

Title (en)

Circuit for driving a liquid crystal panel.

Title (de)

Treiberschaltung für eine Flüssigkristallanzeigetafel.

Title (fr)

Circuit de commande d'un panneau d'affichage à cristaux liquides.

Publication

EP 0424935 A2 19910502 (EN)

Application

EP 90120478 A 19901025

Priority

JP 27718989 A 19891026

Abstract (en)

According to the present invention, there is provided a circuit for driving a liquid crystal panel includes a plurality of shift registers (11Aa, 12Aa, ..., 1mAa) connected in cascade on an A array for transferring data in one direction, a plurality of shift registers (11Bc, 12Bc, ..., 1mBc) on a B array for transferring the data transferred from the shift registers (11Aa, 12Aa, ..., 1mAa) in a direction opposite to the one direction, and a plurality of circuit blocks (11Ac, 12Ac, ..., 1mAc; 11Bc, 12Bc, ..., 1mBc) on the A and B arrays for temporarily storing the data transferred from the shift registers (11Aa, 12Aa, ..., 1mAa; 11Bc, 12Bc, ..., 1mBc). The circuit blocks (11Ac, 12Ac, ..., 1mAc; 11Bc, 12Bc, ..., 1mBc) include output stages for supplying the data outside a semiconductor chip, and the output stages are constituted of MOS transistors (3A3, 3B3). The MOS transistors of the first circuit block (11Ac) on the A array and the m-th circuit block (1mBc) of the B array, those of the second circuit block (12Ac) on the A array and the (m-1)-th circuit block (1m-1Bc) on the B array, ..., those of the m-th circuit block (1mAc) on the A array and the first circuit block (11Bc) on the B array are symmetrically arranged, respectively. The currents flow through the symmetrical MOS transistors in the same direction.

IPC 1-7

G09G 3/36

IPC 8 full level

G02F 1/133 (2006.01); **G09G 3/36** (2006.01); **H01L 21/339** (2006.01); **H01L 21/822** (2006.01); **H01L 27/04** (2006.01); **H01L 27/148** (2006.01); **H01L 29/762** (2006.01)

CPC (source: EP KR)

G09G 3/3674 (2013.01 - EP); **G09G 3/3685** (2013.01 - EP); **H01L 27/04** (2013.01 - KR); **H01L 29/76** (2013.01 - KR)

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0424935 A2 19910502; **EP 0424935 A3 19920429**; **EP 0424935 B1 19941221**; DE 69015316 D1 19950202; DE 69015316 T2 19950524; JP 2653526 B2 19970917; JP H03139695 A 19910613; KR 910008864 A 19910531; KR 940008218 B1 19940908

DOCDB simple family (application)

EP 90120478 A 19901025; DE 69015316 T 19901025; JP 27718989 A 19891026; KR 900017197 A 19901026