

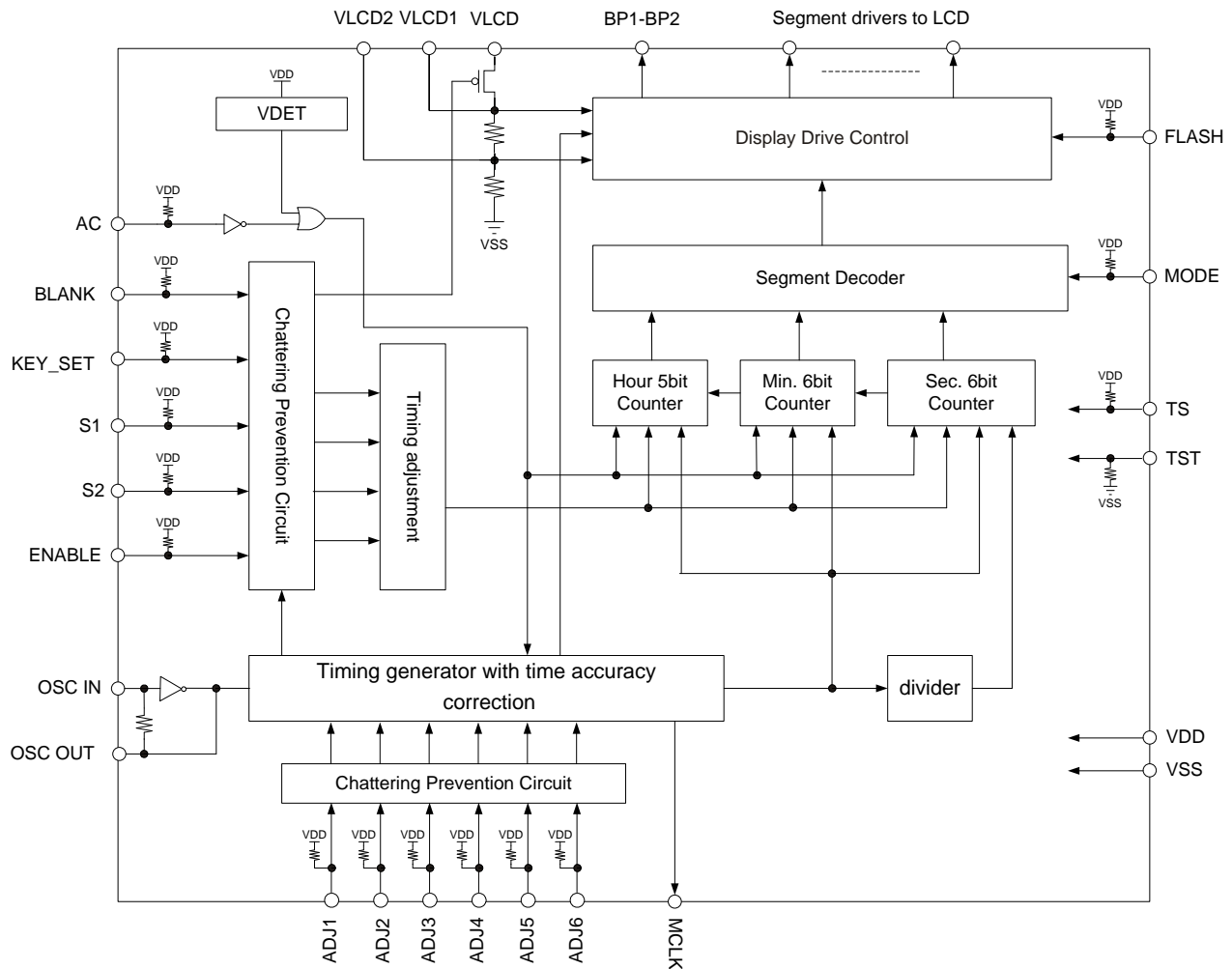
## DESCRIPTION

PT16598 is an automotive digital clock CMOS LSI. It drives LCD panel directly. It can be driven by a 4.194304MHz crystal oscillator. And provide the 12/24 hour display system.

## FEATURES

- 1/2 Duty – 1/2 Bias Drive Technique
- 4.194304MHz crystal oscillator
- Hour and Minutes setting
- 12/24 hour time display mode
- 8Hz signal output
- Internal VDET (Voltage Detection Type Reset Circuit)
- Time accuracy correction
- Power supply voltage: 2.4V to 5.5V
- 12/24 hour time display mode
- Operating temperature: -40~105°C
- Package: 44-LQFP
- 4Hz / 1Hz set mode

