

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-172353

(43)Date of publication of application : 02.07.1996

(51)Int.Cl.

H03L 7/06

(21)Application number : 06-314965

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(22)Date of filing : 19.12.1994

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(54) DIGITAL PLL CIRCUIT

(57)Abstract:

PURPOSE: To optionally set up filter characteristics from the external, to enable a user to set up characteristics in accordance with specifications, to provide this digital PLL circuit with a synchronous state displaying function, and to easily execute characteristic evaluation.

CONSTITUTION: The digital PLL circuit is provided with an edge detecting circuit 1 for detecting the edge of a reference input signal, a phase comparing circuit 2 for comparing the phase of an edge pulse with that of a self-return pulse 9 and outputting detection signals in respective ranges of phase synchronism, delay and advance and a filter 3 for up/down counting the detection signals in the delay and advance ranges. The circuit is also provided with a selector 4 for switching and setting up the number of stages of the filter 3 in accordance with a filter stage setting signal 12 applied from the external, a phase shifting circuit 5 for outputting the pulse of a phase shift request signal 101 outputted from the filter 3, a frequency dividing circuit 7 for controlling the frequency dividing ratio of a reference clock 101 by the phase shift pulse, and a phase state detecting circuit 6 for inputting a detection signal 102 in the synchronizing range with the signal 101 and outputting a synchronous state display signal.

