Monitor of All-sky X-ray Image (MAXI) on the International Space Station has started observations since 2009 August 15. Now about 4 years data has been accumulated. We can study variability of X-ray objects by calculating the power spectrum density (PSD) of the X-ray flux. However, MAXI data has some gaps during observations. At the data gap, we calculate the averages of both ends of the gap for several data points and interpolate linearly in the gap. Moreover, PSDs contain the Poisson level originating from statistical fluctuation. Such component should be subtracted from the PSD. We estimated the Poisson level by simulating the count data with Poisson distribution of the source integrated area and the background area. We applied our method to calculate PSDs for several kinds of objects observed by MAXI. We obtained significant PSDs from 16 Seyfert galaxies. For blackhole binary Cyg X-1 there was difference in the shape of PSD between the hard state and the soft state. On high mass X-ray binary, Cen X-3, SMC X-1, and LMC X-4, there were several peaks in the PSD corresponding to the orbital period and the superorbital period.