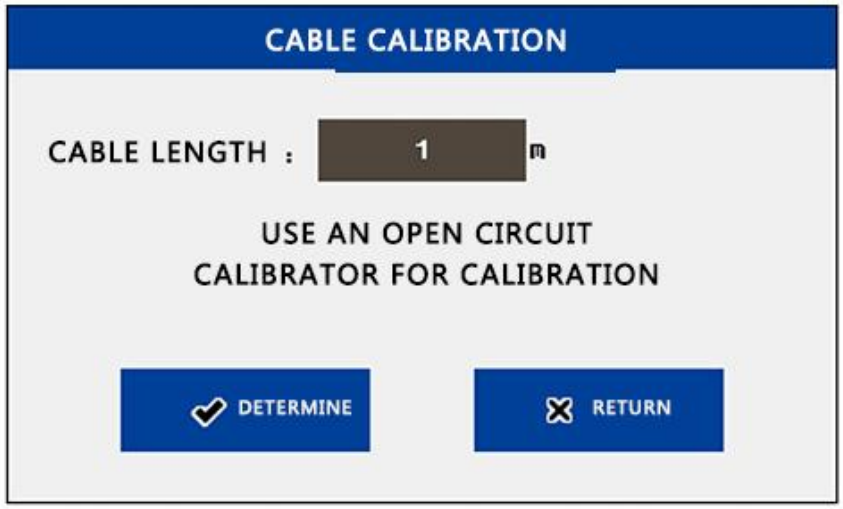
BATCH PROCESSING OF TEST FILES CAN BE REALIZED

INSTRUMENT WITH FILE FILTERING FUNCTION, CAN EASILY ACHIEVE BATCH EDITING, ANALYSIS AND SAVE TEST FILES, EFFECTIVELY IMPROVE EFFICIENCY.

METER SUPPORTS ON-SITE CABLE CALIBRATION AND CABLE PARAMETER ACQUISITION

INSTRUMENT SUPPORT FIELD CALIBRATION CABLE AND GET THE CABLE PARAMETERS

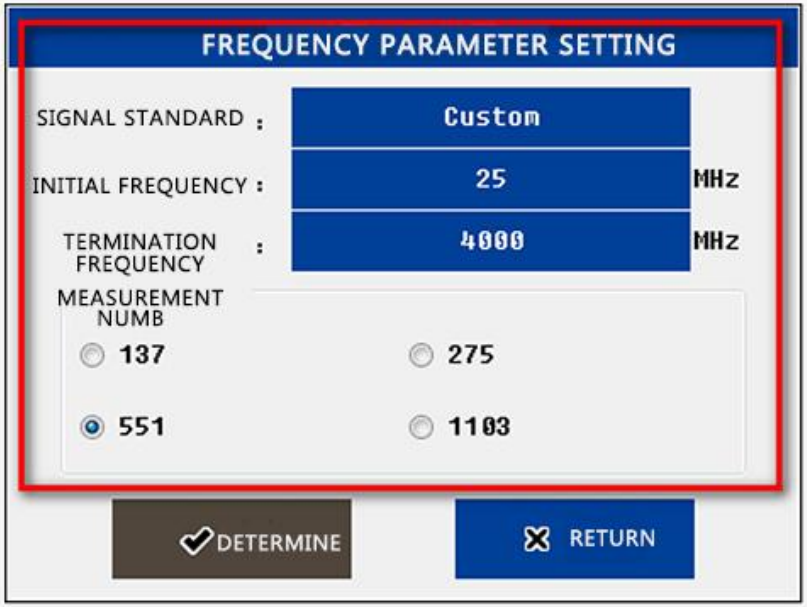
USERS CAN MANUALLY INPUT CABLE PARAMETERS (PROPAGATION SPEED; CABLE LOSS) OR SELECT THE KNOWN CABLE TYPE, OR IF YOU DO NOT KNOW THE CABLE INFORMATION AND PARAMETERS, YOU CAN USE THE EXISTING CABLE ON HAND, USING THE SYSTEM'S BUILT-IN "CABLE CALIBRATION" TOOL TO GET ACCURATE CABLE PARAMETERS. PROVIDE CONVENIENCE FOR FIELD TESTING.



