Abstract： Irradiation cross-linked polypropylene (IXPP) foams show high piezoelectric activity after proper hot-pressing treatment and corona charging. Quasi-static piezoelectric d_{33} coefficients around 400 pC/N were measured by means of the direct piezoelectric effect. Dynamic values of the inverse piezoelectric d_{33} coefficients, determined from the dielectric resonance spectra at 220 kHz, is about 68% of the quasi-static d_{33} values. The difference between the quasi-static and the dynamic values of d_{33} is probably due to the enhancement of Young's modulus of IXPP with increasing frequency. The piezoelectric d_{33} coefficients are slightly dependent on the applied pressure in the range up to 50 kPa. The d_{33} values decrease by 70% when the samples are exposed to 90°C for 1day; and a pre-aging treatment improves the thermal stability of the d_{33} coefficients.