

FREQUENCY DETERMINATION CIRCUIT FOR A DATA PROCESSING UNIT

ABSTRACT OF THE DISCLOSURE

A present invention provides a frequency determination circuit (204) to determine whether the frequency of a clock signal is higher or lower than a reference frequency with a high precision. A capacitor element (251) is charged/discharged with a power supply voltage that is cycled by a switching transistor (252) according to a clock signal. A comparator circuit (253) compares a constant reference voltage produced by a band gap regulator circuit (211) from the power supply voltage with a voltage stored in the capacitor element (251). A high/low determination circuit (216) determines, from the output signal of the comparator circuit (253), whether the clock signal frequency is higher or lower than a predetermined reference frequency. This makes it possible to determine whether the clock signal has a low frequency or a high frequency with precision.

FIG. 3