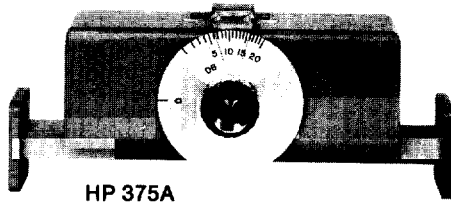


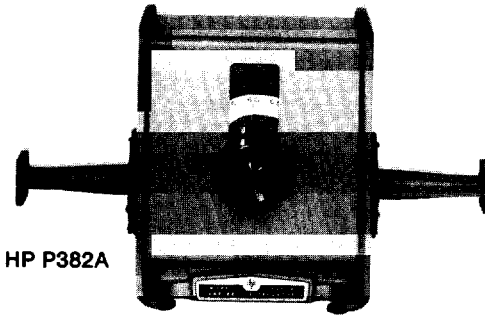
MICROWAVE TEST EQUIPMENT

Variable Attenuators and OEM Step Attenuators

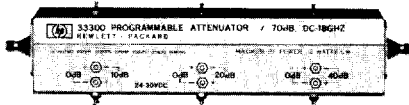
Models 375 Series, 382 Series, 33300 Series, 33320 Series



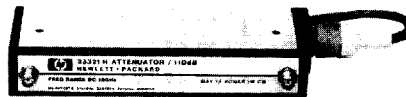
HP 375A



HP P382A



HP 33300A



HP 33321H



HP 33323K

HP 33300 Series, 33320 Series OEM Step Attenuators

HP 33300 series Step Attenuators provide wideband programmable signal level control. Magnetic latching solenoids switch individual attenuating elements into and out of contact with a 50-ohm transmission line. C/D models have separate indicator contacts and A/B models have no indicator contacts. Three three-digit connector options (OXY) must be specified. X is the input connector, Y is the output connector, first digit is always 0. See specifications table for option numbers.

HP 33320 series Step Attenuators are compact versions of the HP 8494/5/6/7 bench Attenuators on page 558 (same specifications) and are configured for designing into microwave systems and instru-

ments. Manual or electrically-actuated versions are available. The manual models take less than 1.5 square inches of panel space. OEM quantity discounts are available for HP 33300 and 33320 series.

HP 375, 382 Series Waveguide Attenuators

Operation of these HP 382 series rotary-vane, continuously-variable Attenuators depends on a mathematical law rather than on the resistivity of the attenuator card. They are direct-reading and provide accurate attenuation from 0 to 50 dB (60 dB for S382C) regardless of temperature and humidity.

HP 375A series variable flap Attenuators consist of a short slotted section of waveguide in which a matched resistive strip is inserted.

HP 33300 Series, 33320 Series Specifications

HP Model	Freq Range (GHz)	Mode	Range	Remarks	Price
33300 A/B C/D	dc-18	Prog.	0-70 dB 10 dB steps	A&C models 12-15 V	\$1200 \$1250
33301 A/B C/D	dc-18	Prog.	0-42 dB 6 dB steps	B&D models 24-30 V	\$1200 \$1250
33304 A/B C/D	dc-18	Prog.	0-11 dB 1 dB steps	Connector options available:	\$1575 \$1635
33305 A/B C/D	dc-18	Prog.	0-110 dB 10 dB steps	0: N(f), 1: N(m) 2: 7mm(f), 3: 7mm(m) 5: SMA(f), 6: SMA(m)	\$1585 \$1635
33320A B	dc-4 dc-18	Manual	1-11 dB 1dB steps	Specifications identical to 8494 series page 558 SMA(f) connectors	\$ 680 \$ 870
33320G H	dc-4 dc-18	Prog.			\$1050 \$1345
33321A B D	dc-4 dc-18 dc-26.5	Manual	0-70 dB 10 dB steps	Specifications identical to 8495 series page 558 SMA (f) connectors (APC-3.5 on D/K)	\$ 480 \$ 635 \$ 975
33321G H K	dc-4 dc-18 dc-26.5	Prog.			\$ 875 \$ 980 \$1425
33322A B	dc-4 dc-18	Manual	0-110 dB 10 db steps	Specifications identical to 8496 series page 558 SMA (f) connectors	\$ 680 \$ 870
33322G H	dc-4 dc-18	Prog.			\$1050 \$1345
33323K	dc-26.5	Prog.	0-90 dB 10 dB steps	Specifications identical to 8497K page 558 APC-3.5 only	\$1785

HP 375A, 382 Series Specifications

HP Model	Frequency Range (GHz)	Accuracy	Attenuation Range (dB)	Waveguide & Equivalent Flange	Price
S382C	2.6-3.95	±1% of reading or 0.1 dB whichever greater ±2% above 50 dB	0-60	WR 284 UG-584/U	\$4375
G382A	3.95-5.85	±2% of reading or 0.1 dB whichever greater	0-50	WR 187 UG-407/U	\$3080
J382A	5.3-8.2	±2% of reading or 0.1 dB whichever greater	0-50	WR 137 UG-441/U	\$2475
H382A	7.05-10.0	±2% of reading or 0.1 dB whichever greater	0-50	WR 112 UG-138/U	\$2475
X382A	8.2-12.4	±2% of reading or 0.1 dB whichever greater	0-50	WR 90 UG-135/U	\$1485
P382A	12.4-18.0	±2% of reading or 0.1 dB whichever greater	0-50	WR 62 UG-419/U	\$1485
K382A	18.0-26.5	±2% of reading or 0.1 dB whichever greater	0-50	WR 42 UG-597/U	\$2475
R382A	26.5-40.0	±2% of reading or 0.1 dB whichever greater	0-50	WR 28 UG-599/U	\$2450
X375A	8.2-12.4	±1 dB, ±2 dB	0-20	WR 90 UG-39/U	\$ 715
P375A	12.4-18	±1 dB, ±2 dB	0-20	WR 62 UG-419/U	\$ 715