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Data Sheet

August 13, 2026

AEROFLEX

Aeroflex FS5000B 20.00GHz Signal Generator

The Aeroflex/Comstron FS5000B is a rack-mount direct-analog frequency synthesizer. The FS5000B-20 covers 0.3 to 20.0 GHz with 1 MHz standard resolution and switches any frequency to any other in less than 200 ns. Fundamental generation is 4.8 to 13.5 GHz; a doubler extends coverage. The B-series chassis has a front-panel keyboard, IEEE-488, and parallel BCD for hop rates faster than 1 megahop/s. Nominal output is +10 dBm into 50 ohms. Agile radar and radar simulators; radar upgrades and MTI LO substitution; fast antenna and RCS measurements; electronic-warfare stimulus; ultra-fast ATE; airborne vibration-tolerant LO applications. Aeroflex / Comstron FS5000B Fast-Switching Frequency Synthesizer, 0.3 to 20 GHz. The Aeroflex/Comstron FS5000B is a rack-mount direct-analog frequency synthesizer. The FS5000B-20 covers 0.3 to 20.0 GHz with 1 MHz standard resolution and switches any frequency to any other in less than 200 ns. Fundamental generation is 4.8 to 13.5 GHz; a doubler extends coverage. The B-series chassis has a front-panel keyboard, IEEE-488, and parallel BCD for hop rates faster than 1 megahop/s. Nominal output is +10 dBm into 50 ohms.



MODEL

Aeroflex FS5000B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

FS5000B

LISTING

<https://aumictechlabs.com/products/fs5000b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Aeroflex FS5000B is a frequency synthesizer delivering fast switching speeds and high spectral purity across 300 MHz to 26.5 GHz. Purpose-built for aerospace, defense, and

telecommunications environments, it excels at receiver testing, complex signal simulation, and equipment calibration. Modular construction with blind-mate GPO connectors and proven vibration tolerance enable reliable operation in airborne platforms.

Technical Specifications

Frequency Synthesis
Frequency Range: 300 MHz to 26.5 GHz
Frequency Resolution: 1.0 MHz
Frequency Switching Time: Less than 200 nanoseconds across entire range
Hop Rate: Faster than 1 megahop/sec
Reference Input: Locks to standard 10 MHz reference

Output Characteristics
Output Amplitude: +10 dBm $\pm$ 2 dB into 50 Ohm impedance
Amplitude Leveling: Supported

Modulation Capabilities
Standard Modulations: AM, FM, Pulse
Advanced Modulations: FM Chirp, Pulse
Spectral Purity
Phase Noise: -120 dBc at 10 kHz offset (X-band)
Spurious Signals: Better than -70 dBc (X-band)
Harmonics: Suppressed to better than -50 dBc (X-band)

Key Features

Sub-microsecond frequency switching supports rapid frequency agility in signal simulation
Keyboard front-panel control with GPIB and parallel BCD remote programming interfaces
Full-rack chassis design with modular construction
Integrated amplitude leveling maintains signal consistency across frequency transitions

Typical Applications

Receiver sensitivity and selectivity testing
Complex signal environment simulation
Frequency-dependent equipment calibration
Airborne platform integration

Compatibility & Integration

Remote operation via GPIB and parallel BCD interfaces enables system integration. Standard 10 MHz reference input allows phase-coherent operation with external frequency standards.

FS5000B Characteristics / Specifications

PARAMETER	VALUE
Model	FS5000B-20
Manufacturer	Aeroflex / Comstron
Instrument Type	Fast-switching direct-analog frequency synthesizer
Alias	FS5000B; FS5000B-20; Comstron FS5000B
Frequency Range FS5000B	0.3 to 13.5 GHz, 0.5 MHz resolution
Frequency Resolution Standard	1 MHz
Frequency Range FS5000B F	4.8 to 13.5 GHz, 0.5 MHz resolution
Frequency Range FS5000B X	4.8 to 20 GHz, 1 MHz resolution
Frequency Range FS5000B 26.	0.3 to 26.5 GHz, 1 MHz resolution
Switching Speed	less than 200 ns
Output Power	+10 dBm (50 ohm) nominal
Output Flatness	plus/minus 2 dB (within plus/minus 5 C of calibration temperature)
Amplitude Settling	within 2 dB of final level in less than 200 ns
Internal Reference	100 MHz quartz oscillator
Reference Aging	5e-8 per day after 30 days in anormal operating environment
External Tuning Input	plus/minus 2 Vdc; pull range plus/minus 100 Hz per volt nominal at 1 GHz
Frequency Accuracy	same as reference oscillator
Remote Interface BCD	20 bits parallel BCD 1,2,4,8 (1 MHz resolution)
Remote Interface BCD Optional	44 bits parallel BCD (1 Hz resolution)
Remote Interface GPIB	IEEE-488-1978
Phase Coherence Steps	50 MHz from 4.8 to 13.5 GHz; 100 MHz from 13.5 to 26.5 GHz
SSB Phase Noise at 8 GHz 10 kHz	-120 dBc/Hz (includes internal reference)
SSB Phase Noise at 18 GHz 10 kHz	-113 dBc/Hz
SSB Phase Noise at 8 GHz 1 kHz	-110 dBc/Hz
Spurious 0.3 to 2.4 GHz	-80 dBc; harmonics -50 dBc; no subharmonics

