

Spectrum Compact 24-40/43 GHz v.2

JOSSAP74 / JOSSAP54 datasheet

v.2.0 07.03.2023



Your RF Spectrum Analyzer of Choice For Field measurements:

Center Frequency • Interference Detection • Signal Mask
Channel Power • Adjacent Channel Power • Signal Bandwidth

www.spectrumcompact.com

Measurement Setup:

- **Frequency:** Center/Start/Stop
- **Span:** Full Span, Min Span, Selected Span
- **Resolution Bandwidth, Video Bandwidth (RBW, VBW)**
- **Attenuation 0 dB** (non-selectable)
- **Low noise amplifier (LNA) ON** (non-switchable)
- **Units:** dBuV/m (only for marker), dBm, dBmV, dBmA, dBuW, dBuV, dBuA
- **Measurement Scale**
- **Detector:** Minimum, Average, Maximum

Functions:

- **Power in Band**
- **Path Calculator**
- **Signal ID**
- **Full Screen**
- **Profiles**
- **Marker:** Peak search, set marker to center
- **Sweep:** Continuous, Manual Trigger
- **Zero-Span**
- **Trace:** Normal, Max hold, # of Averages
Cumulative, Min/Max Hold

Data logging functions:

- Proprietary format
- Saves actual measurement data
- Save single sweep
- Record multiple consecutive sweeps
- Record Time Plot

Frequency

Frequency Range	24 000 – 40 000/43 000 MHz
Frequency Resolution	100 kHz
Frequency Reference	
Aging	±1.0 ppm/1 year
Accuracy ($t: 25\text{ °C} \pm 2.5\text{ °C}$) + aging	±2.5 ppm
Frequency span	5 MHz to full range
Resolution Bandwidth (RBW)	100/300/1000 kHz
Video Bandwidth (VBW)	1/3/10/30/100 kHz

Sweep time	
<i>RBW: 100 kHz; Span: 5 MHz</i>	<= 60 ms
<i>RBW: 1 MHz; Span: 50 MHz</i>	<= 66 ms

SSB Phase Noise <i>t = 20 °C to 30 °C; F_c = 30 GHz</i>	
<i>Carrier Offset: 200 kHz</i>	< -75 dBc/Hz
<i>Carrier Offset: 1 MHz</i>	< -105 dBc/Hz

Level

Measurement Range	DANL to -40 dBm
Dynamic Range	>= 65 dB
Second Harmonics Distortion <i>LNA: ON (non-switchable), Input Level: -50 dBm</i>	< -50 dBc typ.
Third-Order Intercept (TOI) <i>LNA: ON (non-switchable)</i>	-10 dBm typ.

Input related spurs	Signal ID ON	Signal ID OFF
	<i>LNA: ON (non-switchable), Input level: -50 dBm</i>	< -50 dBc, typ.

Amplitude Accuracy	
<i>Detector: AVG ; Input: -50 dBm CW ; RBW, VBW: AUTO</i>	
20 °C to 30 °C (68 °F to 86 °F)	± 1 dB
-15 °C to 55 °C (5 °F to 131 °F)	± 3 dB

Maximum Safe Input <i>Level DC voltage: 0 V, LNA: ON (non-switchable), ATT 0 dBm (non-switchable)</i>	0 dBm
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Typical Actual DANL	
<i>Detector: AVG Termination 50 Ω Trace: 16AVG, 20 °C to 30 °C</i>	
<i>RBW: 100 kHz; VBW: 3 kHz</i>	< -101 dBm
<i>RBW: 300 kHz; VBW: 10 kHz</i>	< -100 dBm
<i>RBW: 1 MHz; VBW: 100kHz</i>	< -100 dBm

Typical DANL Normalized to 1 Hz	
<i>20 °C to 30 °C, ATT = 0 dB, Termination 50 Ω Detector: AVG, Trace: 16AVG</i>	
	< -151 dBm/Hz, typ.

General Data

Display <i>Resolution</i> <i>Size</i> <i>Color arrangement</i>	Touchscreen 480x272 (RGB) 4.3 inch RGB-stripe
Built-in memory	8 GB
Data and Power Interface <i>Input voltage</i>	USB Type-C 5 VDC, 3 A
Battery <i>Battery life</i> <i>Battery charging time</i>	Li-ion, 2x 3500 mAh up to 3 h 2 h, typical
Operating temperature	-15 °C to 55 °C (5 °F to 131 °F)
Dimensions	135 x 83 x 34 mm 5.31 x 3.27 x 1.34 inch
Weight	0.57 kg / 20.11 oz
Ingress Protection	IP54

RF Input

Impedance	50 Ω (nom.)
Connector	2.92 mm F
VSWR	< 1.9

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SAF Spectrum Compact 24-40/43 GHz v.2 datasheet

Product features may vary between different models and configurations. They are subject to change without prior notice.

For more detailed information about SAF products visit www.saftehnika.com or contact your SAF representative info@saftehnika.com.
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