

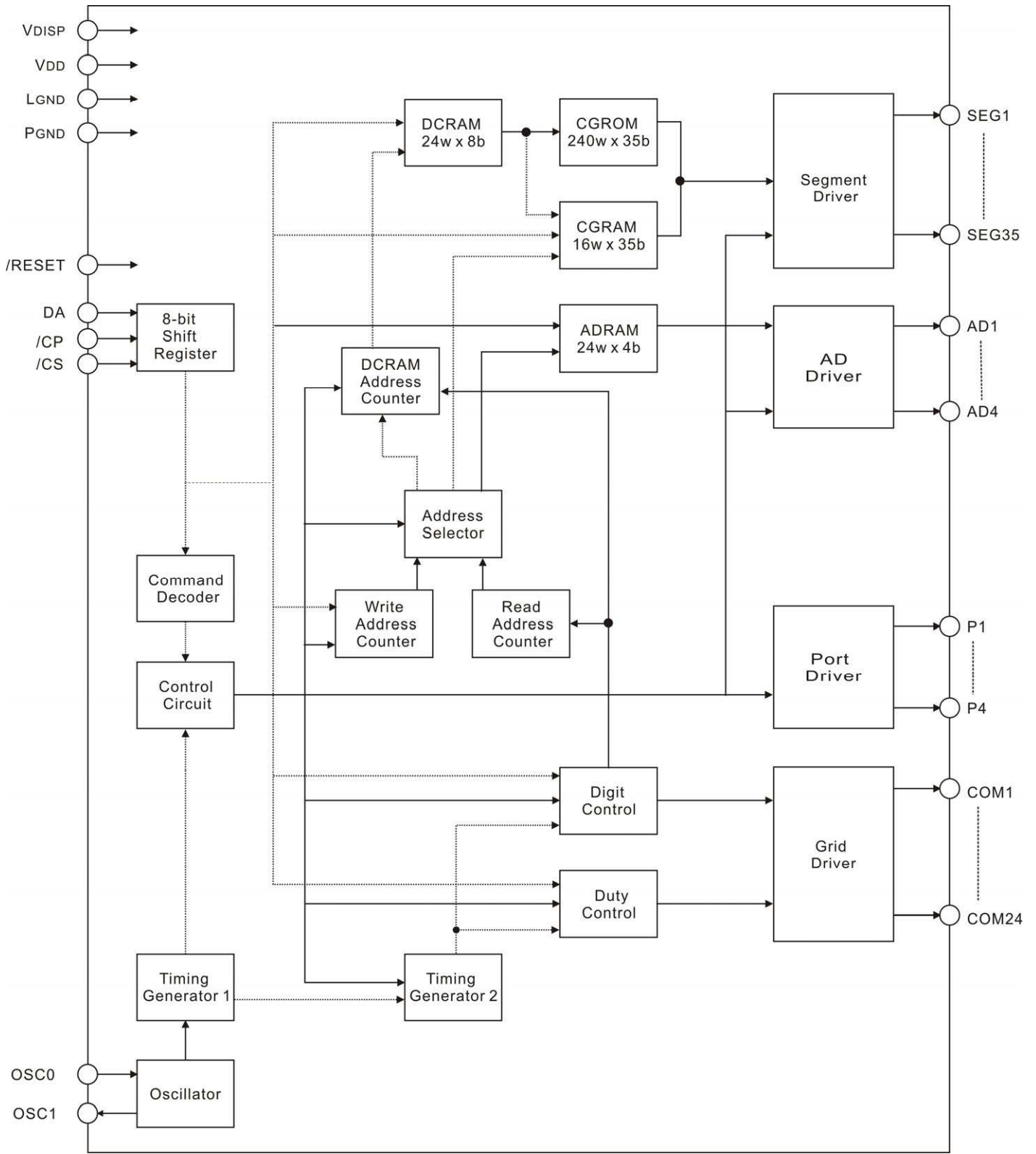
DESCRIPTION

The PT6321 is a dot matrix fluorescent display tube controller driver IC which displays characters, numerics and symbols. Dot matrix fluorescent display tube drive signals are generated by serial data sent from a microcontroller. A display system is easily realized by internal ROM and RAM for character display.

