



# 83596B RF Plug-in for the Agilent 8350B Sweep Oscillator (Discontinued - Support Information Only)

## Data Sheet

### Frequency Characteristics

**Range** Band 1: 2.4 to 7 GHz

Band 2: 7 to 14 GHz

Band 3: 14 to 26.5 GHz

Band 4: 26.5 to 40 GHz

Full Band: 2.4 to 40 GHz

**Accuracy** CW Mode Band 0:  $\pm 5$  MHz

Band 1:  $\pm 5$  MHz

Band 2:  $\pm 10$  MHz

Band 3:  $\pm 20$  MHz

Band 4:  $\pm 25$  MHz

All Sweep Modes Band 0:  $\pm 15$  MHz

Band 1:  $\pm 20$  MHz

Band 2:  $\pm 25$  MHz

Band 3:  $\pm 50$  MHz

Band 4:  $\pm 65$  MHz

Full Band:  $\pm 75$  MHz

Frequency Markers Band 0:  $\pm 15$  MHz,  $\pm 0.5\%$  of sweep width

Band 1:  $\pm 20$  MHz,  $\pm 0.5\%$  of sweep width

Band 2:  $\pm 25$  MHz,  $\pm 0.5\%$  of sweep width

Band 3:  $\pm 50$  MHz,  $\pm 0.5\%$  of sweep width

Band 4:  $\pm 65$  MHz,  $\pm 0.5\%$  of sweep width

Full Band:  $\pm 75$  MHz,  $\pm 0.5\%$  of sweep width

**Stability** With Temperature Band 0:  $\pm 200$  kHz/ $^{\circ}$ C, typical

Band 1:  $\pm 200$  kHz/ $^{\circ}$ C, typical

Band 2:  $\pm 400$  kHz/ $^{\circ}$ C, typical

Band 3:  $\pm 800$  kHz/ $^{\circ}$ C, typical

Band 4:  $\pm 1.6$  MHz/ $^{\circ}$ C, typical

With 10 dB Power Change Band 0 to 2:  $\pm 100$  kHz

Band 3:  $\pm 200$  kHz

Band 4:  $\pm 250$  kHz

With 3:1 Load SWR Band 0 to 3:  $\pm 100$  kHz

Band 4:  $\pm 200$  kHz

### Output Characteristics

**Maximum Leveled Power** Normal: Band 0: 10 dBm

Band 1: 10 dBm (15 dBm high-power mode)

Band 2: 10 dBm (15 dBm high-power mode)

Band 3: 10 dBm (15 dBm high-power mode) 5 dBm  $> 20$  GHz



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Band 4: 3 dBm; 0 dBm >40 GHz

Option 002 (60 dB step atten) Band 0: 10 dBm

Band 1: 8.5 dBm (13 dBm high-power mode)

Band 2: 8.5 dBm (13 dBm high-power mode)

Band 3: 8.5 dBm (13 dBm high-power mode)

Band 4: 3 dBm

Power Level Accuracy: Band 0:  $\pm 1.5$  dB

Band 1:  $\pm 1.3$  dB

Band 2:  $\pm 1.3$  dB

Band 3:  $\pm 1.4$  dB

Band 4:  $\pm 2.0$  dB

Full Band:  $\pm 2.0$  dB

**Spurious Signals:** Harmonics and Subharmonics Band 0:  $< -25$  dBc ( $< -50$  dBc  $> 1.5$  GHz)

Band 1:  $< -45$  dBc

Band 2:  $< -45$  dBc

Band 3:  $< -40$  dBc

Band 4:  $< -40$  dBc ( $< -35$  dBc  $> 40$  GHz)

**Minimum Settable Power:** -12 dBm (-72 dBm with Option 002)

**Power Sweep:**  $> 12$  dB (22 dB  $< 20$  GHz) Option 002:  $> 9$  dB (20.5 dB  $< 20$  GHz)

#### Modulation Characteristics

**External AM** Frequency Response: 100 kHz, typical Maximum Input: 15 V Range of Amplitude Control: 15 dB, typical Sensitivity: 1 dB/V, typical Input Impedance: @ 25 kohms

**External FM Maximum Deviations for Modulation Frequencies** DC to 100 Hz:  $\pm 75$  MHz 100 Hz to 1 MHz:  $\pm 7$  MHz 1 MHz to 2 MHz:  $\pm 5$  MHz 2 to 10 MHz:  $\pm 1$  MHz

**Sensitivity** (switch selectable) FM Mode: -20 MHz/V, typical Phase Lock Mode: -6 MHz/V, typical Input Impedance: @ 2 kohms

#### General Specifications

**Minimum Sweep Time:** 30 ms (single band) 75 ms ( $< 20$  GHz sweep width) 150 ms ( $> 20$  GHz sweep width)

**Auxiliary Output** Rear Panel: 2.3 to 7 GHz Fundamental Oscillator Output: 0 dBm, nominally

**Frequency Reference Output** 0.5 V/Hz (0.01 to 38 GHz) 0.25 V/GHz (full span)  $\pm 25$  mV ( $< 2.4$  GHz)  $\pm 100$  mV ( $> 2.4$  GHz)

**RF Output Connector:** 2.4 mm, male

**Net Weight:** 6.8 kg (16 lb)

**Shipping Weight:** 11.8 kg (26 lb)



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