

NON-LINEAR JUNCTION DETECTOR

RFD-23



«RFD-23» IS INTENDED FOR SEARCHING OF

such electronic components as:

- electronic fuse of explosive devices
- radio microphones, including those with remote control
- microphone amplifiers
- devices for covert data acquisition in IR
- hidden devices for recording sound

INTRODUCTION

The portable “RFD-23” is designed for search and detection of devices (primarily explosive devices) containing semiconductor components in switched-on and switched-off modes.

It consists of an antenna system, a transmitter and two receivers (2nd and 3rd harmonics).

Receivers are tuned to the double and triple frequency of the transmitter signal.

The transmitter searching signals cause non-linear (semiconductor) elements of an electronic device to generate signals which are the 2nd and 3rd harmonics of the emitted signals. The signals of the harmonic are re-emitted and registered by receivers to generate visible and audible alarms.

A special identification mode allows to the operator to differentiate the signals re-emitted by semiconductor radio-electronic devices from the signals re-emitted by natural (corrosional) semiconductors.

The ratio of the 2nd and 3rd harmonics signals is also useful in eliminating false alarms.

GENERAL SPECIFICATIONS

Power supply	rechargeable battery
Power consumption	no more than 5VA
Alarm indicators	visible (LCD) and audible (head-phones)
Weight in operating condition	less than 3.0 kg
Set weight	less than 7.0 kg
Operating temperature	0 to +40°C
Continuous time of operation	no less than 4 hours

TRANSCEIVER SPECIFICATION

* <i>Emitted signal frequency</i>	820±10MHz
<i>Receiver frequencies</i>	1640±20MHz /2460±30MHz
<i>Emitted signal pulse power</i>	
- in “search high power” mode	150±30 W
- in “search low power” mode	25±5 W
- in “identification” mode	25±5 W
<i>RF pulses repetition frequency</i>	
- in “search” mode	300±10Hz
- in “identification” mode	6000±100Hz
<i>RF pulse duration in any mode</i>	2±0.1µs
<i>Receiver sensitivity, S/N=10 Db</i>	< -115 dBW
<i>Receiver dynamic range</i>	> 25 dB.

Receiver sensitivity is adjusted manually, in five steps of (10±2) dB each.

* The version with emitted signal frequency of 860±10MHz is possible.

COMPLETE SET includes:

Transceiver unit with control and indication display	1	Charger	1
Antenna system (with HF connecting cables)	1	Technical description and operating manual	1
Armrest with rechargeable battery	1	Head-phone	1
Spare rechargeable battery	1	Carrying case	1
Test sample.	1		



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