



RF MICROTECH ELECTRONICS
(RF DESIGN & DEVELOPMENT COMPANY)

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Since 1995, we've been researching, designing, and developing innovative ideas. We founded "RF Microtech Electronics" in 2017, and we now make compact, cost-effective, and user-friendly RF measurement instruments and equipment.

Currently, our production and R & D facility is located in Vadodara (Gujarat).

At RFME, we develop a complete line of RF and Microwave devices ranging from DC to 20 GHz for a wide range of applications worldwide. RFME products make use of a wide range of services, including communications, broadcast and CATV, military/aerospace, university and government research labs. Our main goal is to manufacture low-cost RF measurement devices with a frequency range of up to 40GHz.

Variable and fixed signal sources up to 20 GHz, as well as power detectors up to 10 GHz, are among our most recent products. Besides that we also manufacture digital step attenuators, preamplifiers, couplers splitters and many more.

These items are a one-of-a-kind concept for engineers in various electronics and software industries, as well as in college laboratories. These signal sources and power detectors are compact, cost-effective, and meet all quality requirements.

You may find more information about these goods in the accompanying generic datasheet.

In most manufacturing companies, technicians/engineers have difficulty evaluating the items they have created since the testing equipment is too expensive. Thus, we have a solution for them by substituting a modest signal source and power detector for an expensive equipment.

According to the needs of the customer, these signal sources can be created with a fixed frequency as well as can be designed as per customer's required frequency. You can also tell us about your special needs for a custom design product.

For more information reach out to us at:

Website: www.rfme.in
For Sales: sales@rfme.in

OUR OTHER PRODUCTS

BROADBAND SIGNAL SOURCES



DIGITAL STEP ATTENUATORS



PREAMPLIFIERS



RF FILTERS



RF FILTER KIT



COUPLERS, SPLITTERS & COMBINERS



RFTx Signal Sources

Features:

- ◆ Long life battery operation
- ◆ Economical
- ◆ Small & Rigid Design

Description:

Measurement and control of radio frequency (RF) power is a critical consideration when designing a wireless signal source. The RFTx is a wide band signal source which operates in different frequency ranges from 51MHz to 9020MHz. Different frequency ranges are described as per the model numbers in the Table:1.

These signal sources enable testing of the device's RF performance and require no additional support circuitry.

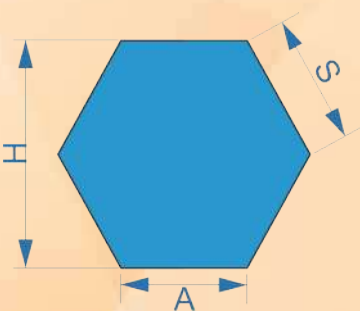
The signal output uses an SMA connector to facilitate the connection to RF test equipment.

Application

- ◆ Scientific equipment manufacturer
- ◆ EMC Test laboratories
- ◆ Microwave system manufacturer
- ◆ Antenna manufacturer
- ◆ Bluetooth devices manufacturer
- ◆ WIFI and WIMAX manufacturer
- ◆ LoRa and Zigbee manufacturer
- ◆ Testing of shielding effectiveness
- ◆ Engineering and technology colleges
- ◆ Medical equipment manufacturer
- ◆ GSM and CDMA mobile towers

Standard Accessories

- ◆ Charger
- ◆ SMA(M) to SMA(M) 50 Ohms cable



Electrical Specifications:

Frequency Range:	As per Table: 1
Output Power:	0 ±3 dBm
Harmonics:	-15dBc
VSWR:	2:1, all Phases
Output Impedance:	50 Ohm
Mode of Operation:	Single/ Sweep
Sweep Time:	1s/2s/5s/10s
Phase Noise:	-102dBc/HZ @ 100KHz
Frequency Drift Rate:	0.8 MHz/°C
Center Frequency Drift:	1 %
Number of Steps:	250((maximum)
Frequency Resolution:	10 MHz Typical
Display :	4 Digit 7 Segment
Operating temperature:	0 °C to 50 °C
Battery Operation :	8 Hour for single charge
Connector:	SMA Female
Power Consumption:	0.3 Watt (Max.)

