T6K34

# Preliminary

TOSHIBA CMOS Digital Integrated Circuit Silicon Monolithic

# **T6K34**

## Row Driver LSI for Dot Matrix Graphic LCD

The TOSHIBA T6K34 is a row (common) driver for a small-to-medium-sized dot matrix graphic LCD.

The T6K34 has 168 outputs for LCD driver signals (common).

The T6K34 contains a power supply circuit with electronic volume enabling the LCD to be driven by a single power supply.

Thus, in combination with a T6K33/S6B0021 (by Samsung) segment driver, the T6K34 can be used to implement a low-power LCD system without the need for a separate power supply IC.

### **Features**

- LCD drive outputs: 168 common outputs
- Operating voltage:  $V_{DD} = 1.8 \text{ V} \sim 3.3 \text{ V}$ ,  $V_{IN} = 2.7 \text{ V} \sim 3.6 \text{ V}$

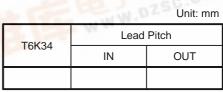
 $(V_{DD} \le V_{IN})$ 

- LCD drive voltage: 28.8 V (max)
- Booster circuit: V<sub>IN</sub> × (-6) max
- Contrast control: 64 steps (max)
- Partial display function
- CMOS process
- Package: Bump chip (COF), TCP (tape carrier package)
- Low power consumption: ISS = 225 μA (typ.) ...... Design target

Conditions:  $V_{DD} = V_{IN} = 3.0 \text{ V}$ , using ×5 booster, LCD non-leaded, Ta = 25°C, 1/168 duty, 1/6 bias,

PCK = 15 kHz, contrast = 20 H

• Voltage regulator: Temperature coefficient = -0.0% (typ.)  $\pm 0.04\%$  °C



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TCP (Tape Carrier Package)



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