

# 8480 Series Sensors (with EPM series power meters)

## 25 Watt Sensors, 1 mW to 25 W (0 dBm to +44 dBm)

Table 15

Model	Frequency Range	Maximum SWR	Power Linearity <sup>(1)</sup>	Maximum Power	Connector Type	Weight
<b>8481B</b>	10 MHz to 18 GHz	10 MHz to 2 GHz: 1.10 2 GHz to 12.4 GHz: 1.18 12.4 GHz to 18 GHz: 1.28	+35 dBm to +44 dBm: (±4%)	0° C to 35° C: 30W avg <sup>(2)</sup> 35° C to 550 C: 25W avg 0.01 to 5.8 GHz: 500W pk 5.8 to 18 GHz: 125 W pk 500 W.µs per pulse	Type - N(m)	Net: 0.8 kg (1.75 lb) Shipping: 1.5 kg (3.25 lb)
<b>8482B</b>	100 kHz to 4.2 GHz	100 kHz to 2 GHz: 1.10 2 GHz to 4.2 GHz: 1.18	+35 dBm to +44 dBm: (±4%)	0° C to 35° C: 30W avg <sup>(2)</sup> 35° C to 55° C: 25W avg 0.01 to 5.8 GHz: 500W pk 5.8 to 18 GHz: 125 W pk 500 W - µs per pulse	Type - N(m)	Net: 0.8 kg (1.75 lb) Shipping: 1.5 kg (3.25 lb)

## 3 Watt Sensors, 100 µW to 3 W (-10 dBm to +35 dBm)

Model	Frequency Range	Maximum SWR	Power Linearity <sup>(1)</sup>	Maximum Power	Connector Type	Weight
<b>8481H</b>	10 MHz to 18 GHz	10 MHz to 8 GHz: 1.20 8 GHz to 12.4 GHz: 1.25 12.4 GHz to 18 GHz: 1.30	+25 dBm to +35 dBm: (±5%)	3.5 W avg, 100 W pk 100 W.µs per pulse	Type - N (m)	Net: 0.2 kg (0.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>8482H</b>	100 kHz to 4.2 GHz	100 kHz to 4.2 GHz: 1.20	+25 dBm to +35 dBm: (±5%)	3.5 W avg, 100 W pk 100 W.µs per pulse	Type - N (m)	Net: 0.2 kg (0.38 lb) Shipping: 0.5 kg (1.0 lb)

## 100 mW Sensors, 1 µW to 100 mW (-30 dBm to +20 dBm)

Model	Frequency Range	Maximum SWR	Power Linearity <sup>(1)</sup>	Maximum Power	Connector Type	Weight
<b>8485A</b>	50 MHz to 26.5 GHz	50 MHz to 100 MHz: 1.15 100 MHz to 2 GHz: 1.10 2 GHz to 12.4 GHz: 1.15 12.4 GHz to 18 GHz: 1.20 18 GHz to 26.5 GHz: 1.25	+10 dBm to +20 dBm: (±3%)	300 mW avg, 15 W pk 30 W.µs per pulse	APC - 3.5mm(m)	Net: 0.2 kg (.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>Opt 033</b>	50 MHz to 33 GHz	26.5 GHz to 33 GHz: 1.40	+10 dBm to +20 dBm: (±3%)	300 mW avg, 15 W pk 30 W.µs per pulse	APC - 3.5mm(m)	Net: 0.2 kg (.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>8481A</b>	10 MHz to 18 GHz	10 MHz to 30 MHz: 1.40 30 MHz to 50 MHz: 1.18 50 MHz to 2 GHz: 1.10 2 GHz to 12.4 GHz: 1.18 12.4 GHz to 18 GHz: 1.28	+10 dBm to +20 dBm: (±3%)	300 mW avg, 15 W pk 30 W.µs per pulse	Type - N (m)	Net: 0.2 kg (0.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>8482A</b>	100 kHz to 4.2 GHz	100 kHz to 300 kHz: 1.60 300 kHz to 1 MHz: 1.20 1 MHz to 2 GHz: 1.10 2 GHz to 4.2 GHz: 1.30	+10 dBm to +20 dBm: (±3%)	300 mW avg, 15 W pk 30 W.µs per pulse	Type - N (m)	Net: 0.2 kg (0.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>8483A (75 ohm)</b>	100 kHz to 2 GHz	100 kHz to 600 kHz: 1.80 600 kHz to 2 GHz: 1.18	+10 dBm to +20 dBm: (±3%)	300 mW avg, 10 W pk	Type - N (m) (75 ohm)	Net: 0.2 kg (0.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>R8486A</b>	26.5 GHz to 40 GHz	26.5 GHz to 40 GHz: 1.40	+10 dBm to +20 dBm: (±3%)	300 mW avg, 15 W pk 30 W.µs per pulse	Waveguide Flange UG-385/U	Net: 0.26 kg (0.53 lb) Shipping: .66 kg (1.3 lb)
<b>Q8486A</b>	33 GHz to 50 GHz	33 GHz to 50 GHz: 1.50	+10 dBm to +20 dBm: (±3%)	300 mW avg, 15 W pk 30 W.µs per pulse	Waveguide Flange UG-385/U	Net: 0.26 kg (0.53 lb) Shipping: .66 kg (1.3 lb)
<b>V8486A</b>	50 GHz to 75 GHz	50 GHz to 75 GHz: 1.06	+10 dBm to +20 dBm: (±2%) -30 dBm to +10 dBm: (±1%)	200 mW avg, 40 W pk (10.µs per pulse, 0.5% duty cycle)	Waveguide Flange UG-385/U	Net: 0.4 kg (0.9 lb) Shipping: 1 kg (2.1 lb)
<b>W8486A</b>	75 GHz to 110 GHz	75 GHz to 110 GHz: 1.08	(±2%)	200 mW avg, 40 W pk (10.µs per pulse, 0.5% duty cycle)	Waveguide Flange UG-385/U	Net: 0.4 kg (0.9 lb) Shipping: 1 kg (2.1 lb)
<b>8487A</b>	50 MHz to 50 GHz	50 MHz to 100 MHz: 1.15 100 MHz to 2 GHz: 1.10 2 GHz to 12.4 GHz: 1.15 12.4 GHz to 18 GHz: 1.20 18 GHz to 26.5 GHz: 1.25 26.5 GHz to 40 GHz: 1.30 40 GHz to 50 GHz: 1.50	+10 dBm to +20 dBm: (±3%)	300 mW avg, 15 W pk 30 W.µs per pulse	2.4 mm (m)	Net: 0.14 kg (.28 lb) Shipping: 0.5 kg (1.0 lb)

