Metal Oxide Varistor : Application Note

- IC Protection against Electro-static Discharge(ESD)

![IC Protection Diagram]

- Noise Suppression

![Noise Suppression Diagram]
Equipment Protection against Line Transient Damage

The varistors have many advantages which make it ideal for use as a suppressor on AC or DC power line.

- Fig. 3 Absorption of line-line surge in single-phase system
- Fig. 4 Absorption of line-line and line-ground surge in single-phase system
- Fig. 5 Absorption of line-line surge in three-phase system
- Fig. 6 Absorption of line-line and line-ground surge in three-phase system

Protection of Components Switching Inductive Load

The transistor in Fig. 7 is to operate a solenoid, inductive load. The energy stored in inductor is dissipated in the reverse bias conduction of the transistor and might cause transistor breakdown. A varistor can be connected, collector-to-base, to dissipate the stored energy in the forward bias state without damaging the transistor.

- Fig. 7 Solenoid circuit with varistor protection.
Transitive Protection of Solid State Circuit
Modern electronic equipments and appliances contain solid state circuits that are susceptible to malfunction or damage caused by transient voltage spikes.

Extend the Life of Relay Contacts
When the current in inductive load is interrupted by mechanical contacts, the voltage across the contacts builds up and cause arcing which is destructive to the contacts. Varistors can be applied to prevent initiation of the arc.