



# 83592B RF Plug-in for the Agilent 8350B, 10 MHz to 20 GHz, +13 dB (Discontinued - Support Information Only)

## Data Sheet

### Frequency Characteristics:

**Range** Band 0: 0.01 to 2.4 GHz

Band 1: 2.4 to 7 GHz

Band 2: 7 to 13.5 GHz

Band 3: 13.5 to 20 GHz

Full Band: 0.01 to 20 GHz

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

Band 1:  $\pm 5$  MHz

Band 2:  $\pm 10$  MHz

Band 3:  $\pm 10$  MHz

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

Band 1:  $\pm 20$  MHz

Band 2:  $\pm 25$  MHz

Band 3:  $\pm 30$  MHz

Full Band:  $\pm 50$  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:  $\pm 30$  MHz,  $\pm 0.5\%$  of sweep width

Full Band:  $\pm 50$  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:  $\pm 600$  kHz/ $^{\circ}$ C, typical

Full Band:  $\pm 600$  kHz/ $^{\circ}$ C, typical

With 10 dB Power Change: Band 0:  $\pm 200$  kHz/ $^{\circ}$ C

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

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

Band 3:  $\pm 600$  kHz/ $^{\circ}$ C

Full Band:  $\pm 600$  kHz/ $^{\circ}$ C

With 3:1 Load SWR: Band 0:  $\pm 100$  kHz/ $^{\circ}$ C

Band 1:  $\pm 100$  kHz/ $^{\circ}$ C

Band 2:  $\pm 200$  kHz/ $^{\circ}$ C

Band 3:  $\pm 300$  kHz/ $^{\circ}$ C

Full Band:  $\pm 300$  kHz/ $^{\circ}$ C

### Output Characteristics:

**Maximum Leveled Power:** Normal: Band 0: 20 mW

Band 1: 20 mW



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Band 2: 20 mW  
Band 3: 20 mW (13.5 to 18.6 GHz) 10 mW (18.6 to 20.0 GHz)  
Full Band: 10 mW Option 002: Band 0: 15.8 mW  
Band 1: 14.1 mW  
Band 2: 12.6 mW  
Band 3: 10 mW (13.5 to 18.6 GHz) 5 mW (18.6 to 20.0 GHz)  
Full Band: 5 mW  
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  
Full Band:  $\pm 1.5$  dB  
**Spurious Signals:** Harmonics and Subharmonics: Band 0:  $< -20$  dBc  
Band 1:  $< -25$  dBc  
Band 2:  $< -25$  dBc  
Band 3:  $< -25$  dBc  
Full Band:  $< -20$  dBc  
**Output Power Resolution** Displayed: 0.1 dB Programmable/Settable: 0.01 dB  
**Minimum Settable Power:** -2 dBm (-72 dBm with Option 002)  
**Power Sweep** Calibrated Range:  $> 12$  dB ( $> 9$  dB with Option 002)

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: @ 10 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

**External Pulse Modulation** Pulse Input: TTL 0.01 to 20 GHz: Square wave modulation up to 30 kHz 0.01 to 2.5 GHz Rise/Fall Time: 15 nsec, typical Minimum RF Pulse Width Internally Leveled: 1  $\mu$ sec, typical Unleveled (power set to +20 dBm): 200 nsec 2.5 to 20 GHz Rise/Fall Time: 10 nsec, typical Minimum RF Pulse Width Internally Leveled: 1  $\mu$ sec, typical Unleveled (power set to +20 dBm): 100 nsec On/Off Ratio:  $>> 30$  dB, typical

General Specifications:

**Minimum Sweep Time:** 10 ms (single band) 25 ms (full band)

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

**Frequency Reference Output:** 1 V/Hz (0.01 to 18 GHz) 0.5 V/GHz (0.01 to 20 GHz)  $\pm 25$  mV

**RF Output Connector:** Type-N, female

**Net Weight:** 6 kg (13.2 lb)

**Shipping Weight:** 9.2 kg (20 lb)

**Furnished:** Operating/service manual



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