



# SG1001

## WIDEBAND SIGNAL GENERATOR



### DESCRIPTION

SG1001 is a USB-controlled wideband signal generator for portable applications. It incorporates an internal 10MHz TCXO. The frequency accuracy is  $\pm 1\text{ppm}$ .

The output power is controlled by a digital attenuator in 0.5dB steps with 30dB attenuation range.

Device consumes 1W at a single 7.5Vdc input.

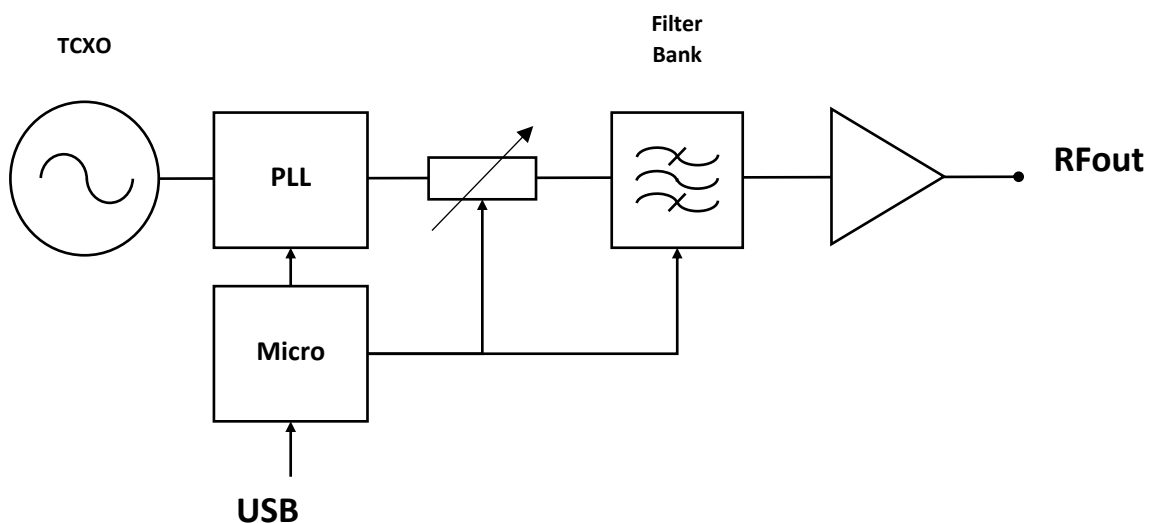
### FEATURES

- Wideband Frequency Generation
- Frequency and Amplitude Control
- Low Phase Noise
- Low power consumption

### SPECS AT A GLANCE

- 10MHz to 20GHz output
- 20dBm to +10dBm output power
- Low Phase Noise
- 105dBc/Hz @ 10kHz offset at 9GHz
- 96dBc/Hz @ 10kHz offset at 20GHz
- - 20us switching speed

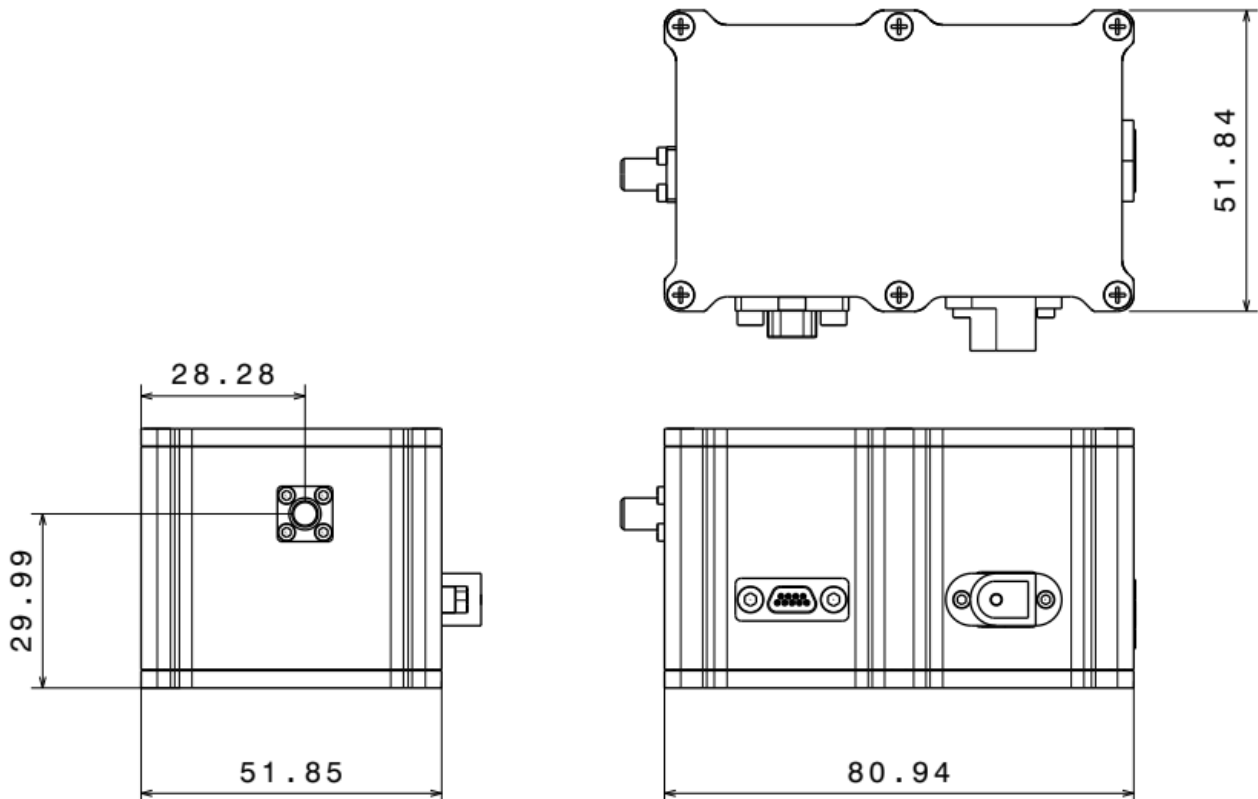
### BLOCK DIAGRAM



## SPECIFICATIONS

| Parameter                   | Limit   |
|-----------------------------|---|
| Output Frequency Range      | 10 MHz to 20 GHz                                      |
| Frequency Steps             | 1kHz  |
| Output Level                | -20 to +10dBm   |
| Level Control               | 0.5dB steps   |
| Output Phase Noise at 3GHz  | -113dBc/Hz @ 10kHz offset<br>-125dBc/Hz @ 1MHz offset |
| Output Phase Noise at 9GHz  | -105dBc/Hz @ 10kHz offset<br>-120dBc/Hz @ 1MHz offset |
| Output Phase Noise at 20GHz | -96dBc/Hz @ 10kHz offset<br>-112dBc/Hz @ 1MHz offset  |
| DC Power Consumption        | 1W typ  |
| Operational Temp Range      | 5°C to 65°C   |
| Storage Temp Range          | 0°C to 125°C  |
| DC Input Voltage – 7.5V     | 10V max   |
| DC Input Current            | 0.5A max  |

## MECHANICAL



## Designed and Manufactured in TÜRKİYE

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### **IMPORTANT**

- Specifications subject to change without further notice.
- Data given in this document provides its typical performance. Actual device performance is guaranteed by specifications called out by “customer-specific” part number and the associated acceptance test procedure.