SUPPORTS MANUAL FREQUENCY SETTING AND PRESET FREQUENCY SELECTION

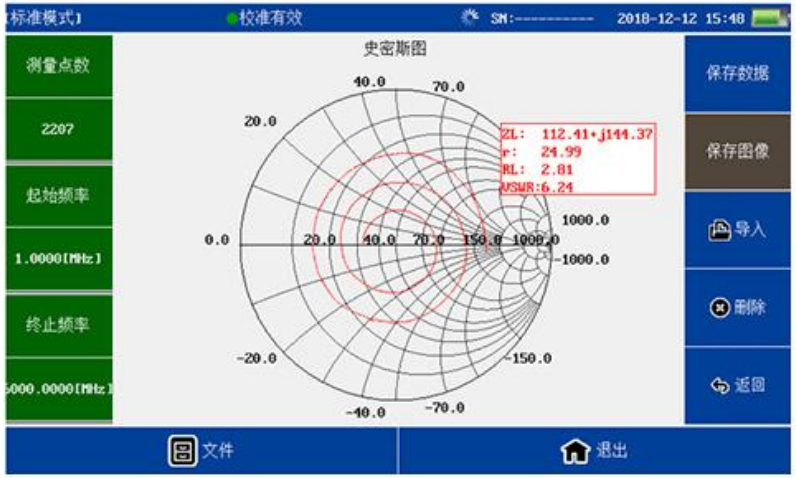
SUPPORT MANUAL FREQUENCY SETTING
AND SELECT THE PRESET FREQUENCY

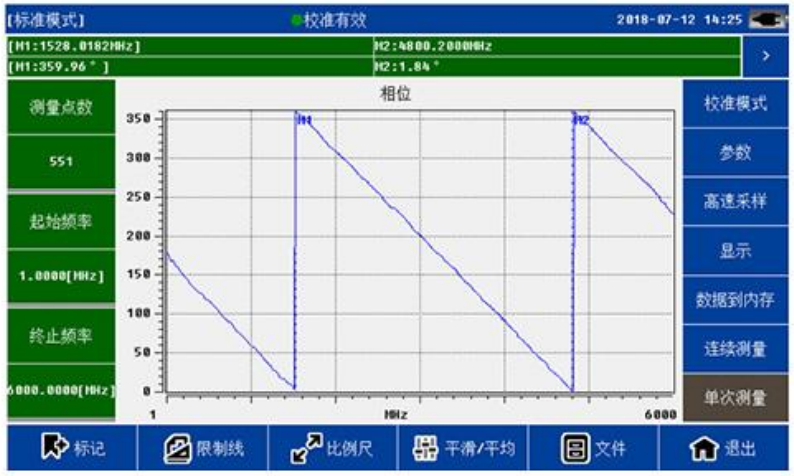
USERS CAN "SELECT PRESET SIGNAL STANDARD" OR "CUSTOMIZE FREQUENCY" ACCORDING TO TEST REQUIREMENTS.



SMITH DIAGRAM, PHASE TEST FUNCTION

SMITH STUART, PHASE TEST FUNCTION





ENERGY SAVING AND ENVIRONMENTAL PROTECTION HUMANIZED INTERFACE DESIGN

ENERGY SAVING AND ENVIRONMENTAL PROTECTION HUMANIZED INTERFACE DESIGN

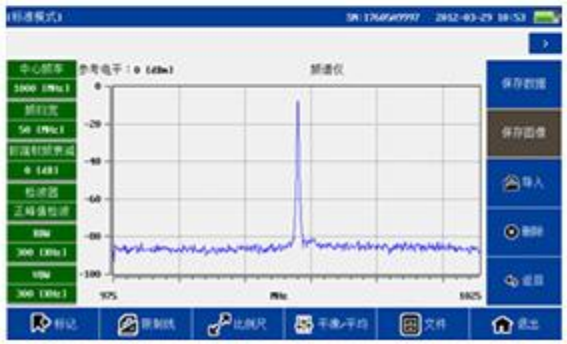
WITH LOW POWER CONSUMPTION DESIGN, LARGE CAPACITY RECHARGEABLE LITHIUM BATTERY AND AC CONFIGURATOR DUAL POWER SUPPLY, 8-HOUR ULTRA-LONG WORKING TIME, AND SHORTCUT KEYS CAN SET FOUR DISPLAY MODES: NORMAL, BLACK AND WHITE, HIGH LIGHT AND NIGHT VISION, SUITABLE FOR USE IN DIFFERENT EXTERNAL ENVIRONMENTS. WITH CONVENIENT BACKLIGHT MANAGEMENT, FAN MANAGEMENT, POWER MANAGEMENT AND OTHER FUNCTIONS, EASY TO OPERATE, ENERGY SAVING AND ENVIRONMENTAL PROTECTION.

