



8480 Series Specifications

Model	Nominal Impedance	Frequency Range	Power Range	Maximum Power	Power Linearity ²	Maximum SWR (Reflection Coefficient)	Size mm (in.)	Shipping Weight kg (lb)	RF Connector
8481A	50 Ω	10 MHz–18 GHz	1 μW to 100 mW	300 mW avg. 15 W peak 30 W • μs (per pulse)	+10 to +20 dBm +2, -4%	10 MHz – 30 MHz: 1.40 (0.166) 30 MHz – 50 MHz: 1.18 (0.083) 50 MHz – 2 GHz: 1.10 (0.048) 2 – 12.4 GHz: 1.18 (0.083) 12.4 – 18 GHz: 1.28 (0.123)	30 x 38 x 105 (1.2 x 1.5 x 4.1)	0.5 (1)	N(m)
Option 001									APC-7
8481B	50 Ω	10 MHz–18 GHz	0–35°C, 1 mW–25W; 35°C–55°C, 1 mW–20 W	0–35°C: 30 W avg. ¹ 35°C–55°C: 25 W avg. 10 MHz–5.8 GHz 500 W peak 5.8–18 GHz 125 W peak 500 W • μs (per pulse)	+35 to +44 dBm ±4%	10 MHz – 2 GHz: 1.10 (0.048) 2–12.4 GHz: 1.18 (0.083) 12.4–18 GHz: 1.28 (0.123)	83 x 114 x 248 (3.25 x 4.5 x 9.75)	1.5 (3.2)	N(m)
8481H	50 Ω	10 MHz–18 GHz	100 μW to 3W	3.5 W avg. 100 W peak 100 W • μs (per pulse)	+25 to +35 dBm ±5%	10 MHz – 8 GHz: 1.20 (0.091) 8–12.4 GHz: 1.25 (0.110) 12.4 – 18 GHz: 1.30 (0.130)	30 x 38 x 149 (1.2 x 1.5 x 5.9)	0.5 (1)	N(m)
8482A	50 Ω	100 kHz–4.2 GHz	1.0 μW to 100 mW	300 mW avg. 15 W peak 30 W • μs (per pulse)	+10 to +20 dBm +2, -4%	100–300 kHz: 1.60 (0.231) 300 kHz – 1 MHz: 1.20 (0.091) 1 MHz – 2 GHz: 1.10 (0.048) 2–4.2 GHz: 1.30 (0.130)	30 x 38 x 105 (1.2 x 1.5 x 4.1)	0.5 (1)	N(m)
8482B	50 Ω	100 kHz–4.2 GHz	0–35°C, 1 mW–25 W; 35°C–55°C, 1 mW–20 W	0–35°C: 30 W avg. ¹ 35°C–55°C: 25 W avg. 500 W peak 500 W • μs (per pulse)	+35 to +44 dBm ±4%	100 kHz – 2 GHz: 1.10 (0.048) 2 GHz – 4.2 GHz: 1.18 (0.083)	83 x 114 x 248 (3.2 x 4.5 x 9.7)	1.5 (3.2)	N(m)
8482H	50 Ω	100 kHz–4.2 GHz	100 μW to 3W	3.5 W avg. 100 W peak 100 W • μs (per pulse)	+25 to +35 dBm ±5%	100 kHz–4.2 GHz: 1.20 (0.091)	30 x 38 x 149 (1.2 x 1.5 x 5.9)	0.5 (1)	N(m)
8483A	75 Ω	100 kHz–2 GHz	1.0 μW to 100 mW	300 mW avg. 10 W peak 30 W • μs (per pulse)	+10 to +20 dBm +2, -4%	100–600 kHz: 1.80 (0.286) 600 kHz – 2 GHz: 1.18 (0.083)	30 x 38 x 105 (1.2 x 1.5 x 4.1)	0.5 (1)	N(m) 75 Ω
8484A ⁴	50 Ω	10 MHz–18 GHz	0.1 nW to 10 μW	200 mW avg. 200 mW peak	-30 to -20 dBm ±1%	10–30 MHz: 1.40 (0.166) 30 MHz – 4 GHz: 1.15 (0.070) 4–10 GHz: 1.20 (0.091) 10–15 GHz: 1.30 (0.130) 15–18 GHz: 1.35 (0.149)	36 x 44 x 133 (1.4 x 1.7 x 5.2)	0.5 (1)	N(m) ³
8485A	50 Ω	50 MHz–26.5 GHz	1 μW to 100 mW	300 mW avg. 15 W peak 30 W • μs (per pulse)	+10 to +20 dBm +2, -4%	50 MHz–100 MHz: 1.15 100 MHz–2 GHz: 1.10 2–12.4 GHz: 1.15 12.4–18 GHz: 1.20 18–26.5 GHz: 1.25	30 x 38 x 95 (1.2 x 1.5 x 3.7)	0.5 (1)	APC3.5(m)

