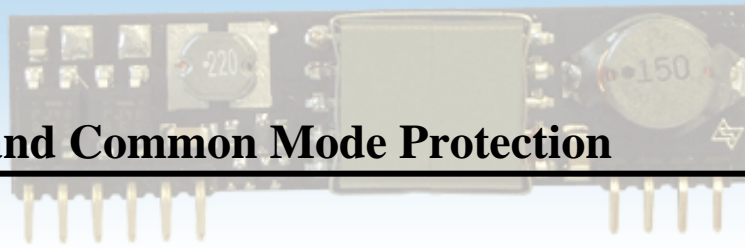


Ag9000 Differential and Common Mode Protection



This application note shows how to protect the Ag9000 Power over Ethernet (POE) modules from differential over-voltages exceeding the 80V maximum rated surge input voltage and common mode voltage exceeding 710V.

An inexpensive but effective solution to limiting the differential voltage can be achieved by connect Tranzorb diodes across each of the POE module inputs. SMAJ58CA bidirectional Tranzorb diodes will provide protection from surges up to 400W for 1ms. If higher surge current capability is thought necessary 600W SMBJ58CA or 1500W SMCJ58CA devices would be suitable.

A simple solution to preventing common mode transients damaging the Ag9000 is to connect a Varistor across the barrier between pins 5 and 7. The SR431K07DS from Walsin, the SVC431D-07A from Samwha or equivalent are suitable.

