

Table 1-1. Specifications for 86260A Installed in 8620A

SPECIFICATIONS

FREQUENCY¹

Frequency Range:

Calibrated: 12.4 to 18.0 GHz

Frequency Accuracy:²

(At 25 ° C; FM switch in PL or FM position)

CW Mode: ³ ±50 MHz

All Sweep Modes (Sweep Time >0.1 sec): ±70 MHz

Frequency Stability:

Temperature: ±3.6 to 5.4 MHz/° C (300 ppm/° C)

10% Line Voltage Change: ±180 kHz

10 dB Power Level Change: ±6 MHz

Residual FM in 10 kHz Bandwidth:²

(FM-NORM-PL switch in NORM position)

CW Mode: <25 kHz peak

POWER OUTPUT¹

Power Level:²

(For calibrated frequency range, at 25 ° C)

Maximum Leveled Power: > +7 dBm (5 mW)

Power Variation:

Unleveled: < ±4.0 dB

Crystal Detector Leveled (External):⁴ <±0.1 dB

Power Meter Leveled (External):⁵ < ±0.1 dB

Spurious Signals:

(Below fundamental at +7 dBm power output)

Harmonics: > 25 dB

Nonharmonics: >50 dB

Residual AM:

(AM noise in 100 kHz bandwidth below fundamental at maximum power output)

Residual AM: >50 dB

Source SWR:

Unleveled: < 2.0

Output Impedance of 86260A RF OUTPUT connector: 50 ohms nominal.

MODULATION¹

External FM:

(FM-NORM-PL switch in FM position)

Sensitivity: ≈ -20 MHz/V⁶

(FM-NORM-PL switch in PL position)

Sensitivity: ≈ -6 MHz/V

Maximum Deviation for Modulation Frequencies:

DC to 200 Hz: ±7 MHz

DC to 200 kHz: ±5 MHz

Internal AM:

(Below maximum leveled power)

1 kHz squarewave ON/OFF Ratio: > 25 dB

External AM:²

(At 3 dB below maximum power output)

Sensitivity to -10V input: > 25 dB

¹ All specifications are at 0 to 55 degrees C except where noted and at RF output jack. Allow 30 minutes warmup time.

² See also the Supplemental Characteristics, Table 1-2.

³ Approach desired frequency from low-frequency end of band.

⁴ Excluding coupler and detector variation.

⁵ Use HP Model 431B, 431C, and 432A power meters. Sweep durations > 10 seconds.

⁶ A positive input voltage decreases frequency.

Table 1-2. Supplemental Performance Characteristics for 86260A Installed in 8620A (1 of 2)

SUPPLEMENTAL PERFORMANCE CHARACTERISTICS¹**FREQUENCY****Frequency Range:**Usable: 12.0 to 18.0 GHz²**Frequency Accuracy:**

(FM-NORM-PL switch in FM or NORM position)

START-STOP END POINTS:Sweep Time 0.01 to 0.1 sec: $< \pm 168$ MHz
or $< \pm 56$ MHz $\pm 2\%$ of sweep width**Marker:**Sweep Time > 0.1 sec: $< \pm 112$ MHz
Sweep Time 0.01 to 0.1 sec: $< \pm 168$ MHz
or $< \pm 56$ MHz $\pm 2\%$ of sweep width **ΔF CENTER FREQUENCY:**MANUAL Sweep: $< \text{CW Frequency} \pm 1$ MHz
 $\pm 2\%$ of sweep widthAUTO Sweep (Sweep Time 0.01 to 0.1 sec):
 $< \text{CW Frequency} \pm 1$ MHz $\pm 4\%$ of sweep
width **ΔF Sweep Width:**MANUAL Sweep: $< \pm 1$ MHz $+3\%$ -10% of
sweep width.AUTO Sweep (Sweep time > 0.1 sec):
 $< \pm 1$ MHz $+1\%$ -12% of sweep widthAUTO Sweep (Sweep time 0.01 to 0.1 sec):
 $< \pm 1$ MHz $+3\%$ -17% of sweep width**CW VERNIER:**CW Vernier Frequency: $< \pm 2$ MHz $+3\%$
 -10% of scale setting**CW REMOTE PROGRAMMING:**CW Frequency: $< \pm 25$ MHz**Frequency Linearity:**(Correlation between frequency and SWEEP
OUT voltage)Sweep Time 0.1 sec: $> \pm 112$ MHzSweep Time 0.01 to 0.1 sec: $> \pm 168$ MHz or
 $< \pm 56$ MHz $\pm 2\%$ of sweep width**Residual FM in 10 kHz BANDWIDTH:**(FM-NORM-PL switch in FM position)
MANUAL sweep mode: < 100 kHz**Residual FM in 10 kHz Bandwidth:**

(FM-NORM-PL switch in NORM position)

All MANUAL or AUTO sweep modes: < 100
kHz peak**POWER OUTPUT****Power Level:**Stability with temperature change: < -0.1
dB/°CDynamic range of 86260A POWER LEVEL control
(while maintaining 60-40 symmetry of
internal 1 kHz square wave)Leveled: > 20 dBUnleveled: > 30 dB**Source SWR:****Unleveled:** < 2.0 Output Impedance of 86260A RF OUTPUT con-
nector: 50 ohms nominal¹The values in this table are not specifications but are typical performance characteristics for information to the user.²Some YIG start-up problems may occur below 12.4 GHz.

Table 1-2. Supplemental Performance Characteristics for 86260A Installed in 8620A (2 of 2)

SUPPLEMENTAL PERFORMANCE CHARACTERISTICS¹

MODULATION

External FM:

(FM-NORM-PL switch in FM position)
Sensitivity: -20 MHz/V
Rate: DC to 2 MHz at ± 2 MHz deviation

Internal AM:

(Below maximum leveled power)
RF Blanking ON/OFF Ratio: > 25 dB

External AM:

Frequency Response: (50% modulation)
(With RF signal down 6 dB from maximum power output)
Unleveled: DC to 750 kHz
Leveled: DC to 500 kHz

GENERAL

Oscillator Type: Fundamental

Net Weight: 7 lbs., 8 oz. (3,4 kg)

Dimensions: With 8620A/B overall:
5-1/4 inches (133,4 mm) high, 11 inches
(297,4 mm) deep, 16-3/4 inches (425,5 mm) wide

Options:

Option 001: Internal Leveling
Option 004: Rear Panel RF output
Option 005: APC-7 RF Output connector
Option 006: High power output

¹ The values in this table are not specifications but are typical performance characteristics for information to the user.