The structural element that provides the connection between the structure and the ground is foundation. The foundation transmits to the ground the loads consisted of the structure, and to the structure also the loads occurred in the ground. Shallow basic types are known as footing, strip footings and raft foundations. It is known that these basic types are determined by destructive drilling or exploration pits and by non-destructive GPR method. In this study, an alternative method is proposed to determine the foundation type of the structure. This method is based on microtremor measurements. In this study, microtremor measurements were carried out in 10 buildings with different heights covering Bornova, Bayraklı, Balçova, Karşıyaka, Karabağlar districts of Izmir province. One of these buildings is 15 years old, five are 25 years old and four are 30 years old. In terms of the ground characteristics of these buildings, 5 buildings are on very soft soil, 3 buildings are on soft soil and 2 buildings are on rock. It is known that all buildings are constructed in 8 strip footings, 1 raft foundation and 1 footing types by examining the approved reinforced concrete-static project. In order to determine the type of foundation, microtremor measurements were taken at 5 different points on the foundation and on 1 natural ground in 30 minute records. In the measurements taken on the foundation, 3 pieces on the beam connecting the two columns and 2 pieces’ perpendicular to this measurement profile are arranged to correspond to the room midpoints and the same measuring mechanism is applied in all building foundations. The purpose of microtremor measurements on foundation of building and natural ground is to detect whether the building foundation type can be determined by microtremor measurements. For this purpose, microtremor data were evaluated with Geopsy package program. After the necessary data processing steps, the dominant frequencies were determined by plotting the H/V ratios. The dominant frequencies obtained from the measurements on the foundation of the building and on the natural ground were compared and their basic types were interpreted.