



DESCRIPTION

PT6312B is a Vacuum Fluorescent Display (VFD) Controller driven on a 1/4 to 1/11 duty factor. Eleven segment output lines, 6 grid output lines, 5 segment/grid output drive lines, one display memory, control circuit, key scan circuit are all incorporated into a single chip to build a highly reliable peripheral device for a single chip micro computer. Serial data is fed to PT6312B via a three-line serial interface. It is housed in a 44-pin plastic LQFP Package and is functionally compatible with μ pD16312.

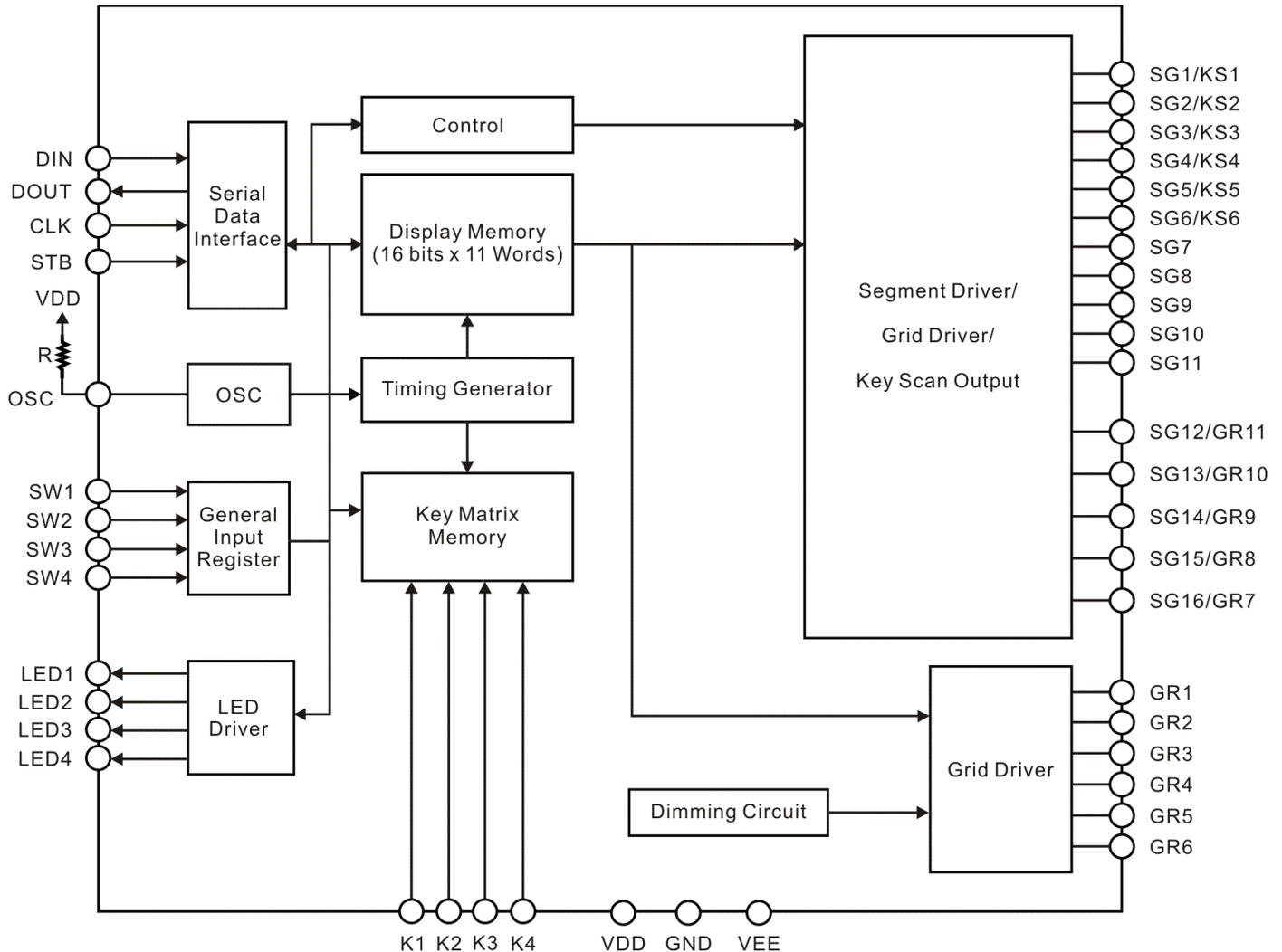