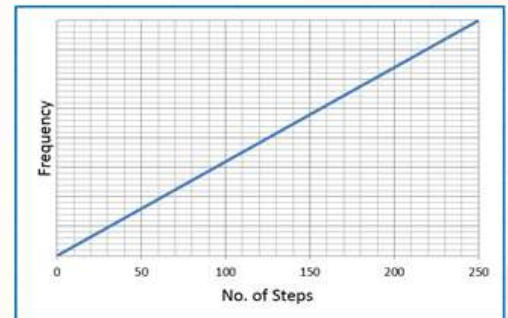
Mechanical Specifications:

Dimension:	Across sides (H) = 115mm
	Side (S) = 66.4mm
Shape:	Hexagonal shape
Weight:	300gm
Size (A x H) :	138.2mm x 115mm

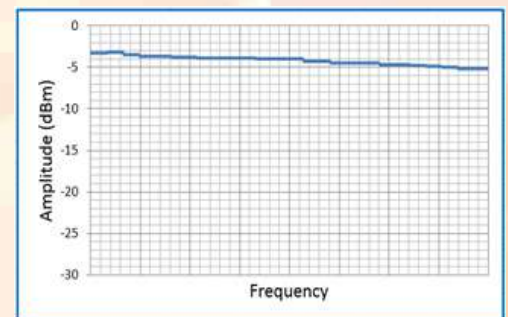
TABLE 1

Variable and Fixed Signal Sources				
Frequency (MHz)		BW (MHz)	Variable Source	Fixed Source
Start	Stop			
51	63	12	RFTxV516-636	RFTxF5705
100	129	29	RFTxV107-127	RFTxF1146
194	255	61	RFTxV197-257	RFTxF2245
330	446	116	RFTxV337-447	RFTxF3886
494	655	161	RFTxV497-657	RFTxF5746
781	920	139	RFTxV787-927	RFTxF8506
802	966	164	RFTxV807-967	RFTxF8846
881	1020	139	RFTxV887-108	RFTxF9506
1010	1280	270	RFTxV108-128	RFTxF1147
2020	2160	140	RFTxV208-218	RFTxF2097
2050	2250	200	RFTxV208-228	RFTxF2157
1930	2310	380	RFTxV198-238	RFTxF2127
2130	2600	470	RFTxV218-268	RFTxF2367
2230	2540	310	RFTxV228-258	RFTxF2387
2410	2870	460	RFTxV248-288	RFTxF2647
2680	3210	530	RFTxV268-328	RFTxF2947
2960	3610	650	RFTxV298-368	RFTxF3287
3270	3720	450	RFTxV328-378	RFTxF3497
3510	4090	580	RFTxV358-408	RFTxF3807
3840	4640	800	RFTxV388-468	RFTxF4247
4270	5220	950	RFTxV428-528	RFTxF4747
4740	5750	1010	RFTxV478-578	RFTxF5247
5220	6490	1270	RFTxV528-648	RFTxF5857
5790	7060	1270	RFTxV578-708	RFTxF6427
6250	7650	1400	RFTxV628-768	RFTxF6957
6600	8330	1730	RFTxV668-838	RFTxF7467
7120	9020	1900	RFTxV718-908	RFTxF8077

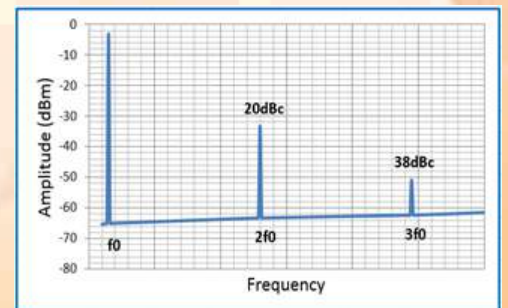
NORMALIZED FREQUENCY STEPS:



NORMALIZED AMPLITUDE VALUE (dBm)



NORMALIZED HARMONIC OUTPUT SPECTRUM



Usually in any manufacturing company technicians/engineers face problems in testing of their products they have made as the equipment needed to evaluate is too much costly. But here we have a solution for them by replacing their costly equipment with the small affordable signal sources and power detectors which will test in seconds and immediately displays its results.

We are continuously into development of higher frequency signal sources and power detectors.

We can also provide support to customers as per their requirements.

RFRx Power Detector

Features:

- ◆ Long life battery operation
- ◆ Economical
- ◆ Small & Rigid Design

Description:

The RFRxV is a wide bandwidth power detector which operates from 1 to 10000 MHz and capable of accurately converting an RF input signal to a corresponding decibel-scaled output. It employs a progressive compression technique over a cascaded amplifier chain where, each stage is occupied with a detector cell. The input dynamic range is typically 50dB(referenced to 50ohms system.) with less than ±3dB error. They are used in various communication test setups for either measurement or controller modes. RFRxV is a portable ,cost effective as well as fulfills all quality standards

Stability over temperature is ±0.5dB

Applications:

- ◆ Scientific equipment manufacturer
- ◆ Power monitoring in radio link signal sources
- ◆ RSSI measurement in base stations, WLANs, WiMAX and radars.
- ◆ EMC Test laboratories
- ◆ Microwave system manufacturer
- ◆ Antenna manufacturer
- ◆ Bluetooth LoRa and Zigbee device manufacturer
- ◆ Testing of shielding effectiveness
- ◆ Engineering and technology colleges
- ◆ Medical equipment manufacturer
- ◆ GSM and CDMA mobile towers
- ◆ RF Signal Sources PA set point control and level monitoring

