

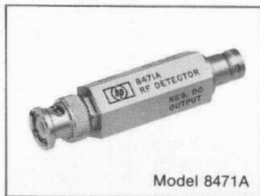
## features:

FLAT FREQUENCY RESPONSE  
 LOW SWR  
 HIGH SENSITIVITY  
 EXCELLENT SQUARE LAW CHARACTERISTICS  
 WIDE FREQUENCY COVERAGE  
 ECONOMICAL

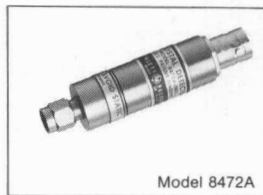
# CRYSTAL DETECTORS

## applications:

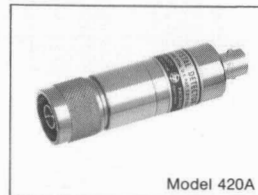
RF Detection  
 Power Leveling  
 Power Monitoring  
 Reflection Coefficient Measurements  
 Attenuation Measurements  
 Peak Power Measurements



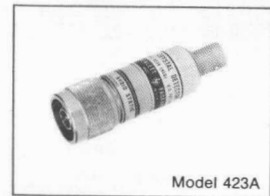
Model 8471A



Model 8472A



Model 420A



Model 423A



Model K422A



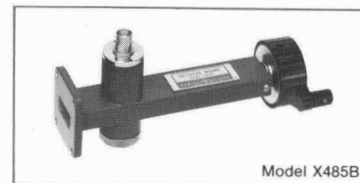
Model J424A



Model 8470A



Model 440A



Model X485B

## SPECIFICATIONS

Model:	8471A	423A	420A	420B	8470A	8472A	MOUNTS	
							440A**	X485B**
Frequency Range (GHz):	100KHz-12 GHz	.01-12.4	.01-12.4	1-4†	.01-18 ◇	.01-18 ◇	2.4-12.4	8.2-12.4
Frequency Response (dB)*:	± .6 typ. ± .1 over 100 MHz	± .2/octave to 8 GHz ± .5 overall	3.5	± 3	± .2/octave to 8 GHz; ± .5 to 12.4 GHz ± 1 overall	same as 8470A		
Minimum Low Level Sensitivity (mV/μW):	0.35	0.4	0.1	0.05	0.4	0.4		
High Level Sensitivity (mW):	> 75% @ input levels > 10mW	< 0.35			< 0.35	< 0.35		
Maximum SWR:	1.3 typ.	1.2 to 4.5 GHz 1.35 to 7 GHz 1.5 to 12.4 GHz	3.0	3.0	1.2 to 4.5 GHz 1.35 to 7 GHz 1.5 to 12.4 GHz 1.7 to 18 GHz	Same as 8470A		1.25
Maximum Input Power (mW, peak or ave.):	3 V rms (4.2 V pk)	100	100	100	100	100		
Input Connector:	BNC (m)	"N" (m)	"N" (m)	"N" (m)	APC-7	SMA (m)	"N" (m)	
Output Connector:	BNC (f)	BNC (f)	BNC (f)	BNC (f)	BNC (f)	BNC (f)	BNC (f)	
Fits Waveguide Size, Nom. O. D. (in): (EIA)								1½x¾ (WR137)
Dimensions (in/mm):	2¾x¾ (70x19)	2½x¾ x 2½x¾ (63x20)	3x¾ (76x19)	3x¾ (76x19)	2½x¾ (64x19)	2½x¾ (64x14)	1½x2½x4½ (21x72x114)	6½x164‡
Weight (lbs/Kg): <b>Net Shipping</b>	¾/0.07 1/0.45	¼/0.11 1/0.45	¼/0.11 1/0.45	¼/0.11 1/0.45	¼/0.11 1/0.45	¼/0.042 ½/0.22	¾/0.14 1/0.45	1/0.45 2/0.9
Options Available:	004, 005, 006	001, 002, 003		001	001, 002, 003 012, 013			

\* As read on a 416 Ratio Meter or 415 SWR Meter calibrated for square law detectors. See HP Catalog for details on these instruments.

† The 420B contains a selected crystal and video load; both are installed to achieve best response from 1 to 4 GHz, but unit is usable from 10 MHz-12.4 GHz.

◇ Below 1 GHz, RF may leak through output connector; leakage may be eliminated by using a low pass filter.

\*\* Detectors are not supplied; may use 1N21 or 1N23 crystal for maximum detection sensitivity where SWR is not critical.

‡ Dimension given is length-only.

Options: 423A/8470A: 001 Matched pair frequency response characteristics track within ± 0.2 dB per octave 10 MHz-8 GHz, ± 0.3 dB 8-12.4 GHz, ± 0.6 dB 12.4-18 GHz.  
423A/8470A: 002 Less than ± 0.5 dB variation from square law up to 50 mV peak output into > 75KΩ; sensitivity typically > 0.1 mV/μW.

423A/8470A: 003 Positive polarity output.

8470A: 012 Stainless steel Type N male input connector.

8470A: 013 Stainless steel Type N female input connector.

420B: 001 Matched pair. Frequency response characteristics track within ± 1 dB for power levels < approximately 0.1mW.

8471A: 004 Positive polarity output.

8471A: 005 Negative polarity output; 75 Ω input impedance.

8471A: 006 Positive polarity output; 75 Ω input impedance.