

Title (en)

TEMPERATURE COMPENSATION CIRCUIT FOR A CRYSTAL OSCILLATOR AND METHOD OF PROVIDING SAME

Title (de)

SCHALTUNG UND VERFAHREN ZUR TEMPERATURKOMPENSATION EINES QUARZOSZILLATORS

Title (fr)

CIRCUIT DE COMPENSATION THERMIQUE POUR UN OSCILLATEUR A QUARTZ ET PROCEDE DE FABRICATION DUDIT CIRCUIT

Publication

EP 0886921 A4 20000308 (EN)

Application

EP 97948526 A 19971125

Priority

- US 9721618 W 19971125
- US 76815496 A 19961217
- US 90189297 A 19970729

Abstract (en)

[origin: WO9827652A1] A temperature compensation (TC) circuit (10) for a crystal oscillator module (12) used in a communication device (200). An existing microcontroller (210) of the communication device (200) is used to provide TC digital data (30) for a crystal oscillator (18). In this way, the crystal oscillator module (12) does not require an on-board memory which substantially cuts costs. TC digital data (30) is converted to a TC signal (22) in a digital-to-analog converter which controls the crystal oscillator frequency. To compensate for radio voltage regulator variations over temperature, the crystal oscillator module (12) includes an on-board voltage regulator (34) which supplies a characterized regulated voltage (36) to the digital-to-analog converter such that the TC signal (22) from the digital-to-analog converter is inherently corrected for voltage variations in the voltage regulator (34). This improves stability of output frequency (20) from 5 ppm to about 2 ppm.

IPC 1-7

H03L 1/02; **H03L 5/00**; **H04B 1/40**

IPC 8 full level

H03B 5/32 (2006.01); **H03B 5/36** (2006.01); **H03J 7/12** (2006.01); **H03L 1/02** (2006.01); **H04B 1/40** (2006.01)

CPC (source: EP KR)

H03B 5/368 (2013.01 - EP); **H03J 7/12** (2013.01 - EP); **H03L 1/02** (2013.01 - KR); **H03L 1/025** (2013.01 - EP); **H04B 1/40** (2013.01 - EP); **H03L 1/028** (2013.01 - EP)

Citation (search report)

- [A] WO 9632775 A1 19961017 - MATSUSHITA ELECTRIC IND CO LTD [JP], et al & EP 0766376 A1 19970402 - MATSUSHITA ELECTRIC IND CO LTD [JP]
- [A] US 5204975 A 19930420 - SHIGEMORI MIKIO [JP]
- See references of WO 9827652A1

Designated contracting state (EPC)

DE DK FR GB IE IT NL

DOCDB simple family (publication)

WO 9827652 A1 19980625; CN 1211354 A 19990317; EP 0886921 A1 19981230; EP 0886921 A4 20000308; JP 2000507073 A 20000606; KR 100290498 B1 20010601; KR 19990082540 A 19991125

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