

Pre-compliance vs. Compliance

	Pre-compliance testing	Compliance Test
Purpose	To increase the confidence level at final compliance test	To achieve certificates (e.g. C-tick, CE, UL, KC, CCC, FCC)
Overall	Not identical to, but can simulate the standard procedure as much as possible	Must follow the standard procedure
Physical setup requirements	Can be done in house, throughout the design process	Must be done in test house (for certification)
	Can be done in a shielded room, or an open area	Must be in an anechoic chamber
	EMI receiver or spectrum analyzer	Must use an EMI receiver
	Simplified test setup	Must use standard test setup
Cost	Much less expensive, and quick turn-around	Very expensive and time consuming
Result	Will report an EMI risk	Will report an EMI failure
	Able to track to the interference source with a NF probe	Cannot tell where the failure comes from

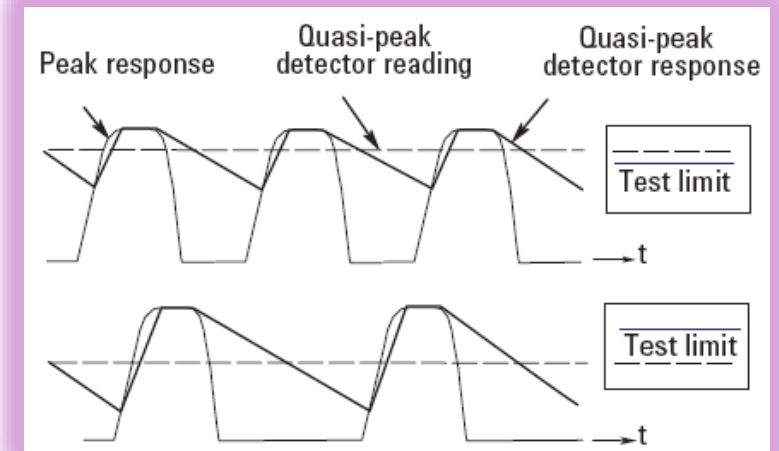
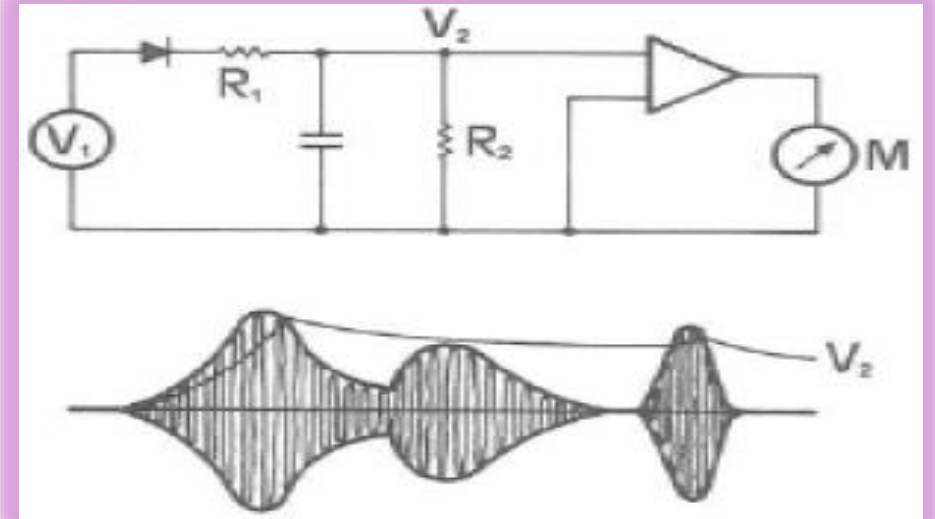
CISPR 16-1-1 Compliant Receiver

A CISPR 16-1-1 receiver must have the following functionality in the range 9 kHz - 18 GHz:

- A normal +/- 2 dB absolute accuracy
- CISPR-specified resolution bandwidths (-6 dB)
- Peak, quasi-peak, EMI average, and RMS average detectors
- Specified input impedance with a nominal value of 50 ohms; deviations specified as VSWR
- Be able to pass product immunity in a 3 V/m field
- Be able to pass the CISPR pulse test (implies pre-selector below 1 GHz)
- Other specific harmonic and intermodulation requirements

About quasi-peak detection

- There are three commonly used detection modes for making EMI measurements, including peak, average, and quasi-peak detection.
- Why use Quasi-peak detection?
 - Used for CISPR based measurements.
 - weighting signals as a function of repetition rate.
 - Lower repetition rate noise has less “annoyance factor” and thus gets less emphasis
 - CISPR bandwidth: 200 Hz, 9 kHz, and 120kHz bandwidth.



Detection Modes

Peak $\geq$ Quasi-Peak $\geq$ Average

