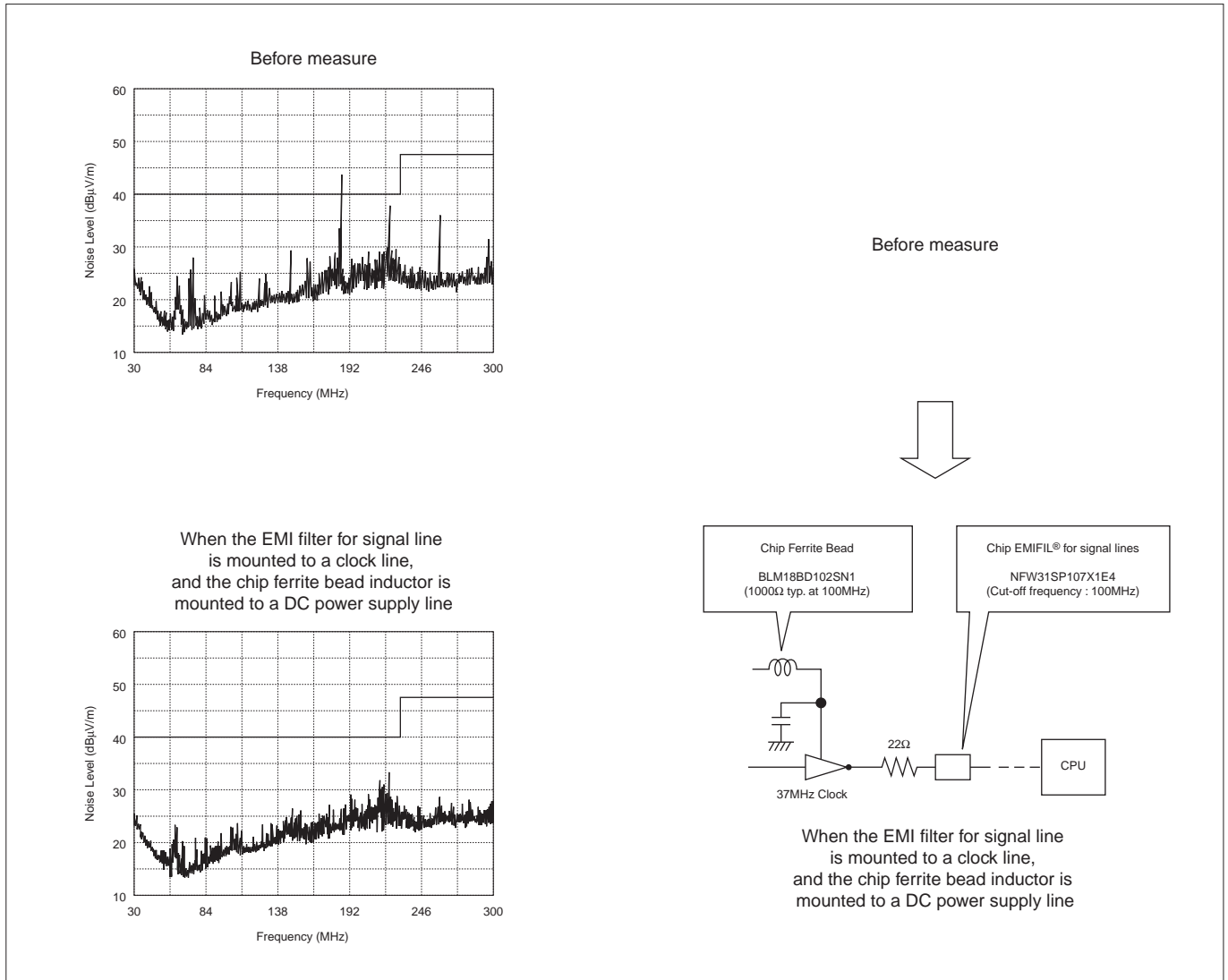


7 Example of Noise Suppression in Fax Machines

Example of effects produced when installing EMI filters on the Clock lines

Noise suppression effects produced when installing the EMI filter on the data clock lines.



7

Installing EMI filters on Bus Lines

The Data and Address bus contain many lines that switch on and off simultaneously. This constant switching causes instantaneous large currents to flow through the GND and power supply lines resulting in unwanted noise. Therefore, it is necessary to suppress the current flow on the signal line. The BLM series (Chip Ferrite Bead) is generally used for this purpose. On the control bus line, especially at high operating speeds, the BLM□□B series (Chip Ferrite Bead for high-speed signal lines that features a steep impedance rising) is used. On bus lines with high-level noise, the NFR21G series (Chip EMIFIL®) may be effective. The radiation spectrum of noise generated from bus lines resembles that of noise generated from the motor. It is important to check which of the motor or bus lines is the source of the noise and then install EMI filters.

