

ABSTRACT

METHOD TO PREVENT CHARGING EFFECTS IN ELECTROSTATIC DEVICES

The present invention significantly reduces charging effects in electrostatic devices due to charge accumulation in or on the insulating materials on the active surfaces of the devices. This has been achieved by replacing the dielectric material that is normally present between the force generating conductor surfaces with a semi-insulating material. This semi-insulating film overcomes the effects of charging, while avoiding short-circuits when the surfaces are pulled into contact. It is not subject to insulation breakdown within the range of voltages used to operate the device. Examples of semi-insulating materials that may be used are semi-insulating polysilicon (SIPOS) and silicon rich silicon nitride.

(FIGURE 3 IS SUGGESTED FOR PUBLICATION)