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## VFD Driver/Controller IC with Character RAM    *Preliminary*    **PT6302**

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### **Description**

PT6302 is a dot matrix VFD Driver/Controller IC utilizing CMOS Technology specially designed to display characters, numerics and symbols. PT6302 provides 35 dot matrix plus 2 additional segment drivers and 16 grid drivers. 248 types of character data (CGROM), 8 types of character data (CGRAM), 16 display digits x 2 bits symbol data, 16 display digits x 8 bits register for character data display and 2 general output bits for static operation are provided. Pin assignments and application circuit are optimized for easy PCB layout and cost saving advantages.

### **Features**

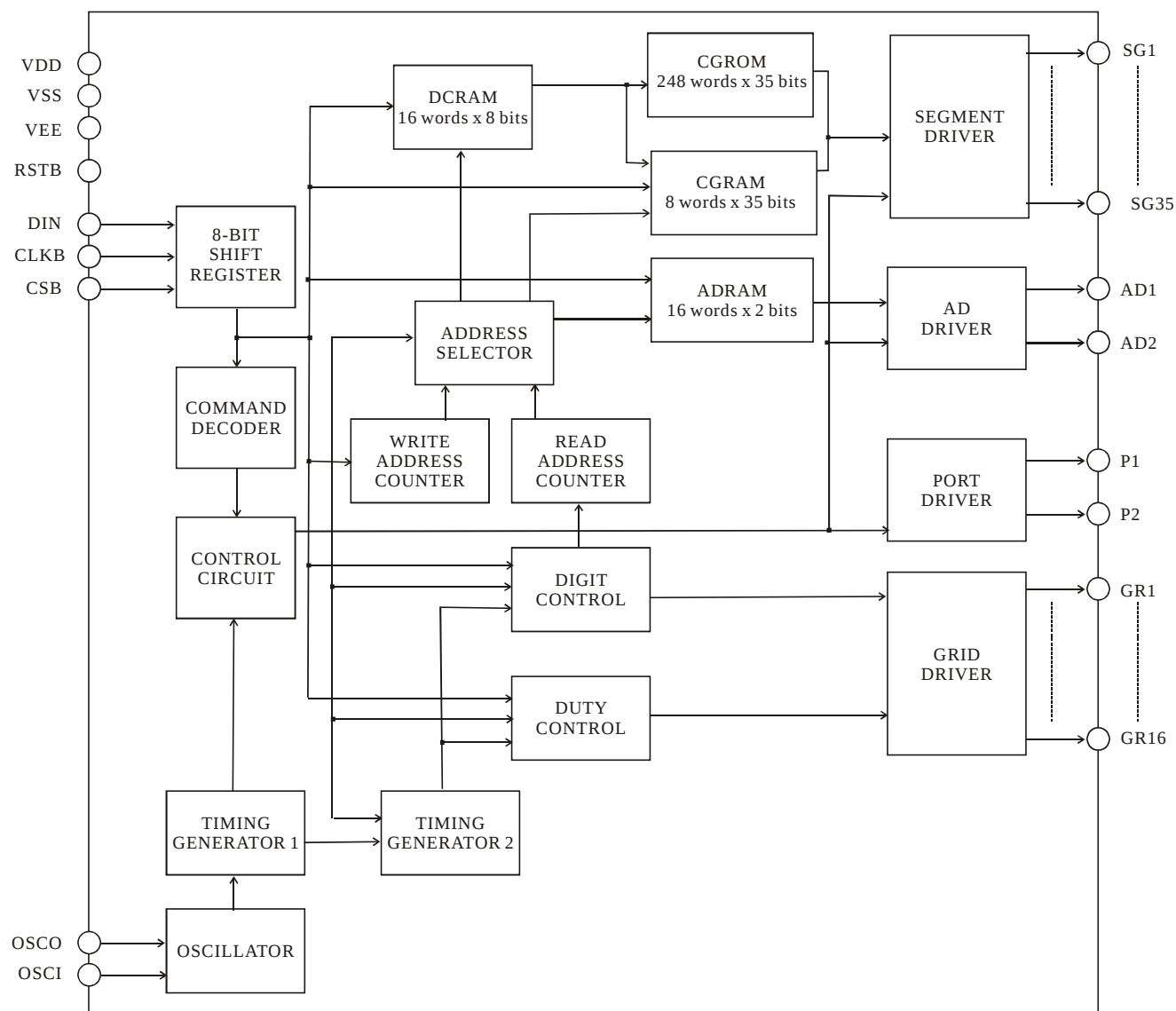
- CMOS Technology
- Logic Power Supply:  $V_{DD} = 3.3\text{ V} \pm 10\%$  or  $5.0\text{ V} \pm 10\%$
- VFD Drive Power Supply:  $V_{EE} = -20\text{V}$  to  $-40\text{V}$
- Built-in Oscillation Circuit (External RC)
- One-Byte Instruction Execution (not including Data Write to RAM)
- Microcontroller Interface
- Display Contents:
  - Character Generator ROM (CGROM): 5x7 Dots (248 Character Data Types)
  - Character Generator RAM (CGRAM): 5x7 Dots (8 Character Data Types)
  - Additional Data RAM (ADRAM): 16 Display Digits x 2 Bits (Symbol Data)
  - Data Control RAM (DCRAM): 16 Display Digits x 8 Bits (Character Data Display Register)
  - General Output Port: 2 Bits (Static Operation)
- Display Control Function:
  - Display Digits : 9 to 16 Digits
  - Display Duty (Contrast Adjustment) : 8 stages
  - All Display Lights : ON/OFF Mode
- Available in 64 pins, LQFP or SSOP Package