# 8480 Series Sensors (with EPM series power meters)

## High Sensitivity Sensors, 100 pW to 10 μW (-70 dBm to -20 dBm)

Model	Frequency Range	Maximum SWR	Power Linearity (1)	Maximum Power	Connector Type	Weight
<b>8481D</b> <sup>(3)</sup>	10 MHz to 18 GHz	10 MHz to 30 MHz: 1.40 30 MHz to 3 GHz: 1.15 4 GHz to 10 GHz: 1.20 10 GHz to 15 GHz: 1.30 15 GHz to 18 GHz: 1.50	- 30 dBm to - 20 dBm: (±1%)	100 mW avg, 100 m W pk	Type - N (m)	Net: 0.16 kg (0.37 lb) Shipping: 0.9 kg (2.0 lb)
<b>8485D</b> <sup>(3)</sup>	50 MHz to 26.5 GHz	0.05 GHz to 0.1 GHz: 1.19 0.1 GHz to 4 GHz: 1.15 4 GHz to 12 GHz: 1.19 12 GHz to 18 GHz: 1.25 18 GHz to 26.5 GHz: 1.29	- 30 dBm to - 20 dBm: (±2%)	100 mW avg, 100 m W pk	APC - 3.5mm (m)	Net: 0.2 kg (.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>Opt 033</b>	50 MHz to 33 GHz	26.5 GHz to 33 GHz: 1.35	- 30 dBm to - 20 dBm: (±2%)	100 mW avg, 100 m W pk	APC - 3.5mm (m)	Net: 0.2 kg (.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>8487D</b> <sup>(3)</sup>	50 kHz to 50 GHz	0.05 GHz to 0.1 GHz: 1.19 0.1 GHz to 4 GHz: 1.15 2 GHz to 12.4 GHz: 1.20 12.4 GHz to 18 GHz: 1.29 18 GHz to 34 GHz: 1.37 34 GHz to 40 GHz: 1.61 40 GHz to 50 GHz: 1.89	- 30 dBm to - 20 dBm: (±2%)	100 mW avg, 100 m W pk 30 W,μs per pulse	2.4 mm (m)	Net: 0.2 kg (0.38 lb) Shipping: 0.5 kg (1.0 lb)
<b>R8486D</b> <sup>(3)</sup>	26.5 GHz to 40 GHz	26.5 GHz to 40 GHz: 1.40	- 30 dBm to - 25 dBm: (±3%) - 25 dBm to - 20 dBm: (±5%)	100 mW avg, or pk 40 V dc max	Waveguide Flange UG-599/U	Net: 0.26 kg (0.53 lb) Shipping: .66 kg (1.3 lb)
<b>Q8486D</b> <sup>(3)</sup>	33 GHz to 50 GHz	33 GHz to 50 GHz: 1.40	- 30 dBm to - 25 dBm: (±3%) - 25 dBm to - 20 dBm: (±5%)	100 mW avg, or pk 40 V dc max	Waveguide Flange UG-383/U	Net: 0.26 kg (0.53 lb) Shipping: .66 kg (1.3 lb)

1. Negligible deviation except for those power ranges noted.
2. For pulses greater than 30 W, the maximum average power ( $P_a$ ) is limited by the energy per pulse (E) in W,μs according to  $P_a = 30-0.02 E$ .
3. Includes 11708A 30 dB attenuator for calibrating against 0 dBm, 50 MHz power reference. The 11708A is factory set to 30 dB ±0.05 dB at 50 MHz, traceable to NIST. SWR <1.05 at 50 MHz.