

QR-LP Based Flexible Switch/Transistor Design

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Abstract

Quick Response Liquid Powder technology from Bridgestone Corp. has some critical properties that when appropriately augmented have the capability to form the basis for a transparent flexible switch/transistor. The applications of such a switch could range from flexible displays to signage systems among other diverse potential applications.

Keywords: QR-LD; Flexible Switch; Flexible Transistors.

Extended Abstract

The Quick Response Liquid Powder [QR-LP] Technology from Bridgestone Corp. has some notable desirable characteristics that lend the technology to a vast array of some interesting applications, the least of which is organic flexible switches/transistors which takes advantage of the organic liquid powder particles. In a short the intrinsic super fast switching speed of the technology, clocked to below 0.2 milliseconds, provides much of the basis for the hereby proposed switch design. Since the liquid powder can also be made in transparent form, this adds the extra advantage that most semiconductor TFTs cannot easily afford, transparency.

In the proposed design the QR-LP switch component set up entails a structural mimic of the traditional TFT with all the familiar electrode connections. This is done intentionally as that would enable the technology to mimic the same footprints in familiar circuits for easy of integration.

The QR-LP is charged and thus setting the Source to a charge opposite that of the QR-LP while both the Gate and Drain are similar breaks the circuit by attracting all QR-LP to Source electrode. Reversing the polarities of both the Gate and Drain electrodes insuccession closes the circuit.

