

Title (en)
IQ PHASE IMBALANCE CORRECTION METHOD IN CARTESIAN LINEARIZATION FEEDBACK PATH WITH DUAL PHASE SHIFTERS

Title (de)
VERFAHREN ZUR KORREKTUR VON IQ-PHASENUNGLEICHGEWICHT BEI EINEM KARTESISCHEN
LINEARISIERUNGSRÜCKKOPPLUNGSWEG MIT DUALPHASENSCHIEBERN

Title (fr)
PROCÉDÉ DE CORRECTION D'UN DÉSÉQUILIBRE DE PHASES I/Q SUR UNE VOIE DE RETOUR À LINÉARISATION CARTÉSIENNE À L'AIDE
DE DÉPHASEURS DOUBLES

Publication
EP 2415175 A2 20120208 (EN)

Application
EP 10762078 A 20100318

Priority
• US 2010027744 W 20100318
• GB 0905576 A 20090331

Abstract (en)
[origin: GB2469076A] To implement phase training in a Cartesian transmitter, the phase training module 530 adjusts the Q phase shifter 546 to minimise the Q feedback signal Qfb with a test signal on the I input only and then the module 530 adjusts the I phase shifter 544 to minimise the I feedback signal Ifb with a test signal on the Q channel only, thereby effecting separate and independent phase corrections for the I and Q loops. The technique is useful in counteracting the not insubstantial IQ imbalance exhibited by local oscillator (LO) phase shifters using separate mixers for the I and Q LO signals (figure 4). The initial setting for the I phase shifter 544 during phase training may be set in accordance with the phase shift determined for the Q phase shifter (because the I and Q phase shifts will often be comparable), thereby reducing calibration time for the I phase shifter and reducing overall phase training time.

IPC 8 full level
H04B 1/04 (2006.01); **H03F 1/34** (2006.01); **H03F 3/24** (2006.01); **H04B 7/005** (2006.01); **H04L 27/36** (2006.01)

CPC (source: EP GB)
H03F 1/3294 (2013.01 - GB); **H03F 1/345** (2013.01 - EP); **H03F 3/24** (2013.01 - EP); **H04L 27/364** (2013.01 - EP); **H04L 27/368** (2013.01 - GB); **H03F 2200/204** (2013.01 - EP); **H03F 2200/336** (2013.01 - EP); **H03F 2200/57** (2013.01 - EP)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
GB 0905576 D0 20090513; **GB 2469076 A 20101006**; **GB 2469076 B 20130522**; EP 2415175 A2 20120208; EP 2415175 A4 20161221; WO 2010117582 A2 20101014; WO 2010117582 A3 20110113

DOCDB simple family (application)
GB 0905576 A 20090331; EP 10762078 A 20100318; US 2010027744 W 20100318