

## **Stacked gas discharge tube (GDT) as a new overvoltage protection device for radio base stations (RBS)**

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A new overvoltage protection device will be presented, which consists of a stack of several single gas discharge tubes (actually 2 to 5 pcs. in a stack). By series addition of single gaps a superposition of the single arc voltages happens and a respectable value for the device arc voltage of  $> 72\text{V}$  for a 5 fold stack can be reached. This property makes the device interesting for use as an overvoltage protection component in a DC source application, by example for applications with a 48V battery source, used for powering the Radio Base Stations (RBS) for telecom cellular phone signal distribution. The EPCOS- LN8 series with diameter 8mm stacked GDT's is able to withstand high currents, caused by external lightning strokes. Typical data for the ability of components to conduct impulse currents are currents of 20kA, 8/20 $\mu\text{s}$  and 4kA, 10/350 $\mu\text{s}$  wave shapes.