



# 8517B S-Parameter Test Set, 0.045 to 50 GHz, 2.4 mm

## Data Sheet

**Frequency Range** 0.045 to 50 GHz

**Test Ports (port 1 or 2)**

Nominal Operating Power Level:

+2 to -29 dBm

Opt 007: +5 to -16 dBm

Connector Type: 2.4 mm, male

Impedance, DC Bias: 50 ohm nominal, 500 mA, 40 Vdc maximum

**Attenuation Range (incident signal):**

0 to 60 dB, in 10 dB steps

**RF Input Connector (rear panel)**

Maximum Input Power: +16 dBm

Connector Type: 2.4 mm, female

Dynamic Range (for transmission measurements)

Frequency Range GHz

.045 0.84 20 40

to 0.84 to 20 to 40 to 50

Maximum Power (dBm)

Measured at Port 2: +17 +8 +3 -4

Opt 007: +17 +12 +5 -5

Reference Power (dBm)

at Port 1 (nominal): +2 -7 -17 -29

Opt 007: +5 +2 -5 -16

Minimum Power

Measured at Port 2: -75 -97 -91 -90

Opt 007: -70 -92 -89 -91

Receiver

Dynamic Range (dB): 92 105 94 86

Opt 007: 87 104 94 86

System

Dynamic Range (dB): 77 90 74 61

Opt 007: 75 94 84 75

**Measurement Port Characteristics**

Frequency Range GHz

.045 0.84 20 40

to 0.84 to 20 to 40 to 50

**Residual (dB)**

Directivity: 42 42 38 36



Source Match: 41 38 33 31

Load Match: 42 42 38 36

Reflection Tracking:  $\pm 0.001 \pm 0.008 \pm 0.02 \pm 0.027$

Transmission Tracking:  $\pm 0.014 \pm 0.045 \pm 0.110 \pm 0.137$

Crosstalk: 99 110 91 80

**Raw (typical) (dB) (Before calibration/error correction)**

Directivity: 20 20 20 20

Source Match: 20 12 10 10

Load Match: 20 12 10 10