

## Eliminate the Weak Links in Your Measurement System

### RF and microwave manual and programmable step attenuators

- Fast, precise signal-level control up to 50 GHz
- High reliability and exceptional repeatability reduces downtime
- Attenuation range of 121 dB in 1 dB steps

#### Fixed attenuators

- Precise attenuation, flat frequency response, and low SWR over broad frequency range up to 67 GHz



Model	Frequency range (DC to)	Type	Attenuation
8494G	4 GHz	Programmable	0 to 11 dB, 1 dB steps
8491A	12.4 GHz	Fixed	3, 6, 10, 20, 30, 40, 50, 60 dB
8495B	18 GHz	Manual	0 to 70 dB, 10 dB steps
8495D	26.5 GHz	Manual	0 to 110 dB, 10 dB steps

Model	Frequency range (DC to)	Type	Attenuation
84904L	40 GHz	Programmable	0 to 11 dB, 1 dB steps
8490G	67 GHz	Fixed	3, 6, 10, 20, 30, 40 dB
J7204/5 A/B	6/18 GHz	One box 4/5 channels	0 to 121 dB, 1 dB steps

### Low-noise and system amplifiers for signal conditioning

- Broadband performance up to 50 GHz optimizes the operating range of your test systems
- Excellent noise figure and high gain significantly reduces overall test system noise figure

Type	Model	Frequency	Gain	Noise figure
Pre-amplifier	87405B	0.01 to 4 GHz	22 dB	5 dB
	87405C	0.1 to 18 GHz	25 dB	6 dB
	N4985A-S30	0.00001 to 30 GHz	30 dB	5 dB
	N4985A-S50	0.00001 to 50 GHz	27 dB	6 dB
System amplifier	83020A	2 to 26.5 GHz	30 dB	13 dB
	83050A	2 to 50 GHz	21 dB	10 dB



### **NEW** J7201A/B/C attenuation control units, DC to 6/18/26.5 GHz, 0 to 101/121 dB, 1 dB steps

- Attenuation sweep function defines the sweep time (- 50 ms to 10 s; 50 ms incremental), number of cycles and step size
- Relative attenuation step function
- Attenuation steps - 0 dB to 121 dB, 121 dB to 0 dB for the preset number of cycles (1 to 1000)
- 0.03 dB insertion loss



### High-Performance Electro-Mechanical Switches 87104/6D, 87222D/E

- Exceptional 0.03 dB insertion loss repeatability cycles ensure accuracy and reduces calibration cycles over a long operating life of 5 million cycles
- Excellent isolation of more than 65 dB to 40 GHz reduces channel-to-channel crosstalk
- Broad selection of configuration of SPDT, SP4T, SP6T and transfer switches with operating frequency up to 50 GHz

