

Title (en)
RF SYNTHESIZER AND RF TRANSMITTER OR RECEIVER INCORPORATING THE SYNTHESIZER

Title (de)
HF-SYNTHESIZER UND DEN SYTHESIZER ENTHALTENDER HF-SENDER ODER -EMPFÄNGER

Title (fr)
SYNTHETISEUR RF ET EMETTEUR RF OU RECEPTEUR EQUIPE DU SYNTHETISEUR

Publication
EP 1929676 A4 20120321 (EN)

Application
EP 06790049 A 20060825

Priority
• US 2006033611 W 20060825
• GB 0518215 A 20050908

Abstract (en)
[origin: GB2430090A] An RF (radio frequency) synthesizer (200) includes a VCO (voltage controlled oscillator) (120) operable to provide an output signal at a desired frequency, a phase locked loop (130) including (i) the VCO; (ii) a variable frequency divider (114) operable to receive an output signal of the VCO and to provide a feedback signal which is divided in frequency relative to the output signal of the VCO; and (iii) a phase frequency detector (110) operable to receive the feedback signal produced by the VCO and to compare a phase and frequency of the feedback signal with the phase and frequency of a reference signal; and is characterised by (iv) a further control loop (230) inside the phase locked loop (130); and (v) a phase rotator (205) connected to an output of the VCO and operable to equalise a phase error of an output signal produced by the VCO, the further control loop being connected to the phase rotator to provide a control signal to the phase rotator. The synthesizer may beneficially include an integrated circuit which incorporates at least part of the VCO, the phase locked loop and the further control loop. Also described is a RE transmitter or receiver, e.g. for use in a base transceiver station, which incorporates the synthesizer.

IPC 8 full level
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CPC (source: EP GB)
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Citation (search report)
• [XDA] US 6642800 B2 20031104 - DRAPKIN OLEG [CA], et al
• [A] US 2003165209 A1 20030904 - CHEN CHUN-YING [US], et al
• [A] US 6366146 B2 20020402 - FREDRIKSSON JESPER [SE]
• See references of WO 2007030358A2

Designated contracting state (EPC)
DE FR IT

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GB 0518215 D0 20051019; **GB 2430090 A 20070314**; **GB 2430090 B 20071017**; CN 101421927 A 20090429; EP 1929676 A2 20080611; EP 1929676 A4 20120321; WO 2007030358 A2 20070315; WO 2007030358 A3 20081127

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