

Agile VHF/UHF Filter R&S FT6510

The R&S FT6510 is an agile filter for the VHF/UHF frequency band. It allows a number of transceivers to be operated successfully in a co-site environment. The VHF/UHF filter provides four poles of RF selectivity to reduce broadband noise in transmit mode and to reduce interfering signals at the transceiver's RF input in receive mode.





Specifications

Frequency range	118.000 MHz to 173.975 MHz 225.000 MHz to 399.975 MHz
Frequency steps	100 kHz
Selectivity	for receive and transmit mode
Under full environmental and	
service conditions	≥12 dB at F ₀ ±3% or ±4 MHz whichever is less
Under service conditions	≥44 dB at F ₀ ±6% or ±8 MHz whichever is less
Under full environmental conditions	\geq 40 dB at F ₀ \pm 6% or \pm 8 MHz whichever is less
Tuning time	≤40 µs after reception of last control bit
Changeover time	
Receive/transmit	≤500 µs
Transmit/receive	≤500 µs
Current drain	28 V DC (MIL-STD-704A, cat. B)
Receive	≤0.78 A
Transmit	≤7.5 A
Standby	≤0.05 A
Receive characteristics	
Noise figure	≤9 dB
Insertion gain	0 dB to 5 dB
Spurious responses	
$\Delta f \leq \pm 100 \text{ kHz}$	≤-90 dBm
Δf ≤±1 MHz	≤-105 dBm
∆f ≤±2 MHz	≤-120 dBm
Input protection	5 W without any damage

Certified Environmental System		
ISO 14001		
REG. NO 1954		



$eq:total_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_continuous_cont$	\leq 5% + exciter distortion \leq 10% + exciter distortion \leq −142 dBm (1 Hz), \leq −145 dBm (1 Hz) (typical) at $F_0 \geq$ ±6% or \geq ±8 MHz, whichever is less -66 dBc (2nd to 7th harmonic) \geq 80 dBc \geq 85 dBc \geq 120 dBc \geq 150 dBc 24 V to 30 V DC 10 W + 1.5 dB 15 W + 1.5 dB
Environmental conditions Operating temperature range ²⁾ Storage temperature range ²⁾ Vibration EMC	-40°C to +55°C -57°C to +85°C MIL-STD-810E, Method No. 516.4 Proc. J MIL-STD-461D, cat. Air Force aircraft
Cooling Convection Finish	transmit:receive \leq (1 min/5 min) at T \leq 35°C transmit:receive \leq (0.5 min/5 min) at T = 55°C FED-STD-595 color No. 37038 (lusterless black)
Dimensions (without connectors) (W x H x D) Weight	127 mm x 181 mm x 263 mm ≤7.0 kg

- 1) In accordance with MIL-STD-416B except for the harmonics specified below.
- In accordance with MIL-HDBK-5400, class 1B.

Ordering information

Agile VHF/UHF Filter R&S FT6510 6107.0005.03

