

Title (en)

Driver circuit for liquid crystal display.

Title (de)

Treiberschaltung für eine Flüssigkristallanzeige.

Title (fr)

Circuit d'entraînement pour une affichage à cristaux liquides.

Publication

EP 0493820 B1 19941012 (EN)

Application

EP 91122321 A 19911227

Priority

JP 41719990 A 19901229

Abstract (en)

[origin: EP0493820A1] A driver circuit for a liquid crystal display comprises a multiplexer (MPX) which selectively outputs m/2 kinds of drive source voltages among m kinds of different drive source voltages (VLC1 SIMILAR VLCm), necessary for m/2 display gradations, according to a frame selection signal (VFRM) supplied from a frame selection terminal (FRM). The number of transistor switches (T11 SIMILAR Tk(m/2)) which are divided into a plurality of switch groups can thus be reduced to one half that in the conventional LCD driver circuit. The LCD driver circuit comprises operational amplifiers (OP1 SIMILAR OPk) each arranged between each of the switch groups and the liquid crystal display, which supply LCD drive voltages (VO1 SIMILAR VO_k) of high drive current capacity to the liquid crystal display according to the drive source voltages supplied via the transistor switches. As no large current flows through each of the transistor switches, it is possible to reduce the transistor size. The LCD driver circuit of the invention is suited to the LCD requiring a number of display gradations and permits high density integration and cost reduction. <IMAGE>

IPC 1-7

G09G 3/36

IPC 8 full level

G02F 1/133 (2006.01); **G09G 3/20** (2006.01); **G09G 3/36** (2006.01)

CPC (source: EP)

G09G 3/2011 (2013.01); **G09G 3/3688** (2013.01); **G09G 3/3614** (2013.01); **G09G 2310/027** (2013.01)

Cited by

US5757351A; US5426447A; US5459483A; US7098904B2; US11804184B2; WO2021109969A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0493820 A1 19920708; **EP 0493820 B1 19941012**; DE 69104601 D1 19941117; DE 69104601 T2 19950518; JP H04242788 A 19920831

DOCDB simple family (application)

EP 91122321 A 19911227; DE 69104601 T 19911227; JP 41719990 A 19901229