

6230A/L series

Scalar Detectors



The 6230A and 6230L series of scalar detectors have EEPROM correction for improved frequency response. Users can achieve swept power measurements with accuracy close to that achieved with a power sensor.

The 6230A series scalar detectors have typically 85 dB dynamic range (-65 dBm to +20 dBm) and are used when best sensitivity and maximum dynamic range are required. The 6230L series scalar detectors (-59 dBm to +26 dBm typically) have integral input attenuators. This provides improved input match and greater power handling capability. The 6230L series detectors should be used when measuring low loss devices, such as semi-rigid cables or when measuring high power devices such as amplifiers.

Scalar Detectors (with EEPROM correction)

Ordering Number

Version

6230A series	Standard Detectors (-65 dBm to +20 dBm) typical
6230A	10 MHz to 20 GHz, N type (m)
6232A	1 MHz to 3 GHz, N Type (m)
6233A	10 MHz to 26.5 GHz, 3.5 mm (m)
6234A	10 MHz to 46 GHz, 2.92 mm (m)
6230L series	Low VSWR Detectors (-59 dBm to +26 dBm) typical
6230L	10 MHz to 20 GHz, N type (m)
6233L	10 MHz to 26.5 GHz, 3.5 mm (m)
6234L	10 MHz to 46 GHz, 2.92 mm (m)

Supplied Accessories

43139/099	1.5 m DC Cable
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Optional Accessories

43139/100	3 m DC Cable
43139/101	10 m DC Cable
43139/102	25 m DC Cable
43139/103	50 m DC Cable

Typical specifications are non-warranted.

SPECIFICATION

	6230A	6230L	6232A	6233A	6233L	6234A	6234L
Frequency Range	10 MHz to 20 GHz	10 MHz to 20 GHz	1 MHz to 3 GHz	10 MHz to 26.5 GHz	10 MHz to 26.5 GHz	10 MHz to 46 GHz	10 MHz to 46 GHz
Dynamic range							
AC detection:	-65 dBm to +20 dBm, typical	-59 dBm to +26 dBm, typical	-65 dBm to +20 dBm, typical	-65 dBm to +20 dBm, typical	-59 dBm to +26 dBm, typical	-65 dBm to +20 dBm, typical	-59 dBm to +26 dBm, typical
DC detection:	-60 dBm to +20 dBm, guaranteed	-54 dBm to +26 dBm, guaranteed	-60 dBm to +20 dBm, guaranteed	60 dBm to +20 dBm, guaranteed	-54 dBm to +26 dBm, guaranteed	-60 dBm to +20 dBm, guaranteed	-54 dBm to +26 dBm, guaranteed
Maximum RF input VSWR							
1 to 10 MHz	-----	-----	1.43	-----	-----	-----	-----
10 to 40 MHz	1.4	1.4	1.14	1.4	1.4	1.58	1.58
40 to 100 MHz	1.15	1.1	1.14	1.15	1.1	1.15	1.15
0.1 to 2 GHz	1.12	1.1	1.14 (to 2.7 GHz)	1.12	1.1	1.12	1.1
2 to 5 GHz	1.17	1.1	1.2 (to 3 GHz)	1.17	1.1	1.33	1.1
5 to 18 GHz	1.29	1.15	-----	1.29	1.15	1.33	1.15
18 to 20GHz	1.5†	1.22†	-----	1.5	1.22	1.5	1.22
20 to 26.5 GHz	-----	-----	-----	1.5	1.22	1.5	1.22
26.5 to 33 GHz	-----	-----	-----	-----	-----	1.5	1.31
33 to 40 GHz	-----	-----	-----	-----	-----	1.95	1.31
Linearity	0.2 dB/10 dB but not > 0.5 dB in total	0.2 dB/10 dB but not > 0.5 dB in total	0.2 dB/10 dB but not > 0.5 dB in total	0.2 dB/10 dB but not > 0.5 dB in total	0.2 dB/10 dB but not > 0.5 dB in total	0.2 dB/10 dB but not > 0.5 dB in total	0.2 dB/10 dB but not > 0.5 dB in total
Frequency Response (EEPROM corrected)	± 0.2 dB	± 0.2 dB	± 0.2 dB	± 0.2 dB	± 0.2 dB	± 0.2 dB (± 0.4 dB > 26.5 GHz)	± 0.2 dB (± 0.4 dB > 26.5 GHz)
Connector	Precision Type N (m)	Precision Type N (m)	Type N (m)	Precision 3.5 mm (m)	Precision 3.5 mm (m)	Precision 2.92 mm (m)	Precision 2.92 mm (m)
Length	89 mm	89 mm	73 mm	80 mm	80 mm	88.5 mm	88.5 mm
Width	33.5 mm	33.5 mm	33.5 mm	33.5 mm	33.5 mm	33.5 mm	33.5 mm
Weight	151 g	151 g	180 g	151 g	151 g	149 g	149 g

† Specifications involving Type N connectors above 18 GHz are not traceable to national standards as these do not exist at present.

†† Specifications involving 2.92 mm connectors above 40 GHz are not traceable to national standards as these do not exist at present.