APPLICATION

- Microcomputer peripheral devices

FEATURES

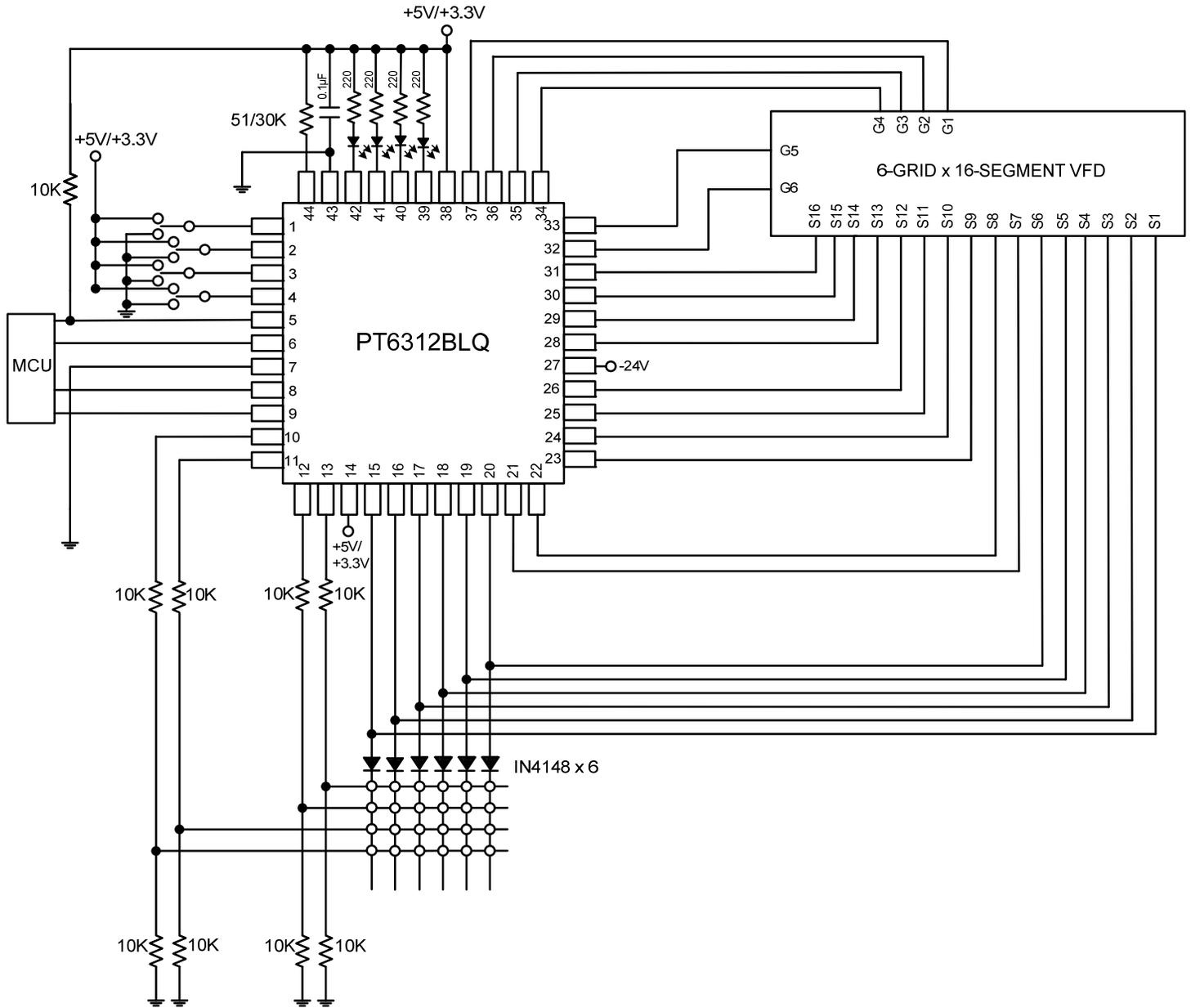
- CMOS technology
- Low power consumption
- Key scanning (6 x 4 matrix)
- Multiple display modes: (11 segments, 11 digits to 16 segments, 6 digits)
- 8-Step dimming circuitry
- LED ports provided (4 channels, 20mA max.)
- 4- Bits general purpose input ports provided
- Serial interface for Clock, Data Input, Data Output, Strobe pins
- No external resistors needed for driver outputs
- Functional compatibility with μ pD16312
- Available in 44-pin, LQFP package