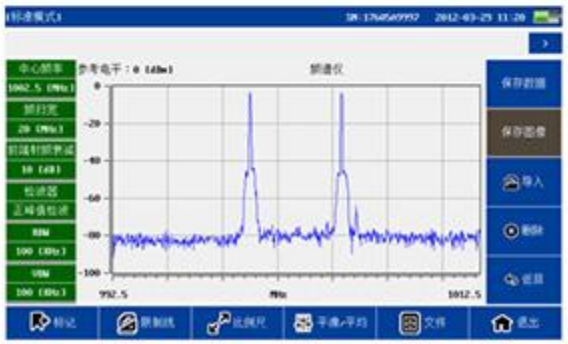
FUNCTIONAL SPECTRUM ANALYSIS MODULE

SPECTRUM ANALYSIS MODULE WITH PERFECT FUNCTION

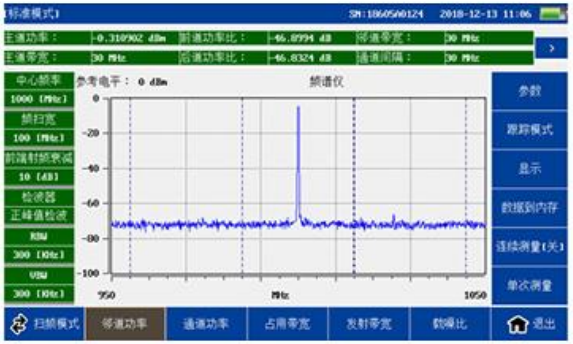
SPECTRUM ANALYSIS MODULE COVERS THE FREQUENCY RANGE OF 300MHZ-4GHZ, 100DB LARGE DYNAMIC RANGE, DANL-130DBM@1KHZ RBW, PROVIDING SPECTRUM TEST, INTERFERENCE DETECTION AND OTHER TESTS, INCLUDING FIVE SWEEP TEST MODES: ADJACENT CHANNEL POWER, CHANNEL POWER, OCCUPIED BANDWIDTH, TRANSMISSION BANDWIDTH, CARRIER-TO-NOISE RATIO.

