

Agilent 8494G/H, 8495G/H, 8496G/H Programmable Step Attenuators

Data Sheet



Features

- High reliability and exceptional repeatability reduce downtime
- Excellent RF specifications optimize test system measurement capability
- Broad portfolio of attenuation and connector options provide configuration flexibility



Agilent Technologies

Specifications describe the instrument's warranted performance. Supplemental and typical characteristics are intended to provide information useful in applying the instrument by giving typical, but not warranted performance parameters.

Specifications

| Model number | Frequency | Attenuation range (dB) | Attenuation step | Insertion loss (dB) @ 0 dB | Maximum SWR | Max. input average power | Max. input peak power | Operating life (n million cycles/section) | Repeatability |
|--------------|--------------|------------------------|------------------|----------------------------|-------------|--------------------------|-----------------------|---|---|
| 8494G | DC to 4 GHz | 0 to 11 | 1 dB | 0.96 | 1.50 | 1 W | 100 W | 5 | ±0.03 dB max 5 million cycles per section |
| 8495G | DC to 4 GHz | 0 to 70 | 10 dB | 0.68 | 1.35 | 1 W | 100 W | 5 | ±0.03 dB max 5 million cycles per section |
| 8496G | DC to 4 GHz | 0 to 110 | 10 dB | 0.96 | 1.50 | 1 W | 100 W | 5 | ±0.03 dB max 5 million cycles per section |
| 8494H | DC to 18 GHz | 0 to 11 | 1 dB | 2.22 | 1.90 | 1 W | 100 W | 5 | ±0.03 dB max 5 million cycles per section |
| 8495H | DC to 18 GHz | 0 to 70 | 10 dB | 1.66 | 1.70 | 1 W | 100 W | 5 | ±0.03 dB max 5 million cycles per section |
| 8496H | DC to 18 GHz | 0 to 110 | 10 dB | 2.22 | 1.90 | 1 W | 100 W | 5 | ±0.03 dB max 5 million cycles per section |

RF Connector Options: 1) 849xG/H offers N(f)/SMA (f)/APC-7

Supplemental Specifications

Attenuation Accuracy: +/- dB (Reference from 0 dB)