### **Applications**

- Microcontroller Peripheral Device
- Audio/Video Equipment



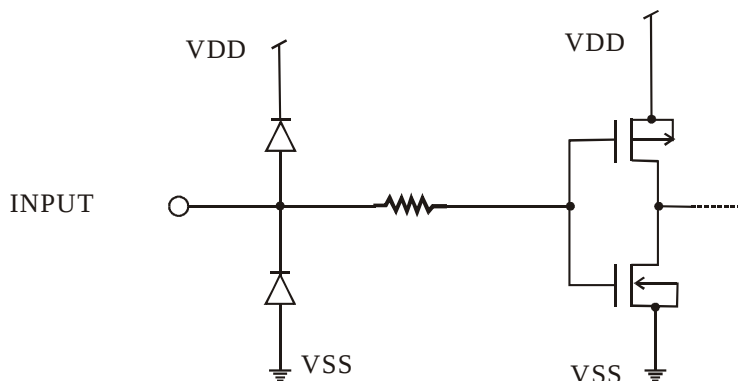
## Block Diagram



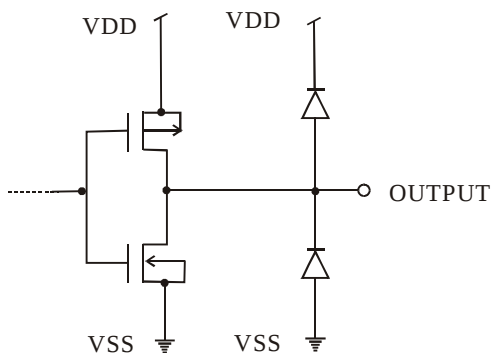