BLOCK DIAGRAM





APPLICATION CIRCUIT

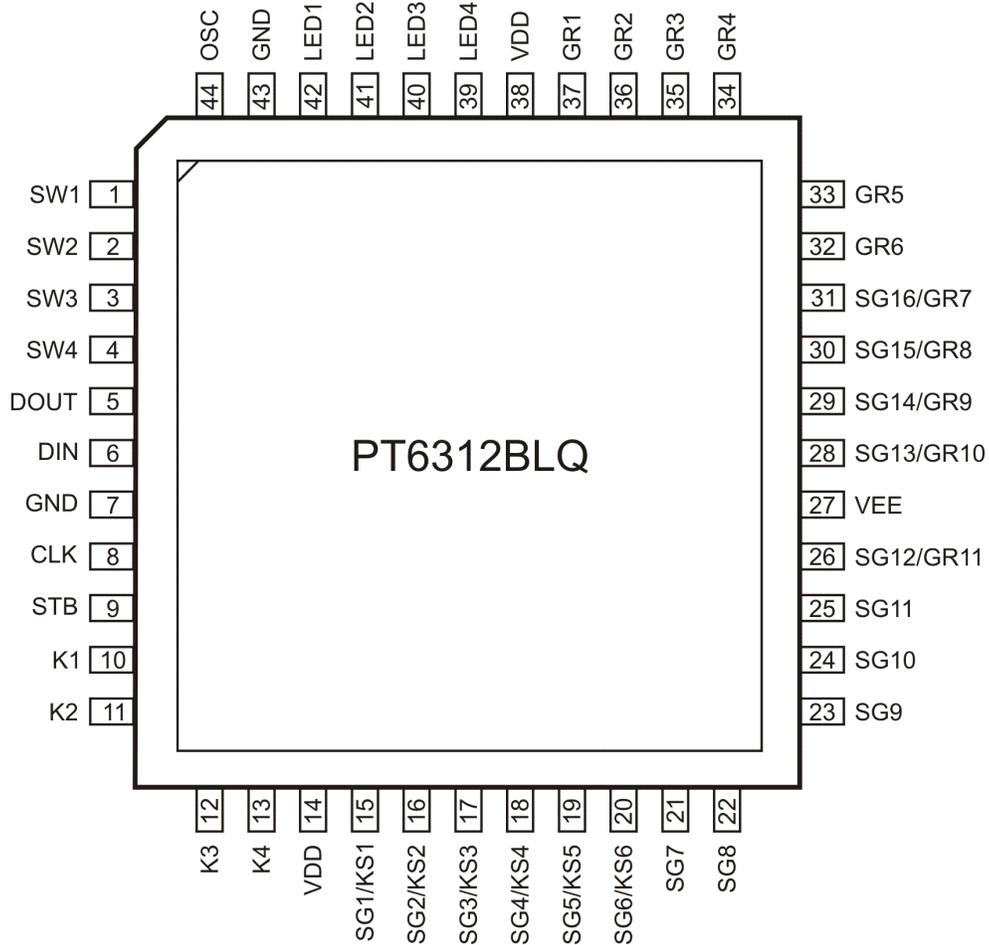




ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6312BLQ	44-pin, LQFP	PT6312BLQ

PIN CONFIGURATION





4 PIN DESCRIPTION

Pin Name	I/O	Description	Pin No.
SW1 to SW4	I	General Purpose Input Pins	1 to 4
DOUT	O	Data Output Pin (N-Channel, Open-Drain) This pin outputs serial data at the falling edge of the shift clock (starting from the lower bit).	5
DIN	I	Data Input Pin This pin inputs serial data at the rising edge of the shift clock (starting from the lower bit).	6
GND	-	Ground Pin	7, 43
CLK	I	Clock Input Pin This pin reads serial data at the rising edge and outputs data at the falling edge.	8
STB	I	Serial Interface Strobe Pin The data input after the STB has fallen is processed as a command. When this in is "HIGH", CLK is ignored.	9
K1 to K4	I	Key Data Input Pins The data inputted to these pins is latched at the end of the display cycle.	10 to 13
VDD	-	Logic Power Supply	14, 38
SG1/KS1 to SG6/KS6	O	High-Voltage Segment Output Pins Also acts as the Key Source.	15 to 20
SG7 to SG11	O	High-Voltage Segment Output Pins	21 to 25
SG12/GR11 SG13/GR10 to SG16/GR7	O	High-Voltage Segment/Grid Output Pins	26 28 to 31
VEE	-	Pull-Down Level	27
GR6 to GR1	O	High-Voltage Grid Output Pins	32 to 37
LED1 to LED4	O	LED Output Pin	42 to 39
OSC	I	Oscillator Input Pin A resistor is connected to this pin to determine the oscillation frequency.	44



IMPORTANT NOTICE

Princeton Technology Corporation (PTC) reserves the right to make corrections, modifications, enhancements, improvements, and other changes to its products and to discontinue any product without notice at any time.

PTC cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a PTC product. No circuit patent licenses are implied.

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