

Title (en)  
PULSE PROCESSING

Title (de)  
IMPULSVERABREITUNG

Title (fr)  
TRAITEMENT D'IMPULSIONS

Publication  
**EP 2745401 A1 20140625 (EN)**

Application  
**EP 12761774 A 20120815**

Priority  
• GB 201114148 A 20110817  
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Abstract (en)  
[origin: GB2493742A] An LED D1 is biased near its knee voltage so that a negative input voltage pulse  $V_{in}$  causes radiant energy to be emitted to a Silicon Carbide photodiode D2. A following positive overshoot pulse (4, figure 1) has no optical effect and so does not cancel the effect of the negative pulse. The relatively long fall time of the photodiodes response to the radiant energy provides a current output pulse which is longer than the input voltage pulse  $V_{in}$ . Alternatively, the photodiode may be operated in photovoltaic mode (figure 5), or a phototransistor or photomultiplier may be used. The photodiode output pulse may be further extended by a charge amplifier 10 comprising an operational amplifier with resistor-capacitor feedback (figure 3). The stretched pulses may be processed using slower and simpler components. Amplitude information is not lost. The input pulses may be from proton or neutron detectors.

IPC 8 full level  
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CPC (source: EP GB)  
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