¹For pulses greater than 30 W the maximum average power (Pa) is limited by the energy per pulse (E) in W • μs according to Pa = 30–0.02E.

²Negligible deviation except for those power ranges noted.

³Includes 1250-0597 adapter from 75 Ω type N to 50 Ω type N for calibration.

⁴The 11708A 30 dB attenuator for calibrating against a 0 dBm, 50 MHz power reference is shipped with the 8484A.

Uncertainty of calibration factor data for 8482A and 8483A

Frequency (MHz)	Sum of Uncertainties (%) ¹				Probable Uncertainties (%) ²			
	8482A	8482B	8482H	8483A	8482A	8482B	8482H	8483A
0.1	±2.3	±5.7	±3.3	±2.6	±1.3	±2.8	±1.6	±1.5
0.3	2.2	5.7	3.2	2.5	1.2	2.8	1.6	1.4
1.0	2.2	5.7	3.2	2.5	1.2	2.8	1.6	1.4
3.0	2.2	5.7	3.2	2.5	1.2	2.8	1.6	1.4
10.0	2.5	5.7	3.5	3.0	1.3	2.8	1.6	1.6
30.0	2.6	5.7	3.6	3.1	1.4	2.8	1.7	1.6
50.0	0(ref)	2.7	0(ref)	0(ref)	0(ref)	2.7	0(ref)	0(ref)
100.0	3.1	5.6	4.1	3.9	1.6	3.3	1.9	2.0
300.0	3.1	5.6	4.1	3.9	1.6	3.3	1.9	2.0
1000.0	2.7	5.7	3.7	3.7	1.4	3.3	1.7	2.0
2000.0	2.7	5.5	3.7	3.9	1.4	3.1	1.7	2.1
4000.0	2.8	5.5	3.8	—	1.5	3.1	1.8	—

Uncertainty of calibration factor data for 8481A/B, 8484A and 8485A

Frequency (GHz)	Sum of Uncertainties (%) ¹					Probable Uncertainties (%) ²				
	8481A	8481B	8481H	8484A	8485A	8481A	8481B	8481H	8484A	8485A
0.1	±3.1	±6.4	±4.1	±4.4	—	±1.6	±3.0	±1.9	±1.9	—
2	2.7	5.8	3.7	4.0	±3.6	1.4	3.1	1.7	1.8	±2.1
4	2.8	5.8	3.8	4.1	—	1.5	3.1	1.8	1.8	—
6	2.8	5.8	3.8	4.1	4.0	1.5	3.1	1.8	1.8	2.3
8	3.2	6.0	4.2	4.6	—	1.7	3.2	2.0	2.0	—
10	3.6	6.2	4.6	5.1	4.7	1.9	3.3	2.2	2.2	2.7
12	3.9	7.8	4.9	6.5	—	2.1	4.1	2.4	2.8	—
14	4.8	7.9	5.8	7.4	5.6	2.6	4.1	2.8	3.2	3.2
16	5.2	8.0	6.2	7.8	—	2.9	4.2	3.0	3.4	—
18	5.8	8.3	6.8	8.4	5.9	3.2	4.3	3.4	3.7	3.6
22	—	—	—	—	6.8	—	—	—	—	3.7
26.5	—	—	—	—	7.3	—	—	—	—	4.0

¹Includes uncertainty of reference standard and transfer uncertainty. Directly traceable to NBS.

²Square root of sum of the individual uncertainties squared (RSS).