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ISHIDA et al.(10) **Pub. No.: US 2024/0214251 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **DATA CARRIER APPARATUS,
COMMUNICATION SYSTEM, AND
REPLACEABLE UNIT**(52) **U.S. Cl.**
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In a data carrier apparatus, a reception unit receives, from a data carrier driving apparatus, a pulse signal that alternately repeats a first-level period and a second-level period, which are set based on individual data values. A measurement unit measures respective time widths of the first-level period and the second-level period in the received pulse signal. A demodulation unit demodulates data conveyed by the received pulse signal, by determining the data value corresponding to the first-level period based on a measured value of the first-level period output from the measurement unit and a first reference value, and determining the data value corresponding to the second-level period based on a measured value of the second-level period output from the measurement unit and a second reference value.