SPECTRUM TEST FUNCTION

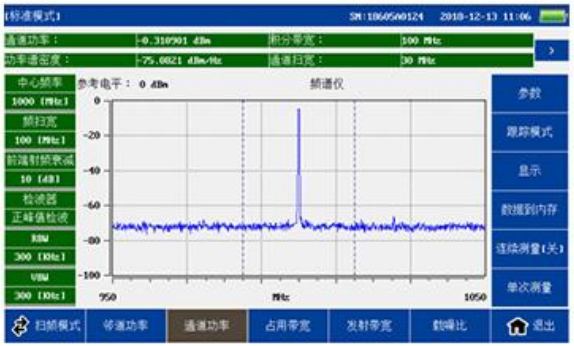




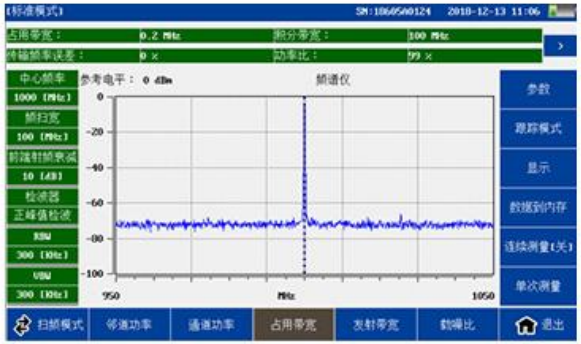
SWEEP MODE



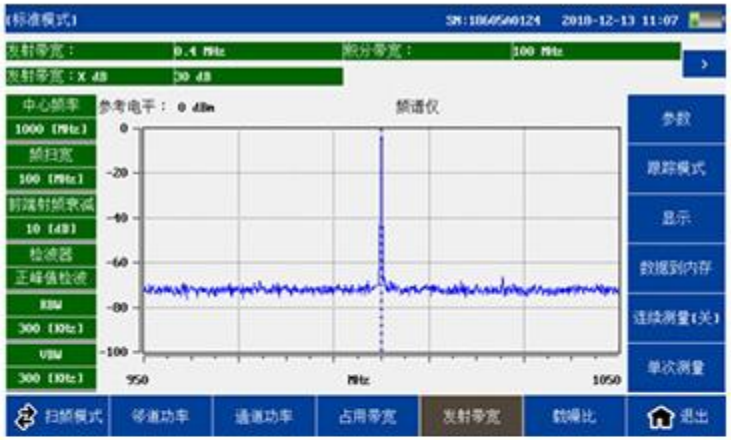
ANJACENT CHANNEL POWER



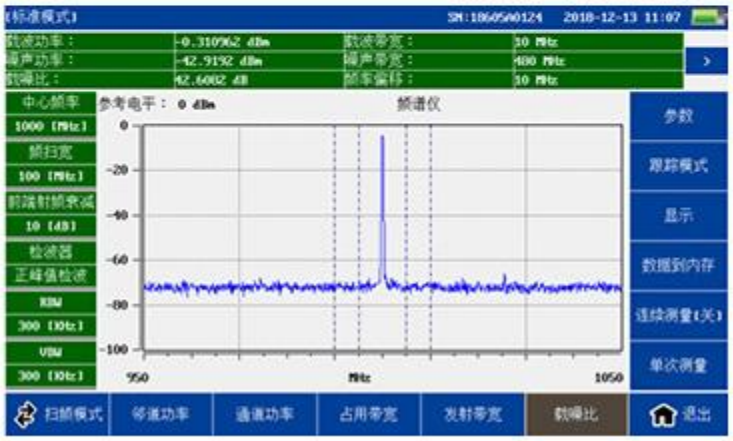
CHANNEL POWER



BANDWIDTH CONSUMPTION

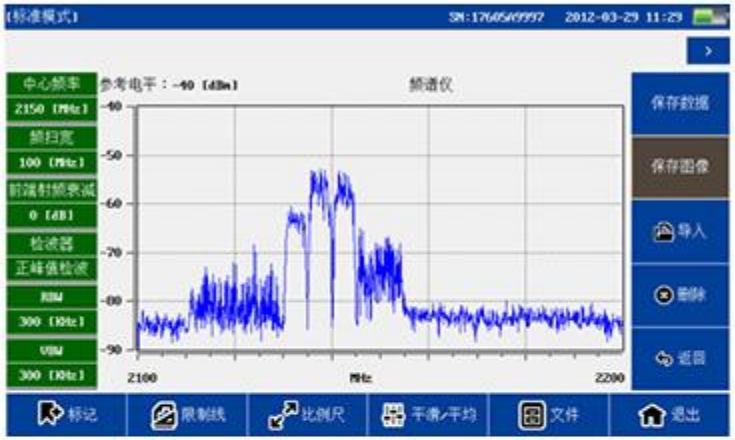


TRANSMITTING BANDWIDTH

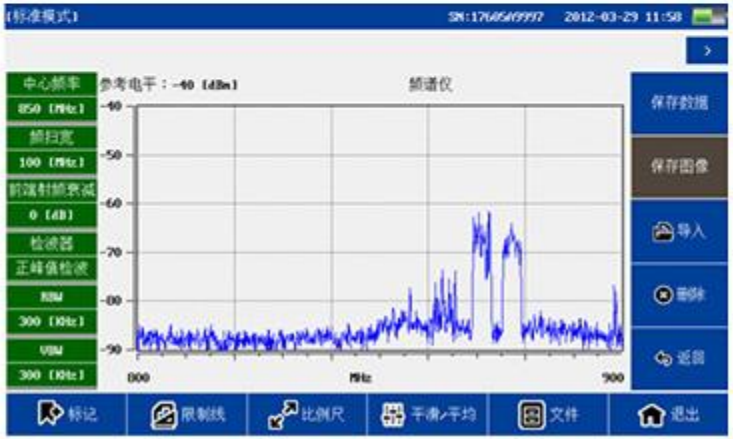


LOAD-TO-NOISE RATIO

ANTENNA TEST FUNCTION



WCDMA SYSTEM



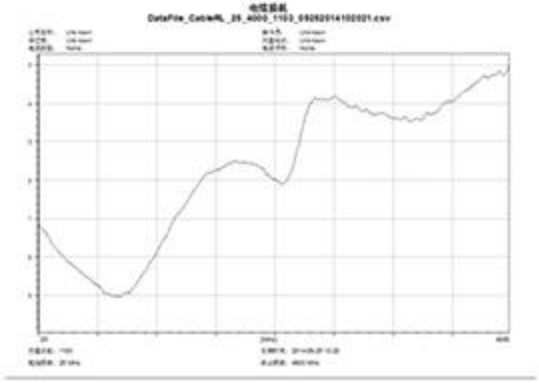
CDMA SYSTEM

POWERFUL ANALYSIS SOFTWARE FOR UPPER COMPUTER

POWERFUL SOFTWARE FOR UPPER COMPUTER ANALYSIS

DATA MANAGEMENT FUNCTION

FILE TRANSFER WITH 100A HOST, INCLUDING UPLOADING FILES FROM THE HOST TO THE WORKSTATION/DOWNLOADING FILES TO THE HOST AND PC FOR FILE INTERACTION, INCLUDING OPENING LOCAL FILES/SAVING FILES TO THE LOCAL SUPPORT REPORT PRINT PREVIEW AND PRINT, AND CAN FULLY DISPLAY THE COMPANY NAME, TEST PARAMETERS, MEASUREMENT TIME AND OTHER INFORMATION

