Measurement Specifications and Characteristics

All measurement specifications are over the full signal and temperature ranges unless otherwise noted.

Input Characteristics	320A	326A	346A
Frequency Range			
Channel 1 (Normal mode)	10 Hz–125 MHz	10 Hz–125 MHz	10 Hz–125 MHz
(Low pass filter enabled)	10 Hz–50 kHz	10 Hz–50 kHz	10 Hz–50 kHz
Channel 2	50 MHz–20 GHz	50 MHz–26.5 GHz	50 MHz–46 GHz
Sensitivity			
Channel 1			
10–30 Hz	40 mV rms	40 mV rms	40 mV rms
30 Hz–125 MHz	25 mV rms	25 mV rms	25 mV rms
Channel 2			
50–300 MHz	–20 dBm	–20 dBm	–20 dBm
0.3–12.4 GHz	–33 dBm	–33 dBm	–33 dBm
12.4–18 GHz	–33 dBm	–33 dBm	–30 dBm
18–20 GHz	–29 dBm	–29 dBm	–27 dBm
20–26.5 GHz	N/A	–25 dBm	–27 dBm
26.5–40 GHz	N/A	N/A	–23 dBm
40–46 GHz	N/A	N/A	–17 dBm
Maximum Input			
Channel 1	2 V_{rms}	2 V_{rms}	2 V_{rms}
Channel 2			
50 MHz–2 GHz	+5 dBm	+5 dBm	+5 dBm
2–46 GHz	+13 dBm	+13 dBm	+13 dBm
Damage Level			
Channel 1	120 V (dc + ac pk) linearly derated to 5 V_{rms} at 125 MHz	120 V (dc + ac pk) linearly derated to 5 V_{rms} at 125 MHz	120 V (dc + ac pk) linearly derated to 5 V_{rms} at 125 MHz
Channel 2	+27 dBm	+27 dBm	+27 dBm
Impedance (Nominal)			
Channel 1	1 MΩ/ 60 pF	1 MΩ/ 60 pF	1 MΩ/ 60 pf
Channel 2	50 Ω	50 Ω	50 Ω
Connector			
Channel 1	BNC female	BNC female	BNC female
Channel 2	SMA/APC-3.5 compatible female	SMA/APC-3.5 compatible female	2.92 mm removable, female
SWR - Channel 2			
50–300 MHz	1.5:1 typical	1.5:1 typical	1.5:1 typical
0.3–10 GHz	2.0:1 typical	2.0:1 typical	2.0:1 typical
10–20 GHz	3.0:1 typical	3.0:1 typical	3.0:1 typical
20–26.5 GHz	N/A	3.0:1 typical	2.5:1 typical
26.5–46 GHz	N/A	N/A	2.5:1 typical
Coupling			
Channel 1	ac	ac	ac
Channel 2	ac	ac	ac
Acquisition Time (typical) (1 MHz FM rate, power measurement off)			
Channel 1	N/A	N/A	N/A
Channel 2 (FM Auto/FM Off)	125 ms/100 ms	125 ms/100 ms	140 ms/115 ms
Resolution Selection			
Channel 1/Channel 2	1 Hz to 1 MHz	1 Hz to 1 MHz	1 Hz to 1 MHz

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Emissions (typ.) ("kickback noise") Channel 1 Channel 2 (measuring/no input)	N/A –40 dBm/<–70 dBm	N/A –40 dBm/<–70 dBm	N/A –40 dBm/<–70 dBm
Residual Stability* Channel 1 Channel 2 *Counter and source tied to same timebase	N/A 0.6 LSD rms	N/A 0.8 LSD rms	N/A 1.25 LSD rms
Accuracy Channel 1/Channel 2 (LSD= resolution selected)	±1 LSD ± residual stability ± timebase error x frequency	±1 LSD ± residual stability ± timebase error x frequency	±1 LSD ± residual stability ± timebase error x frequency
Measurement Time (typical) Channel 1 Channel 2	1/Resolution + 20 ms 1/Resolution + Acquisition time + 20 ms	1/Resolution + 20 ms 1/Resolution + Acquisition time + 20 ms	1/Resolution + 20 ms 1/Resolution + Acquisition time + 20 ms
FM Tolerance Channel 1 Channel 2 (FM Auto) (FM Off)	N/A 20 MHz p-p max @ 10 MHz rate 1 MHz p-p @ 10 MHz rate	N/A 20 MHz p-p max @ 10 MHz rate 1 MHz p-p @ 10 MHz rate	N/A 20 MHz p-p max to 26.5 GHz, 12 MHz p-p max above 26.5 GHz @ 10 MHz rate 1 MHz p-p @ 10 MHz rate
AM Tolerance Channel 1, Channel 2	Any index provided minimum signal level is not less than sensitivity	Any index provided minimum signal level is not less than sensitivity	Any index provided minimum signal level is not less than sensitivity
Amplitude Discrimination Channel 1 Channel 2 below 300 MHz above 300 MHz	N/A N/A Automatically measures the largest signal present provided signal is >10 dB (typical) above any signal separated by less than 75 MHz; >20 dB (typical) above any signal separated by more than 75 MHz	N/A N/A Automatically measures the largest signal present provided signal is >10 dB (typical) above any signal separated by less than 75 MHz; >20 dB (typical) above any signal separated by more than 75 MHz	N/A N/A Automatically measures the largest signal present provided signal is >10 dB (typical) above any signal separated by less than 75 MHz; >20 dB (typical) above any signal separated by more than 75 MHz
Power Measurement Channel 1 Channel 2 Range Accuracy at input connector (0 dBm to –20 dBm) 0.05–12.4 GHz 12.4–20 GHz 20–26.5 GHz 26.5–46 GHz Resolution Display	N/A Counter sensitivity to +7 dBm ±1.5 dB ±1.5 dB N/A N/A 0.01 dB dBm or millwatts/microwatts	N/A Counter sensitivity to +7 dBm ±1.5 dB ±1.5 dB ±2.0 dB N/A 0.01 dB dBm or millwatts/microwatts	N/A Counter sensitivity to +7 dBm ±1.0 dB ±1.5 dB ±1.5 dB ±2.0 dB 0.01 dB dBm or millwatts/microwatts