AMPTEK, INC.
14 DEANGELO DRIVE, BEDFORD, MA 01730-2204 U.S.A.
TEL + 1 (781) 275 2242 FAX + 1 (781) 275 3470
e-mail: sales@amptek.com WWW: http:/www.amptek.com

A225 APPLICATION NOTES

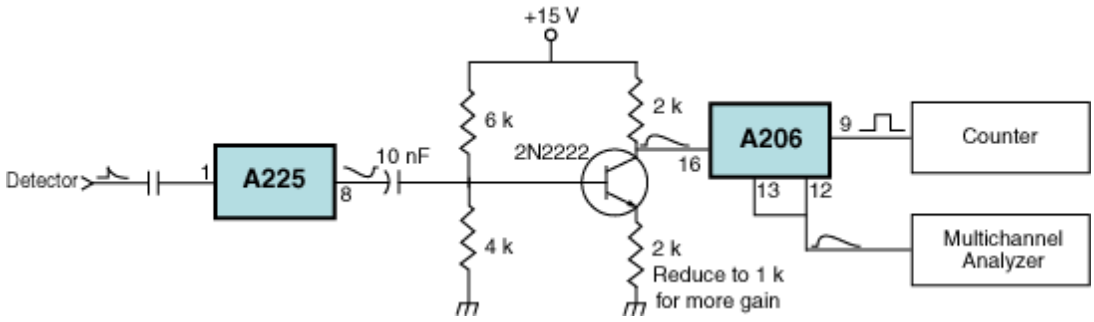
1. A225 Overload Characteristics

The A225 can be operated at high supply voltage (Vs = +25 VDC) in order to maximize the dynamic range and hence minimize the overload conditions. Furthermore, PIN 5 can be connected to a negative supply up to –2 VDC to further decrease the overload recovery time.

Up to 100 Mev (Si) or 500 picocoulomb can be analyzed with the A225 without overloading the unit, resulting into a dynamic range of 40,000.

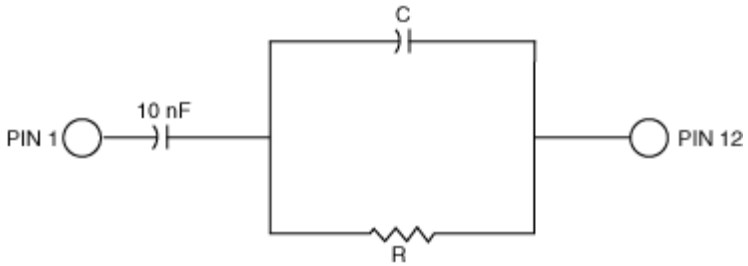
The x10 overload characteristics of the A225 are: <20 μs @ V_S = +25 VDC and <40 μs @ V_S = +5 VDC.

2. Inverter for A225/A206 When Detector Signal is Positive



3. A225 Adjustable Sensitivity

The sensitivity of the A225 can be reduced by adding the following external network:



Example: C = 10 pF; R = 300 KΩ will reduce the sensitivity by a factor of 10.

R will have to be adjusted for the individual detector load so that no undershoot occurs on the output pulse.

Important: An equivalent detector load (typically 150 – 200 pF) must be present for PIN 1 to ground in order to stabilize the loop and reduce high frequency oscillation on the output pulse.