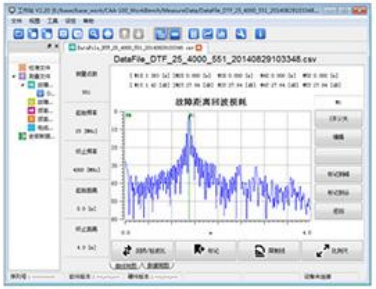


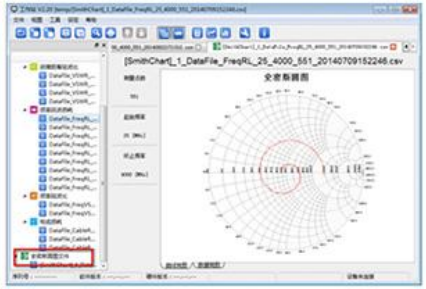
APPLICATION TOOL FUNCTION

DISTANCE-TO-FAULT FUNCTION

CONVERT TO SMITH CIRCLE CHART FUNCTION

COMPUTER



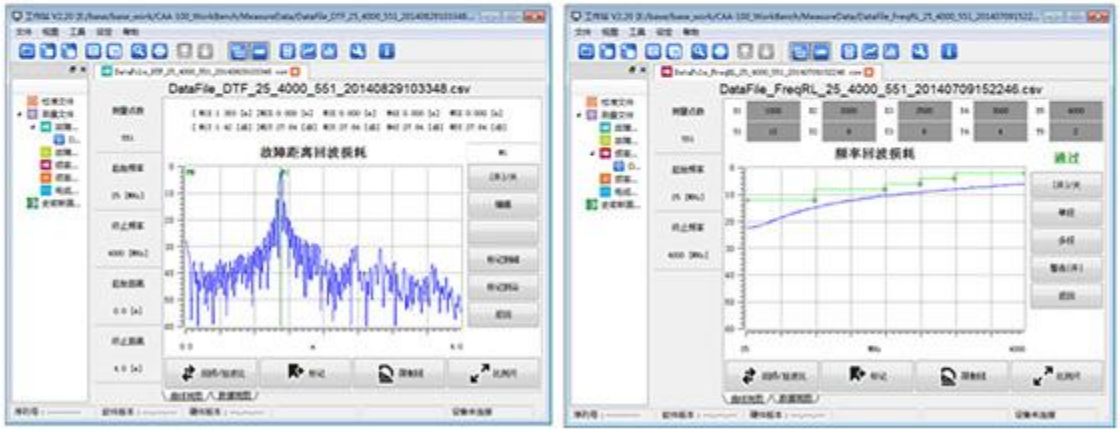


DATA ANALYSIS FUNCTION

SUPPORT MARK LINE

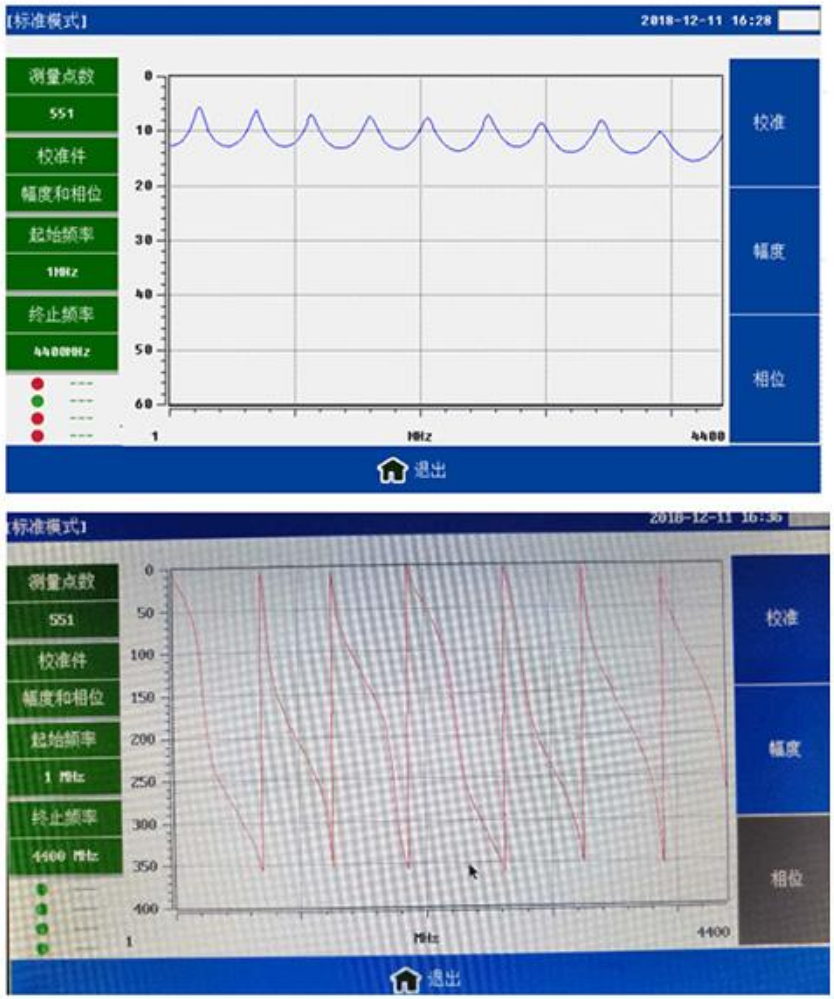
SUPPORT LIMIT LINE

SUPPORTS THE SCALE FUNCTION



THE METER SUPPORTS SELF-CALIBRATION

THE INSTRUMENT SUPPORTS SELF CALIBRATION FUNCTION



SUPPORT GPS SWITCH FUNCTION AND INPUT CARD ID AND CARD SERIAL NUMBER (OPTIONAL)

SUPPORT GPS SWITCH FUNCTION
AND CARD ID AND CARD SERIAL NUMBER INPUT (OPTIONAL)

SUPPORTS GPS POSITIONING AND SWITCHING

SUPPORT CARD ID AND CARD SERIAL NUMBER INPUT

METER SUPPORTS CW SIGNAL SOURCE FUNCTION

SUPPORT CW SIGNAL OUTPUT

OUTPUT FREQUENCY RANGE (TYPICAL VALUE)50MHZ-6GHZ OUTPUT POWER RANGE (TYPICAL VALUE)-8 DBM -ODBM

TECHNICAL INDEX

TECHNICAL INDEX

TECHNICAL INDEX	
MODEL NUMBER	100A
