Performances in ultrasonic active transducers of interconnected porous lead zirconate titanate (PZT) piezoelectric disks with a porosity ranging from 30 to 70%, and polarized along their axial axis, are investigated. The characterization method used is based on the measurement of the voltage, which appears between the two faces of the piezoelectric element when it is excited by a current impulse. The device used, allows the acquisition of axial and radial vibrations of the transducer, and from these data, electromechanical and acoustic parameters are deduced. One observes that interconnected porosity causes the disappearance of the radial vibrations, and for large porosities the disk vibrates exclusively according to the axial mode. kt is increased, the acoustic impedance is reduced, and the axial propagation velocity reaches ~2500 m s−1 for 30% of porosity. These results show that interconnected porous PZT are suitable for making ultrasonic active transducer, such as biomedical imaging devices