

ABSTRACT

POWER ARRAY FOR HIGH POWER PULSE LOAD

The present invention relates to a method and a controlled power supply for supplying bursts of substantially constant voltage from a voltage reservoir to a plurality of pulse loads via a load switch, said power supply comprising: a) an array of low voltage current sources each for feeding constant DC current at a nominal voltage to a respective storage capacitor; b) a plurality of switch power supplies coupled to each of the storage capacitors and respective ones of the pulse loads being coupled to each of the switch power supplies; c) each of the storage capacitors being configured for storing energy during an inactive portion of a load switching cycle of the respective switch power supply to which the corresponding storage capacitor is coupled when the pulse loads are inactive; d) a respective output capacitor in association with each of the switch power supplies for feeding voltage to the respective pulse loads during an active portion of the load switching cycle; and e) the respective storage capacitor being configured for supplying the stored energy via the respective to the respective switch power supply to which the storage capacitor is coupled to each of the pulse loads coupled to switch power supply during an active portion of the load switching cycle.

FIG. 3