PERFORMANCE INDICATORS (ANTENNA FEED PART)	
BASIC PERFORMANCE	
FREQUENCY RANGE	1-6000MHz
FREQUENCY RESOLUTION	1kHz
FREQUENCY ACCURACY	±2ppm
OUTPUT LEVEL	0dBm (TYPICAL)
MEASURED VELOCITY	1.5ms/pt
MEASUREMENT NUMBER	137, 275, 551, 1103, 2207, 3310
DIRECTIVITY	42DB (AFTER CALIBRATION)
ANTI-INTERFERENCE CAPABILITY	17DBM CHANNEL, -5DBM FREQUENCY
FREQUENCY TEST PERFORMANCE	
RETURN LOSS RANGE	0-60dB
RETURN LOSS RESOLUTION	0.01dB
STANDING WAVE RATIO RANGE	1-65
STANDING WAVE RATIO RESOLUTION	0.01
CABLE LOSS RANGE	0-30dB
CABLE LOSS RESOLUTION	0.01dB
DTF TESTS PERFORMANCE	
RETURN LOSS RANGE	0-60dB
STANDING WAVE RATIO RANGE	1-65dB
DISTANCE RANGE	1500 M
RESOLUTION	1.5*10^8*Vp/(F2-F1) VP: CABLE PROPAGATION SPEED; F1,F2: START AND CUT OFF FREQUENCIES
PHASE	
MEASURING RANGE	-180° - +180°
RESOLUTION	0.01°
SMITH DIAGRAM	
RESOLUTION	0.01
CW SIGNAL SOURCE	
OUTPUT FREQUENCY RANGE (TYPICAL VALUE)	50MHz-6GHz
OUTPUT POWER RANGE (TYPICAL VALUE)	-8dBm - 0dBm