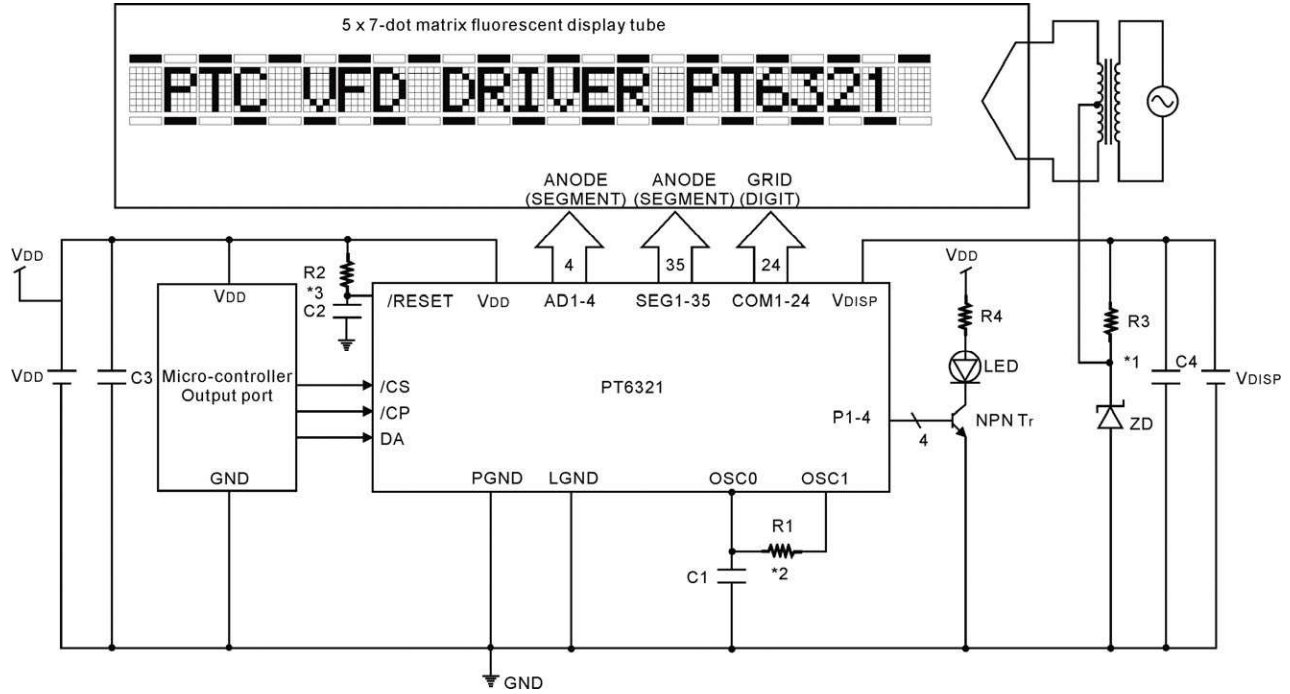
FEATURES

- Logic power supply(V_{DD}): $3.3V \pm 10\%$ / $5.0V \pm 10\%$
- Fluorescent display tube drive power supply (V_{DISP}): 20V~60V
- VFD driver output current (VFD driver output can directly be connected to the fluorescent display tube. No pull-down resistor is required.)
 - Segment driver (SEG1 to SEG35): -5.0mA ($V_{DISP}=60V$)
 - Segment driver (AD1 to AD4): -10.0mA ($V_{DISP}=60V$)
 - Grid driver (COM1 to COM24): -20.0mA ($V_{DISP}=60V$)
- General output port output current
 - Output driver (P1-4): $\pm 1.0mA$ ($V_{DD}=3.3V \pm 10\%$)
 $\pm 2.0mA$ ($V_{DD}=5.0V \pm 10\%$)
- Content of display
 - CGROM: 5x7 dots, 240 types (character data)
 - CGRAM: 5x7 dots, 16 types (character data)
 - ADRAM: 24 (display digit) x 4 bits (symbol data)
 - DCRAM: 24 (display digit) x 8 bits (register for character data display)
 - General output port: 4 bits (static mode)
- Display control function
 - Display digit: 9 to 24 digits
 - Display duty (contrast adjustment): 8 stages
 - All lights ON/OFF
- 3 interfaces with microcontroller: DA, /CS, /CP(4 interfaces if /RESET is added)
- 1-byte instruction execution (excluding data write to RAM)
- Built-in oscillation circuit (external C and R)
80-pin plastic LQFP (LQFP80-P-1414-0.65-K)