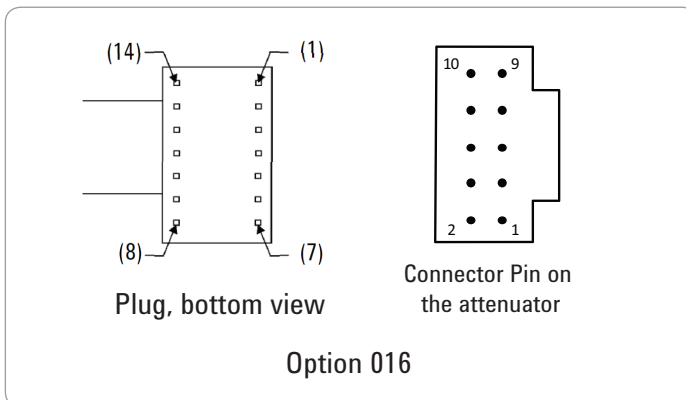
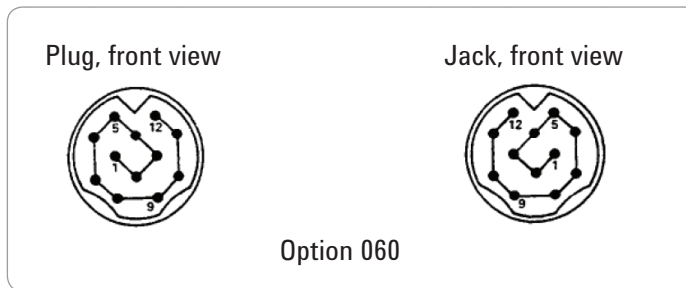
| 8494G/H | 8495G/H 8496G/H | 8494G | 8494H | | | 8495G | 8495H | | 8496G | 8496H | |
|----------------------------|--------------------|-------------|----------------|----------------|-------------|----------------|----------------|-------------|----------------|----------------|--|
| Attenuation Selection (dB) | | DC to 4 GHz | DC to 12.4 GHz | 12.4 to 18 GHz | DC to 4 GHz | DC to 12.4 GHz | 12.4 to 18 GHz | DC to 4 GHz | DC to 12.4 GHz | 12.4 to 18 GHz | |
| 1 | 10 | 0.2 | 0.3 | 0.7 | 0.2 | 0.5 | 0.6 | 0.2 | 0.5 | 0.6 | |
| 2 | 20 | 0.2 | 0.3 | 0.7 | 0.4 | 0.7 | 0.8 | 0.4 | 0.7 | 0.8 | |
| 3 | 30 | 0.3 | 0.4 | 0.7 | 0.5 | 0.9 | 1.2 | 0.5 | 0.9 | 1.2 | |
| 4 | 40 | 0.3 | 0.4 | 0.7 | 0.7 | 1.2 | 1.6 | 0.7 | 1.2 | 1.6 | |
| 5 | 50 | 0.3 | 0.5 | 0.7 | 0.8 | 1.5 | 2.0 | 0.8 | 1.5 | 2.0 | |
| 6 | 60 | 0.3 | 0.5 | 0.8 | 1.0 | 1.8 | 2.4 | 1.0 | 1.8 | 2.4 | |
| 7 | 70 | 0.4 | 0.6 | 0.8 | 1.2 | 2.1 | 2.8 | 1.2 | 2.1 | 2.8 | |
| 8 | 80 | 0.4 | 0.6 | 0.8 | - | - | - | 1.3 | 2.4 | 3.2 | |
| 9 | 90 | 0.4 | 0.6 | 0.8 | - | - | - | 1.5 | 2.7 | 3.6 | |
| 10 | 100 | 0.4 | 0.6 | 0.9 | - | - | - | 1.6 | 3.0 | 4.0 | |
| 11 | 110 | 0.5 | 0.7 | 0.9 | - | - | - | 1.8 | 3.3 | 4.4 | |

How To Drive

| Section | Section 1 | | Section 2 | | Section 3 | | Section 4 | | Power V+ | |
|---------------|---|------------|-----------|------------|-----------|------------|-----------|------------|----------|-----|
| Solenoid Coil | Thru-line | Atten Card | Thru-line | Atten Card | Thru-line | Atten Card | Thru-line | Atten Card | | |
| Option 060 | Bare Wire Cable Color Code ¹ | PUR | YEL | BLK | GRN | ORN | BLU | BRN | WHT | RED |
| | Connector Plug Pin Number | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 1 |
| Option 016 | Flat Pack Plug Pin Number ² | 13 | 2 | 11 | 5 | 3 | 9 | 4 | 10 | 6 |
| | Pin Number on the attenuator | 1 | 2 | 5 | 8 | 4 | 9 | 6 | 7 | 10 |
| 8494G/H | 0 dB | 1 dB | 0 dB | 2 dB | 0 dB | 4 dB | 0 dB | 4 dB | - | - |
| 8495G/H | 0 dB | 1 dB | 0 dB | 20 dB | 0 dB | 40 dB | - | - | - | - |
| 8496G/H | 0 dB | 10 dB | 0 dB | 20 dB | 0 dB | 40 dB | 0 dB | 40 dB | - | - |

¹ Five-foot cable and mating plug assembly provided.

² Pin 6 is common for all coils. Pin 1, 7, 8, 12 and 14 are not used.



Ordering Information

| Attenuation range | Option type | Option description |
|--|-------------|--|
| 8494G/ 8494H/ 8495G/ 8495H/ 8496G/ 8496H/ | 001 | N (f) ^{G,H} |
| | 002 | SMA (f) ^{G,H} |
| | 004 | 3.5 mm (f) ¹ |
| | 024 | 24 Vdc |
| | 011 | 5 Vdc |
| | 060 | 12-pin Viking connector ^{G,H} |
| | 016 | 16-inch ribbon cable with 14-pin DAP plug ^{G,H} |
| | UK6 | Commercial calibration test data with certifications |

Note: Each order must include RF connector option

¹ Available with 8495/97 only

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