## BLOCK DIAGRAM

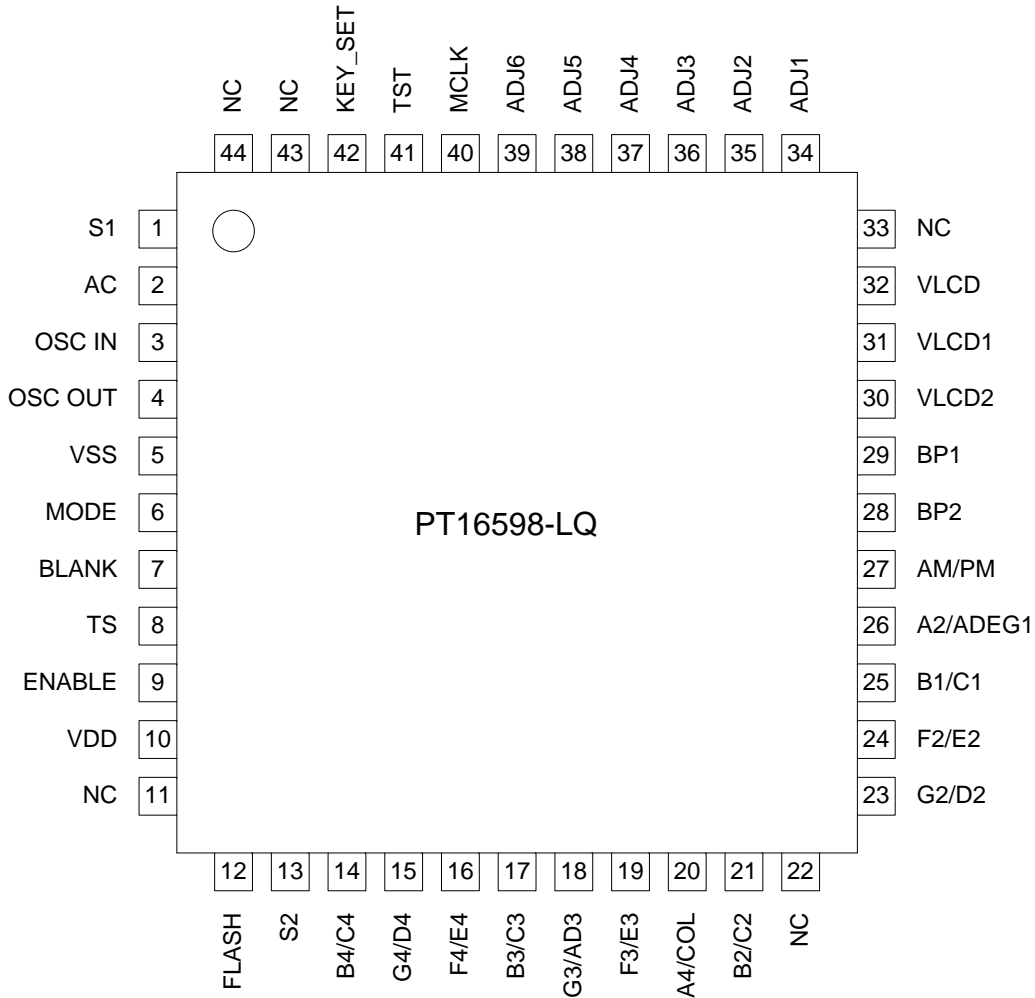




## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT16598-LQ	44-pin, LQFP	PT16598-LQ

## PIN CONFIGURATION





## PIN DESCRIPTION

Pin Name	I/O	Description	Pin No
S1	I	Hour Adjustment Input	1
AC	I	All Clear Input	2
OSC IN	I	Oscillator Input	3
OSC OUT	O	Oscillator Output	4
VSS	-	Ground Pin	5
MODE	I	12/24-Hour Mode Select Input	6
BLANK	I	LCD Display On/Off Control Signal	7
TS	I	Test Pin. Test Scan Clock Pin	8
ENABLE	I	Enable Input(For S1 And S2)	9
VDD	-	Power Supply Input Pin For Logic Part	10
NC	-	NC Pin	11, 21, 33 43~44
FLASH	I	Colon Option Input	12
S2	I	Minute Adjustment Input	13
B4/C4	O	Segment Driver	14
G4/D4	O	Segment Driver	15
F4/E4	O	Segment Driver	16
B3/C3	O	Segment Driver	17
G3/AD3	O	Segment Driver	18
F3/E3	O	Segment Driver	19
A4/COL	O	Segment Driver	20
B2/C2	O	Segment Driver	22
G2/D2	O	Segment Driver	23
F2/E2	O	Segment Driver	24
B1/C1	O	Segment Driver	25
A2/ADEG1	O	Segment Driver	26
AM/PM	O	Segment Driver	27
BP2	O	Backplane2	28
BP1	O	Backplane1	29
VLCD2	-	The Current Of Bias Voltage Generation Circuit Adjust Input	30
VLCD1	I/O	LCD Driver 1/2 Bias Supply Pin	31
VLCD	I/O	Power Supply Input Pin For LCD Driver Part	32
ADJ1~6	I	Time Accuracy Correct Control Input	34~39
MCLK	O	Clock of 8Hz frequency is generated when using 4.194304MHz crystal	40
TST	I	Test Scan Mode Select Input Customer should connect this pin to VSS or floating. "H" level: ATPG Mode, "L" level: Normal Mode.	41
KEY_SET	I	4HZ/1Hz set mode select	42

## **IMPORTANT NOTICE**

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