## Input & Output Configuration

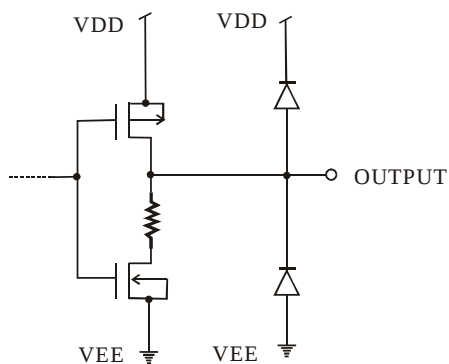
### Logic Input Pins



### Logic Output Pins

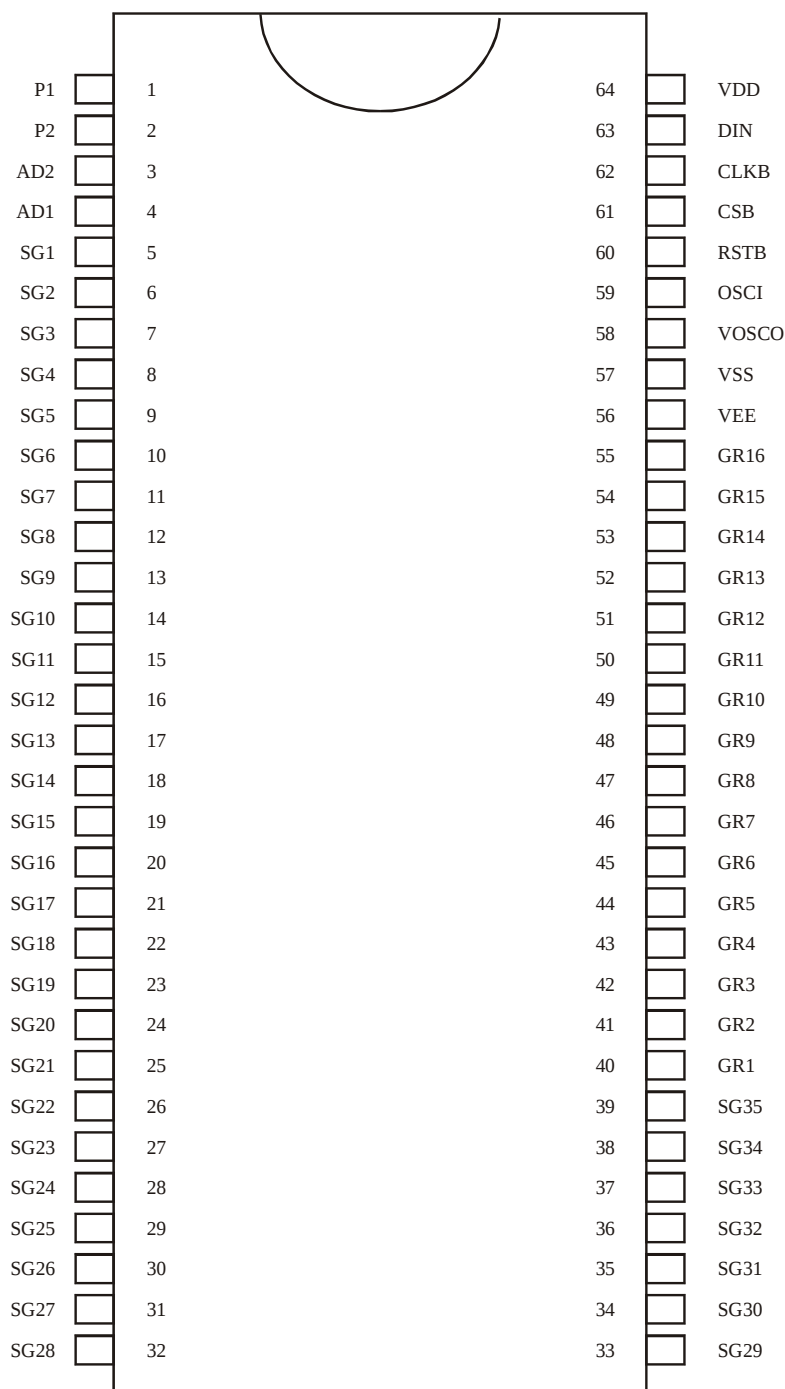


### Driver Output Pins





## Pin Configuration



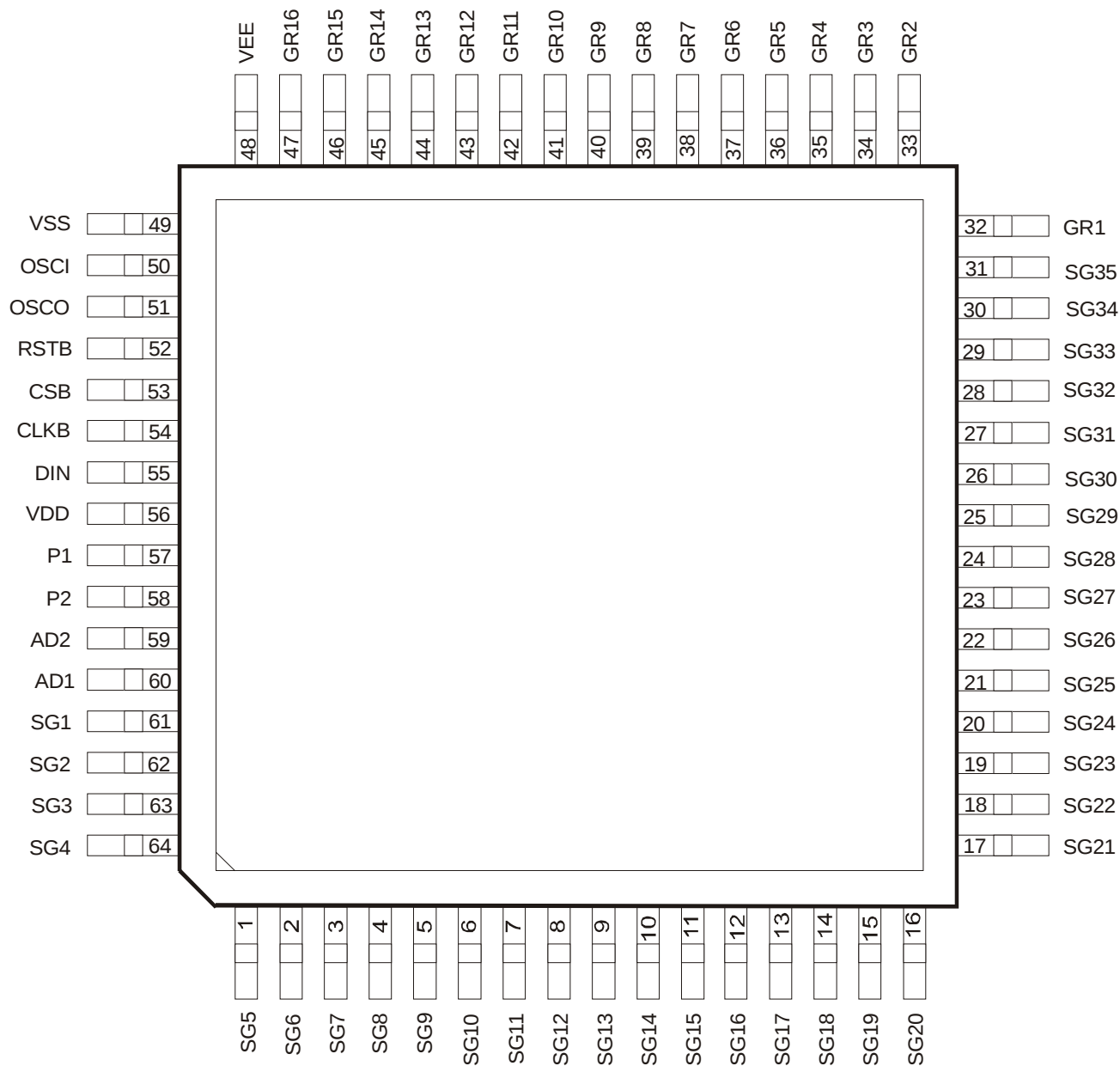