Standard Accessories

- ◆ Charger
- ◆ SMA(M) to SMA(M) 50 Ohms cable

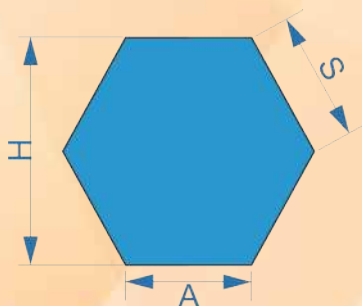


Electrical Specifications:

Frequency Range:	1MHz to 10GHz
Input Power:	+10dBm (Max.)
Operating Range	-50 to 0 dBm
VSWR:	2:1, all Phases
Output Impedance:	50 Ohm
Power Measurement	Peak
Display :	4 Digit 7 Segment
Operating temperature:	0 °C to 50 °C
Battery Operation :	8 Hour for single charge
Connector:	SMA Female or as per user
Power Consumption:	0.3 Watt (Max.)

Mechanical Specifications:

Dimension:	Across Phase (H) = 115mm
	Side (S) = 66.4mm
Shape:	Hexagonal shape
Weight:	300gm
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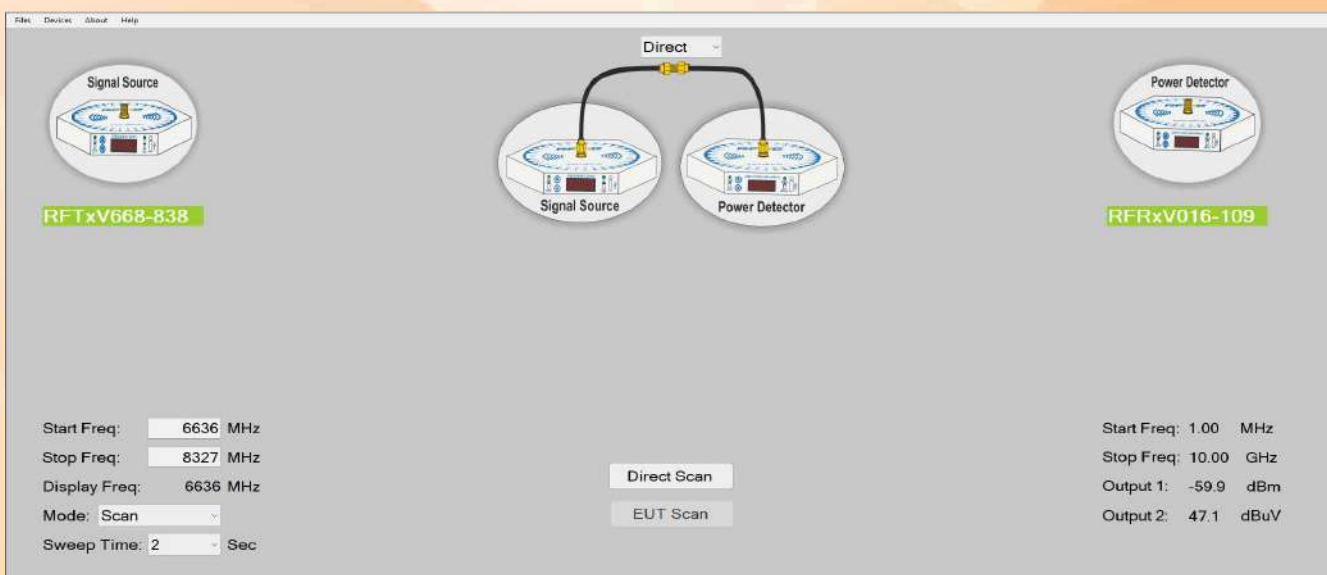
GUI (Graphical User Interface) is a software developed by RFME which can measure and log data with high accuracy that can be stored and used as per requirement. One can simply measure any reading with high accuracy in a few clicks.

The initial idea was to provide a dynamic platform with an extent such as anyone (even with a little knowledge) could operate as well as develop their own devices with the help of accurate RF data with RFME Equipment. Our motive is to develop such a system, which provides reliable and meaningful data to the user who understands the anomalies and flow of RF to convert it into relevant form of Signal Structure.

RFME GUI is designed to expand the capabilities as well as functionalities of the RFME devices with precise and comfortable control loop system. The goal is to develop such a software, which provides an accurate output as well as directly utilized without any external calibration. Manual operation some-times causes human error that can change the final output so to minimize calibration time and such errors; RFME GUI ensures calibrated output just by selecting proper parameters in the software. Connecting RFME devices using USB, it will auto-detect the device and display the related product information. User can get calibrated data by following proper steps.

Note: As per user's requirements GUI software can be customized and modified.

RFME also provides customized software design solutions. There can be as many applications as one can imagine by using customized GUI and RFME Equipments. Our vision is to make people more confident and familiar with various innovations in RF field.





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