Spectrum Compact **6-20 GHz v.2**

J0SSAP52 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**
- **Low noise amplifier (LNA) ON/OFF**
- **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	5 925 – 20 000 MHz
Frequency Resolution	30 kHz
Frequency Reference	
Aging	±1.0 ppm/1 year
Accuracy *(t: 25 °C ± 2.5 °C)* **+ aging**	±2.5 ppm
Frequency span	1.5 MHz to full range
Resolution Bandwidth (RBW)	30/100/300/1000 kHz
Video Bandwidth (VBW)	1/3/10/30/100 kHz

Sweep time	
RBW: 30 kHz; Span: 1.5 MHz	<= 161 ms
RBW: 1 MHz; Span: 50 MHz	<= 75 ms

SSB Phase Noise *t = 20 °C to 30 °C; F_c = 14 GHz*	
Carrier Offset: 100 kHz	< -80 dBc/Hz
Carrier Offset: 1 MHz	< -110 dBc/Hz

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

Level

Measurement Range	DANL to +20 dBm
Dynamic Range	>= 70 dB
Second Harmonics Distortion *ATT: 0 dB, LNA: ON,* *Input Level: -50 dBm*	< -40 dBc typ.
Third-Order Intercept (TOI) *ATT: 0 dB, LNA: ON*	-10 dBm typ.

Input related spurs	**Signal ID ON**	**Signal ID OFF**
ATT: 0 dB, LNA: ON, *Input level: -50 dBm*	< -60 dBc, typ.	< -12 dBc, typ.

Amplitude Accuracy *ATT: 0 dB ; Detector: AVG ; Input: -50 dBm CW ;* *RBW, VBW: AUTO*	
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 *Level DC voltage: 0 V*	**LNA ON**	**LNA OFF**
ATT: 0 dB	+10 dBm	+20 dBm
ATT: 30 dB	+25 dBm	+25 dBm

Typical Actual DANL *ATT: 0 dB, Detector: AVG* *Termination 50 Ω* *Trace: 16AVG, 20 °C to 30 °C*	**LNA ON**	**LNA OFF**
RBW: 30 kHz; VBW: 1 kHz	< -116 dBm	< -94 dBm
RBW: 100 kHz; VBW: 3 kHz	< -110 dBm	< -89 dBm
RBW: 300 kHz; VBW: 10 kHz	< -107 dBm	< -85 dBm
RBW: 1 MHz; VBW: 100kHz	< -98 dBm	< -76 dBm

Typical DANL **Normalized to 1 Hz**	**LNA ON**	**LNA OFF**
20 °C to 30 °C, ATT = 0 dB, *Termination 50 Ω* *Detector: AVG, Trace: 16AVG*	< -159 dBm/Hz, typ.	< -137 dBm/Hz, typ.

General Data

Display *Resolution* *Size* *Color arrangement*	Touchscreen 480x272 (RGB) 4.3 inch RGB-stripe
Built-in memory	8 GB
Data and Power Interface *Input voltage*	USB Type-C 5 VDC, 3 A
Battery *Battery life* *Battery charging time*	Li-ion, 2x 3500 mAh up to 4 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	< 2.0
Input attenuator	0, 6, 10, 16, 20, 26, 30 dB

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