64 - pin, SSOP Package



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64-pin, LQFP Package

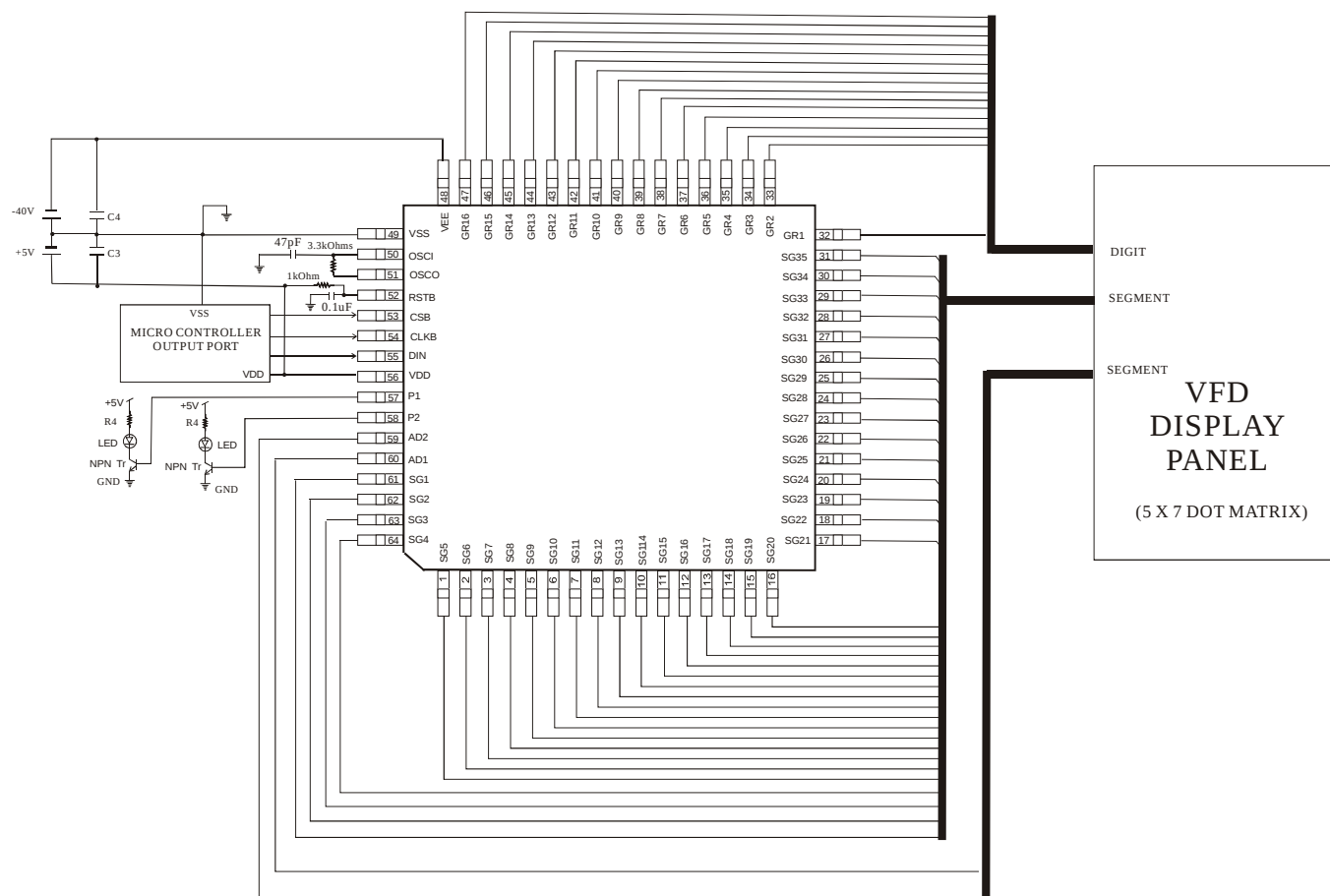


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**PT6302**

**Application Circuit**





## Ordering Information

| Packaging   | Model Number |
|-------------|--------------|
| 64-pin SSOP | PT6302-R     |
| 64-pin LQFP | PT6302LQ     |