

ABSTRACT

TRANSMISSION DEVICE, RECEPTION DEVICE, AND
METHOD USED IN MOBILE COMMUNICATION SYSTEM USING OFDM
METHOD

5

A transmitting device includes a transmission
signal generating unit configured to generate a
transmission signal by inverse-Fourier-transforming
reference signals and data signals mapped to
10 subcarriers and a transmitting unit configured to
wirelessly transmit the transmission signal. In the
transmitting device, a total power level allocated to
signals to be transmitted in a time slot is equal to a
total power level allocated to signals to be
15 transmitted in any other time slot, and a power density
per unit bandwidth of the reference signals is greater
than a power density per unit bandwidth of the data
signals. This configuration makes it possible to
equalize the total transmission power level of all time
20 slots and thereby to improve the power amplification
efficiency. Also, with this configuration, since the
reference signals are transmitted with a higher power
than that for other signals, it is possible to improve
the accuracy of channel estimation.

25

Fig. 1