

DESCRIPTION

The PT16514 is 1/4 duty general-purpose LCD driver that can be used for frequency display in electronic tuners under the control of a microcontroller. The PT16514 can drive an LCD with up to 216 segments directly. The PT16514 can also control up to 8 general-purpose output ports.

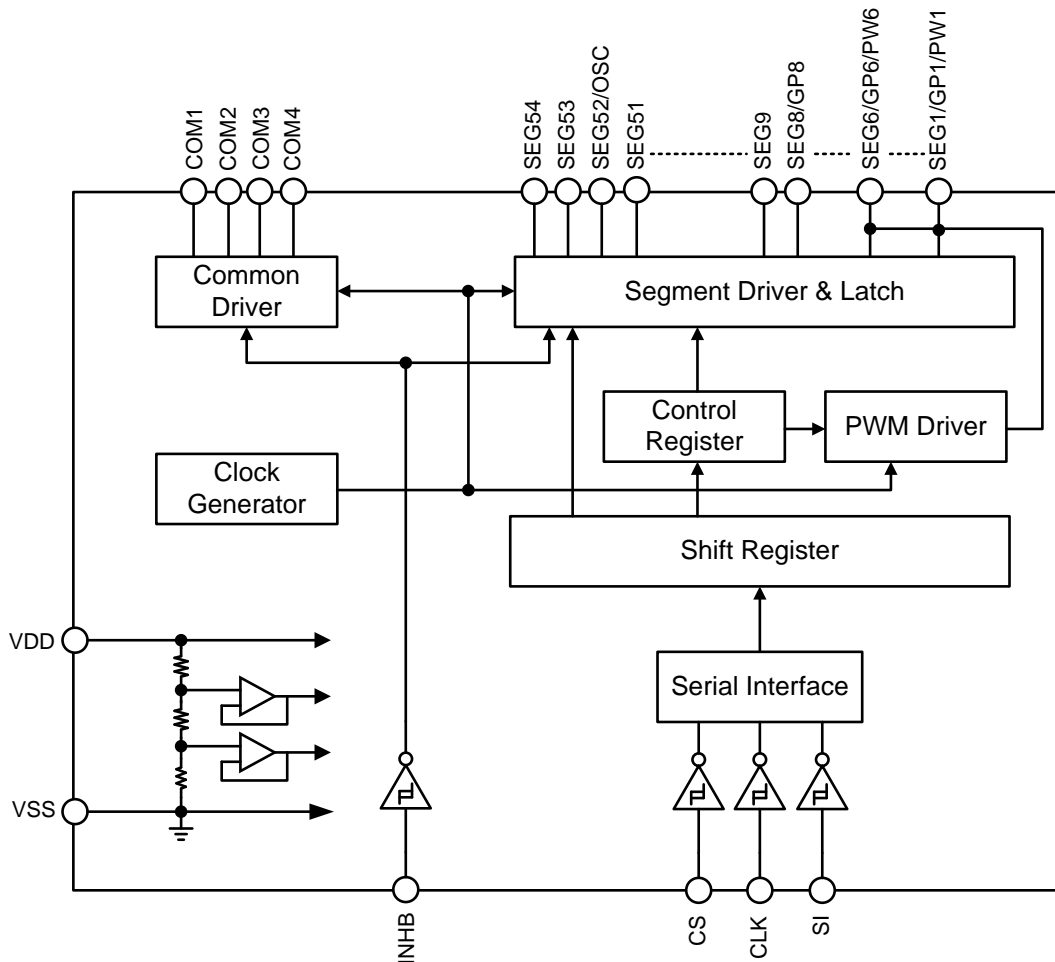
APPLICATION

- Electronic equipment with LCD Display

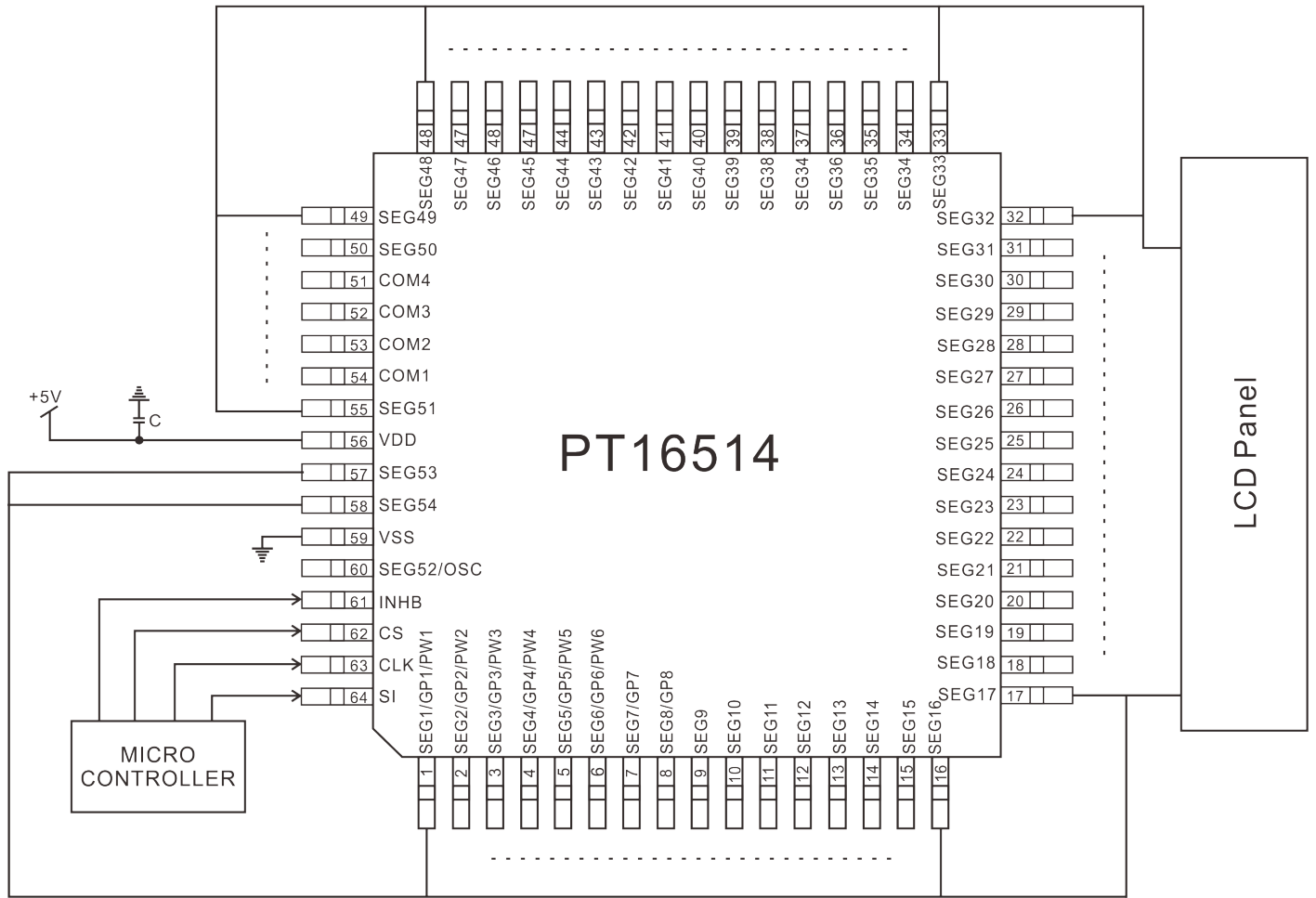
FEATURES

- Switching between 1/2 bias and 1/3 bias drive techniques under serial data control.
- Up to 216 segments for 1/4 duty drive can be displayed.
- Serial data control of switching between the segment output port and the general-purpose output port functions.
- Serial data control of frame frequency for common and segment output waveforms.
- High generality, since display data is displayed directly without decoder intervention.
- Built-in OSC circuit
- The INHB pin can force the display to the off state.
- Programmable PWM signal output pins
- AEC-Q100 Grade 2 Compliant for Automotive Applications

