Abstract: The influence of environment humidityon charge storage stahility and the transport ofdetrapping charges in the bulk of FEP、PTFE、PCTFE and PI electrets were investigated byisothermal surface potential decay and open-circuitTSD analysis,The shift of mean charge depth forthese materials at different environmental bumiditywere measured by heat pulse technique,Theexperimental results indicate that the charge storagestability of FEP、PTFE、PCTFEand PI material isinfluenced by relative humidity .The higherhumidity ,the lower charge storage stability.withincreasing environmental humidity the mean chargedepth,FEP、PTFE、PCTFE and PI shift towardsbulk from the free surface of the sample especially inhigher humidity environment