BLOCK DIAGRAM



APPLICATION CIRCUIT



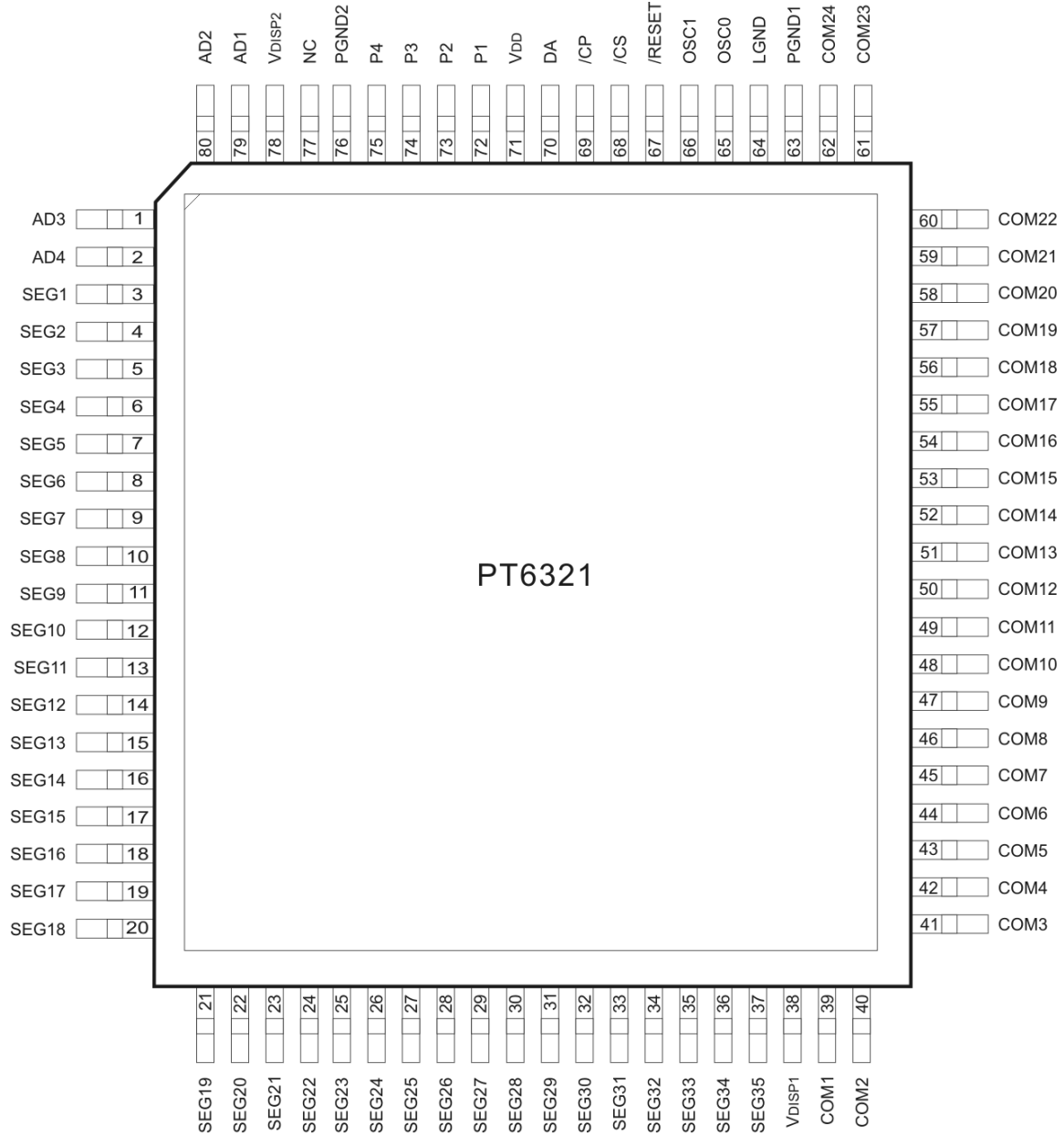
Notes:

- *1. The V_{DISP} voltage depends on the fluorescent display tube used. Adjust the value of the constants R3 and ZD to the V_{DISP} voltage used.
- *2. The value of R1 & C1 depend on PT6321 supply voltage of V_{DD} ($V_{DD}=5V$: R1=3.3K Ω , C1=47pF; $V_{DD}=3.3V$: R1=3.3K Ω , C1=39pF)
- *3. R2=1K Ω , C2=0.1 μ F

ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6321-LQ	80 Pins, LQFP	PT6321-LQ

PIN CONFIGURATION



IMPORTANT NOTICE

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Princeton Technology Corp.
2F, 233-1, Baociao Road,
Sindian, Taipei 23145, Taiwan
Tel: 886-2-66296288
Fax: 886-2-29174598
<http://www.princeton.com.tw>