PERFORMANCE INDICATORS (SPECTRUM PART)	
FREQUENCY INDEX	
FREQUENCY RANGE	300-4000MHz
FREQUENCY RESOLUTION	1kHz
FREQUENCY STABILITY	±2.5ppm
FREQUENCY SWEEP WIDTH	1-3700MHz
RBW BANDWIDTH	1k-300kHz (1, 3, 10 STEP BY STEP)
VBW BANDWIDTH	1k-300kHz (1, 3, 10 STEP BY STEP)
RBW/VBW	1, 3, 10
AMPLITUDE INDEX	
ATTENUATOR RANGE	30dB
ATTENUATOR STEP	5dB
MAXIMUM INPUT SAFETY LEVEL	+26dBm
THIRD ORDER INTERMODULATION	>+15dBm (TYPICAL VALUE)
SECOND HARMONIC DISTORTION	<-70dBc
DISPLAY AVERAGE FLOOR NOISE (DANL)	<-130dBm/Hz
ACCURACY	±1.5dB@25±5℃ (TYPICAL VALUE)
SINGLE SIDEBAND PHASE NOISE @1GHZ	-85dBc/Hz @ 10kHz OFFSET -120dBc/Hz @ 1MHz OFFSET
RESIDUAL SPURIOUS	<-85dBm
DISPLAY MODE	
DYNAMIC RANGE	<=100dB
MEASURING RANGE	DANL to 20dBm
REFERENCE LEVEL RANGE	-80dBm - 30dBm
AMPLITUDE UNIT	LOGARITHMIC MODE (DBM, DBV, DBMV, DBUV)
DETECTION MODE	SAMPLING DETECTION, POSITIVE PEAK DETECTION, NEGATIVE PEAK DETECTION, AVERAGE DETECTION, STANDARD DETECTION
TRIGGER MODE	FREE TRIGGER, VIDEO TRIGGER
VSWR	2.2:1 (TYPICAL VALUE)

UNIVERSAL INDEX	
CONNECTOR TYPE	N-TYPE NEGATIVE HEAD
INPUT IMPEDANCE	50 OHMS
DISPLAY	7 INCH RESISTIVE TOUCH SCREEN WITH 800*480 RESOLUTION
DATA INTERFACE	1 USB HOST PORT, 1 USB DEVICE PORT, ONE 10M/100M ADAPTIVE LAN PORT
STORAGE SPACE	> ; 2000 CURVES
LANGUAGE	CHINESE, ENGLISH, SPANISH
BUILT-IN BATTERY	11. 1V 7800MAH LITHIUM RECHARGEABLE BATTERY
EXTERNAL ADAPTER	110-240, 50-60HZ AC INPUT, 16V 3.75A DC OUTPUT
OPERATING TEMPERATURE	-10℃ - 50℃
STORAGE TEMPERATURE	-40℃ - 70℃
RELATIVE HUMIDITY	0-85% (NO CONDENSATION)

TPM (OPTIONAL) - TERMINAL RF POWER METER	
FREQUENCY RANGE	50-4000MHz
POWER RANGE	-40 - 20 dBm
MAXIMUM TOLERABLE POWER	<23 dBm
TEST ACCURACY	≤±0. 3db (15 - 35℃); ≤±0. 5dB(0 - 50℃)
INPUT STANDING WAVE RATIO	<1. 2
BURST WIDTH	1us-60ms
MINIMUM TEST CYCLE	15Hz
VIDEO BANDWIDTH	5MHz
MINIMUM PULSE WIDTH	200ns
TIME RESOLUTION	GIGI 4: LUS, LUS, 15US, 150US
MODULATING SIGNAL PEAK-TO-AVERAGE RATIO	<12dB
CCDF TEST RANGE	0. 1% - 100%
CCDF TEST ACCURACY	±3%
BURST SIGNAL DUTY CYCLE	0. 1% - 100%
POWER SUPPLY MODE	USB
OPERATING TEMPERATURE	0℃ - 50℃
STORAGE TEMPERATURE	-20℃ - 70℃
RELATIVE HUMIDITY	0-85% (NO CONDENSATION)
WEIGHT	0. 3kg
VOLUME (LENGTH × WIDTH × HEIGHT)	125×45×35mm