BLOCK DIAGRAM



APPLICATION CIRCUIT

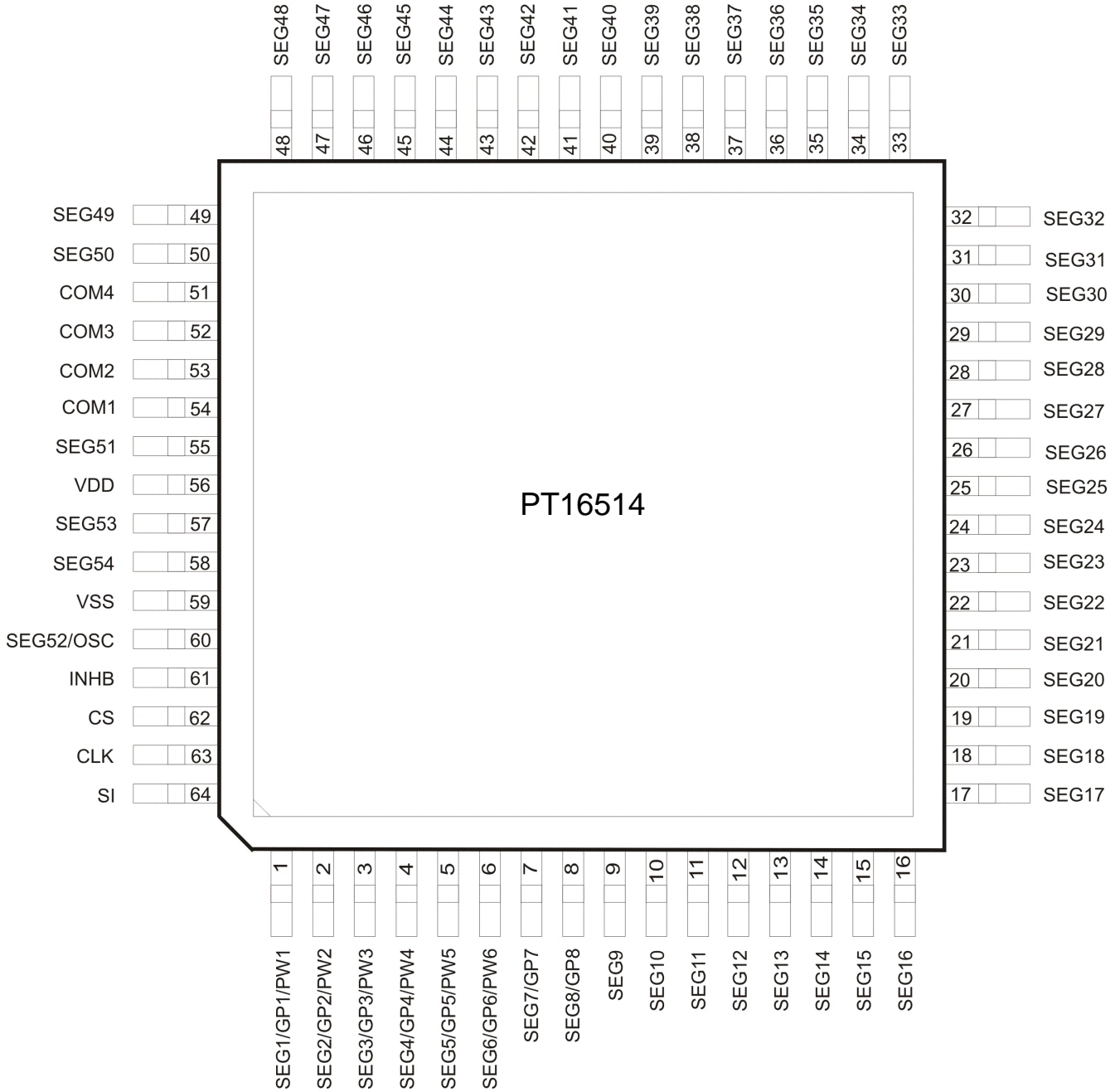





ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT16514-LQ	64 Pins, LQFP	PT16514-LQ

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	I/O	Active	Handling when unused	Function	Pin No.
SEG1/GP1/PW1 to SEG6/GP6/PW6	O	-	Open	Segment outputs for displaying the display data transferred by serial data input. The pins SEG1/GP1/PW1 to SEG8/GP8 can be used as general-purpose output ports when set up by the control data.	1 to 6
SEG7/GP7 to SEG8/GP8 SEG9 to SEG54	O				7 to 8 9 to 50, 55,57,58
COM1 to COM4	O	-	Open	Common driver outputs. The frame frequency is f_0 Hz.	51 to 54
VDD	-	-	-	Logic block power supply. Provide a voltage in the range 4.5 to 6.0V.	56
VSS	-	-	-	Ground pin. Connect to ground.	59
SEG52/OSC	I/O	-	VDD	Segment outputs for displaying the display data transferred by serial data input. The pin SEG52/OSC can be used external frequency input pin when set up by the control data.	60
INHB	I	L	GND	Display off control input <ul style="list-style-type: none"> INHB=low (V_{SS})...off SEG1/GP1/PW1 to SEG8/GP8=low (V_{SS}) (These pins are forcibly set to the segment output port function and fixed at the V_{SS} level) SEG9 to SEG54=low (V_{SS}) COM1 to COM4=low (V_{SS}) INHB=high (VDD)...on Note that serial data transfers can be performed when the display is forced off by this pin.	61
CS	I	H	GND	Serial data transfer inputs. These pins are connected to the control microprocessor. CS: Chip select CLK: Synchronization clock SI: Transfer data	62
CLK	I				63
SI	I	-			64

IMPORTANT NOTICE

Princeton Technology Corporation (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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