Measurement/Searching techniques/Experiment

To solve this acoustic problem, the current in the telecommunication line was measured (Figure 1.3-2). The common mode current wave shape is shown in Figure 1.3-3. A typical period 200-300 µs periodic characteristic can be seen in the figure. Its major frequency is about 5 kHz and it was estimated that the noise source must be a switching power source. The investigations showed that the power mains cable was wired parallel to the telecommunication line, and that the telecommunication line was connected to the main distribution frame (MDF) room, where the mains power transformer was located.

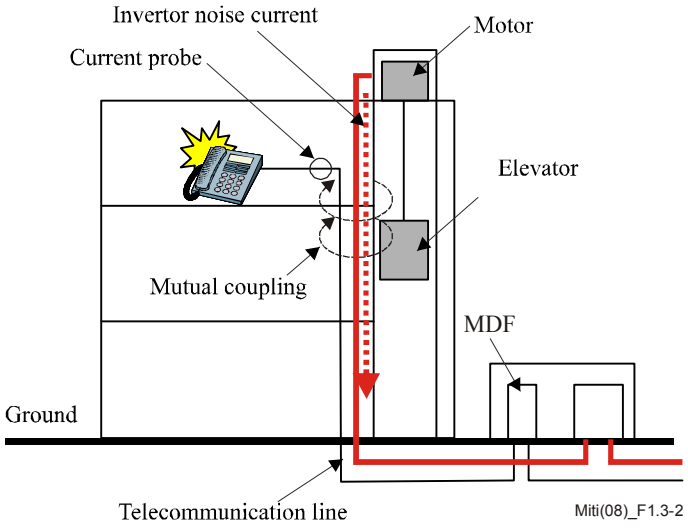

Figure 1.3-2 – Measurement of noise current

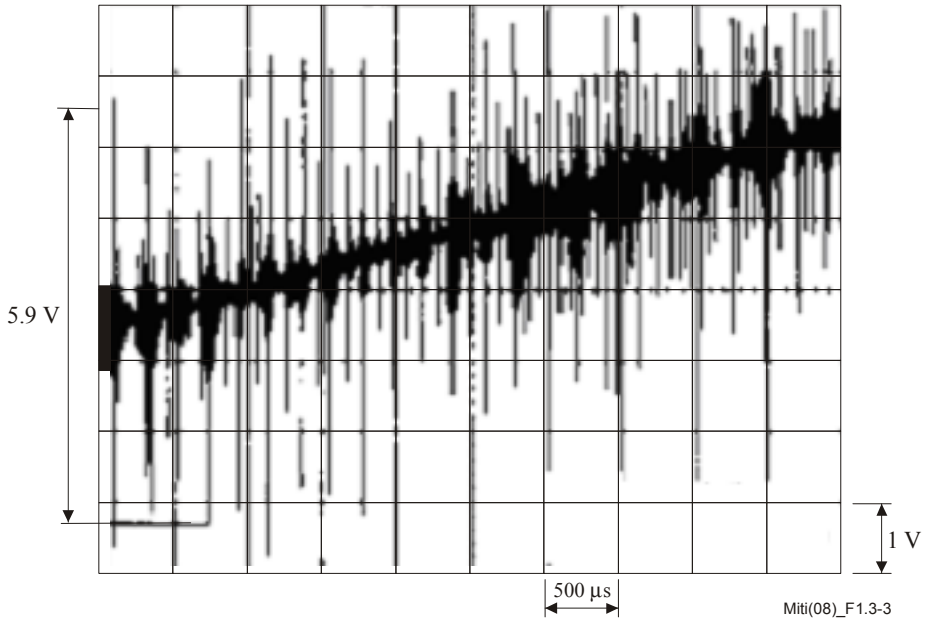

Figure 1.3-3 – Current wave shape on the line connected to the telephone