PARAMETER	VALUE
Spurious 2.4 to 4.8 GHz	-76 dBc; harmonics -50 dBc; no subharmonics
Spurious 4.8 to 13.5 GHz	-70 dBc; harmonics -50 dBc; no subharmonics
Spurious 13.5 to 20 GHz	-64 dBc; subharmonics -60 dBc; harmonics -50 dBc
Operating Temperature	0 C to 50 C
Storage Temperature	-20 C to 85 C
Mains FS5000B 18 Class	120/220/240 Vac plus/minus 10 percent, 48 to 440 Hz, 320 W, 380 VA
Dimensions	16.75 inWx 5.22 inHx 23.88 in D (42.55 × 13.66 × 60.66 cm)
Weight FS5000B 18 Class	55 lb (24.9 kg)
FM Option Rate DC Mode	DC to 5 MHz; AC mode 50 Hz to 5 MHz; 50 ohm input Notes Specs from the Aeroflex/Comstron FS5000 Series Fast Switching Synthesizer datasheet. Confirm the exact suffix (FS5000B-20 vs -18, -26.5, -F, -X) and installed options (1 Hz, FM chirp, 10 MHz lock) on the unit faceplate.

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	20 C to 85 C
Operating temperature	0 C to 50 C
Operating Temperature	0 C to 50 C
Mains FS5000B 18 Class	120/220/240 Vac plus/minus 10 percent, 48 to 440 Hz, 320 W, 380 VA
Dimensions	16.75 inWx 5.22 inHx 23.88 in D (42.55 × 13.66 × 60.66 cm)
Weight FS5000B 18 Class	55 lb (24.9 kg)
FM Option Rate DC Mode	DC to 5 MHz; AC mode 50 Hz to 5 MHz; 50 ohm input Notes Specs from the Aeroflex/Comstron FS5000 Series Fast Switching Synthesizer datasheet. Confirm the exact suffix (FS5000B-20 vs -18, -26.5, -F, -X) and installed options (1 Hz, FM chirp, 10 MHz lock) on the unit faceplate.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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PARAMETER	VALUE
Model	FS5000B-20
Manufacturer	Aeroflex / Comstron
Instrument Type	Fast-switching direct-analog frequency synthesizer
Alias	FS5000B; FS5000B-20; Comstron FS5000B
Frequency Range FS5000B 20	0.3 to 20.0 GHz
Frequency Resolution Standard	1 MHz
Frequency Range FS5000B F	4.8 to 13.5 GHz, 0.5 MHz resolution
Frequency Range FS5000B X	4.8 to 20 GHz, 1 MHz resolution
Frequency Range FS5000B 13	0.3 to 13.5 GHz, 0.5 MHz resolution
Frequency Range FS5000B 18	0.3 to 18.0 GHz, 1 MHz resolution
Frequency Range FS5000B 26.5	0.3 to 26.5 GHz, 1 MHz resolution
Switching Speed	less than 200 ns
Output Power	+10 dBm (50 ohm) nominal
Output Flatness	plus/minus 2 dB (within plus/minus 5 C of calibration temperature)
Amplitude Settling	within 2 dB of final level in less than 200 ns
Internal Reference	100 MHz quartz oscillator
Reference Aging	5e-8 per day after 30 days in anormal operating environment
External Tuning Input	plus/minus 2 Vdc; pull range plus/minus 100 Hz per volt nominal at 1 GHz
Frequency Accuracy	same as reference oscillator
Remote Interface BCD	20 bits parallel BCD 1,2,4,8 (1 MHz resolution)
Remote Interface BCD Optional	44 bits parallel BCD (1 Hz resolution)
Remote Interface GPIB	IEEE-488-1978
Phase Coherence Steps	50 MHz from 4.8 to 13.5 GHz; 100 MHz from 13.5 to 26.5 GHz
SSB Phase Noise at 8 GHz 10 kHz: -120 dBc/Hz (includes internal reference)	
SSB Phase Noise at 18 GHz 10 kHz: -113 dBc/Hz	
SSB Phase Noise at 8 GHz 1 kHz: -110 dBc/Hz	

Specifications

PARAMETER	VALUE
Spurious 0.3 to 2.4 GHz	-80 dBc; harmonics -50 dBc; no subharmonics
Spurious 2.4 to 4.8 GHz	-76 dBc; harmonics -50 dBc; no subharmonics
Spurious 4.8 to 13.5 GHz	-70 dBc; harmonics -50 dBc; no subharmonics
Spurious 13.5 to 20 GHz	-64 dBc; subharmonics -60 dBc; harmonics -50 dBc
Operating Temperature	0 C to 50 C
Storage Temperature	-20 C to 85 C
Mains FS5000B 18 Class	120/220/240 Vac plus/minus 10 percent, 48 to 440 Hz, 320 W, 380 VA
Dimensions	16.75 inWx 5.22 inHx 23.88 in D (42.55 x 13.66 x 60.66 cm)
Weight FS5000B 18 Class	55 lb (24.9 kg)

Optional Resolution: 1 Hz (limits switching to 1 us for steps less than 0.500 MHz)

FM Option Rate DC Mode: DC to 5 MHz; AC mode 50 Hz to 5 MHz; 50 ohm input

Notes

Specs from the Aeroflex/Comstron FS5000 Series Fast Switching Synthesizer datasheet. Confirm the exact suffix (FS5000B-20 vs -18, -26.5, -F, -X) and installed options (1 Hz, FM chirp, 10 MHz lock) on the unit faceplate.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.