DPM MODULE (OPTIONAL) -- PASS THROUGH RF POWER METER	
MEAN MEASUREMENT	
FREQUENCY RANGE	300-4200MHz
POWER RANGE	100mW-200W
DYNAMIC RANGE	≥33 dB
INSERTION LOSS	≤0.1 dB
STANDING WAVE RATIO	1.05-99.9
DIRECTIVITY	≥30 (<3GHz); ≥28 (>3GHz)
TEST ACCURACY	±4%
INPUT IMPEDANCE	50Ω
RF INTERFACE	N-TYPE NEGATIVE
DATA INTERFACE	USB
PEAK MEASUREMENT	
POWER RANGE	100mW-500W
MEASUREMENT ACCURACY	BURST PULSE WIDTH >; 200 MS: ±7%; 1 MS<BURST PULSE WIDTH < 200MS: ±10% 0.5MS<BURST PULSE WIDTH <1MS: ±15%;
	BURST PULSE WIDTH < 0.5MS: ± 20%
PEAK-TO-AVERAGE RATIO	0 - 12dB
CCDF	
TEST RANGE	0.1% - 100%
TEST ACCURACY	±3%
THRESHOLD MEASUREMENT RANGE	50mW - 500W
BURST POWER	
POWER RANGE	100mW - 200W
BURST WIDTH	1us - 60ms
MINIMUM TEST FREQUENCY	15Hz
DUTY CYCLE	0.001 - 1
TEST ACCURACY	±6% +0.05W
UNIVERSAL INDEX	
POWER SUPPLY MODE	USB
OPERATING TEMPERATURE	-10℃ - 50℃
STORAGE TEMPERATURE	-20℃ - 70℃
RELATIVE HUMIDITY	0-85% (NO CONDENSATION)
WEIGHT	0.48kg
VOLUME (LENGTH × WIDTH × HEIGHT)	130×124×34mm

ORDERING INFORMATION

STANDARD CONFIGURATION

HOST, LITHIUM BATTERY,AC ADAPTER,CD(UPPER COMPUTER SOFTWARE, INSTRUCTION MANUAL), CONVENIENCE PACK, T-CALIBRATOR, TEST CABLE (1.5M DC TO 6GHZ,N(M) TO N(F),50Ω), ADAPTER (N(M) TO N(M),DC TO 6GHZ,50Ω).

OPTIONAL CONFIGURATION

TPM MOD-TERMINAL RF POWER METER;

DPM MODULE - THROUGH TYPE SPECTRUM POWER METER;

ECAL ELECTRONIC CALIBRATION PARTS.

OPTIONAL ANTENNA

880 MHZ -- 960 MHZ, N(M), 13 DBI, YAGI
1710 MHZ -- 1990 MHZ, N(M), 13 DBI, YAGI
1920 MHZ -- 2170 MHZ, N(M), 13 DBI, YAGI
2400 MHZ -- 2500 MHZ, N(M), 13 DBI, YAGI
890MHZ-960MHZ , 1710MHZ--1990MHZ , N(M), 3DBI, 50Ω, GLUE STICK
1920 MHZ -- 2170 MHZ, N(M), 50 Ω, 3DBI, GLUE STICK
2400 MHZ -- 2483 MHZ, N(M), 50 Ω, 5DBI, GLUE STICK
890MHZ-960MHZ , 1710MHZ-1990MHZ , 50Ω , N(M), 3.5DBI, SUCKER
890MHZ-960MHZ , 1710MHZ-1990MHZ , 50Ω , N(M), 3DBI, SUCKER
2400MHZ-2483MHZ, 50Ω , N(M), 7DBI SUCKER
890MHZ-960MHZ , 50Ω , N(M), 6DBI, GLASS REINFORCED PLASTIC
2400MHZ-2483MHZ, 50Ω , N(M), 10DBI, GLASS REINFORCED PLASTIC