6 DIGIT LCD ALARM WATCH WITH BLACK LIGHT CONTROL

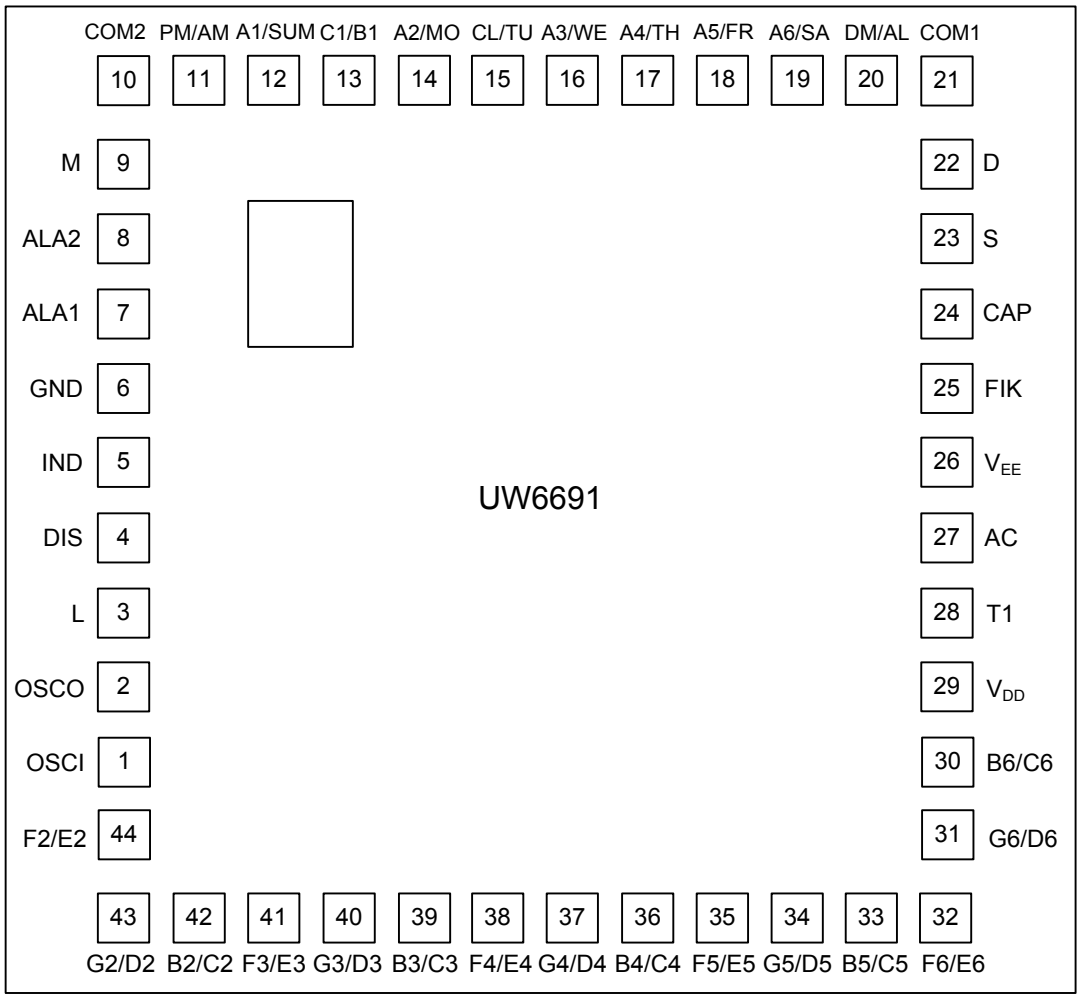
■ FEATURES

* Hour, Minute, second, Month and Day normal display
* 6 digit chronogramh: Auto ranging after 30 minutes to hour, mintue, second, from minute,second,1/100second
* Split operative stopwatch(Accurate to 1/100 second)
* Use selectable 12/24 format & 4 year calendar
* Alarm function with 4 to 5 minutes snooze
* Chime on every hour
* One touch correction of time error within ±30 seconds
* Alarm output drivcd by build-in transistor
* Dirdct drive of piezo buzzer
* Oscillating build-in transistor
* Backlight (EL) contro; output

■ CHIP INFORMATION

PARAMETER	SIZE		NUIT
	X	Y	
Chip Size (With: S.L.)	1450	1490	μm
Pad Size	80	90	μm
Scribe Line Width	60	70	μm
Die Thickness	280		μm

■ PIN CONFIGURATION



■ PIN DESCRIPTION

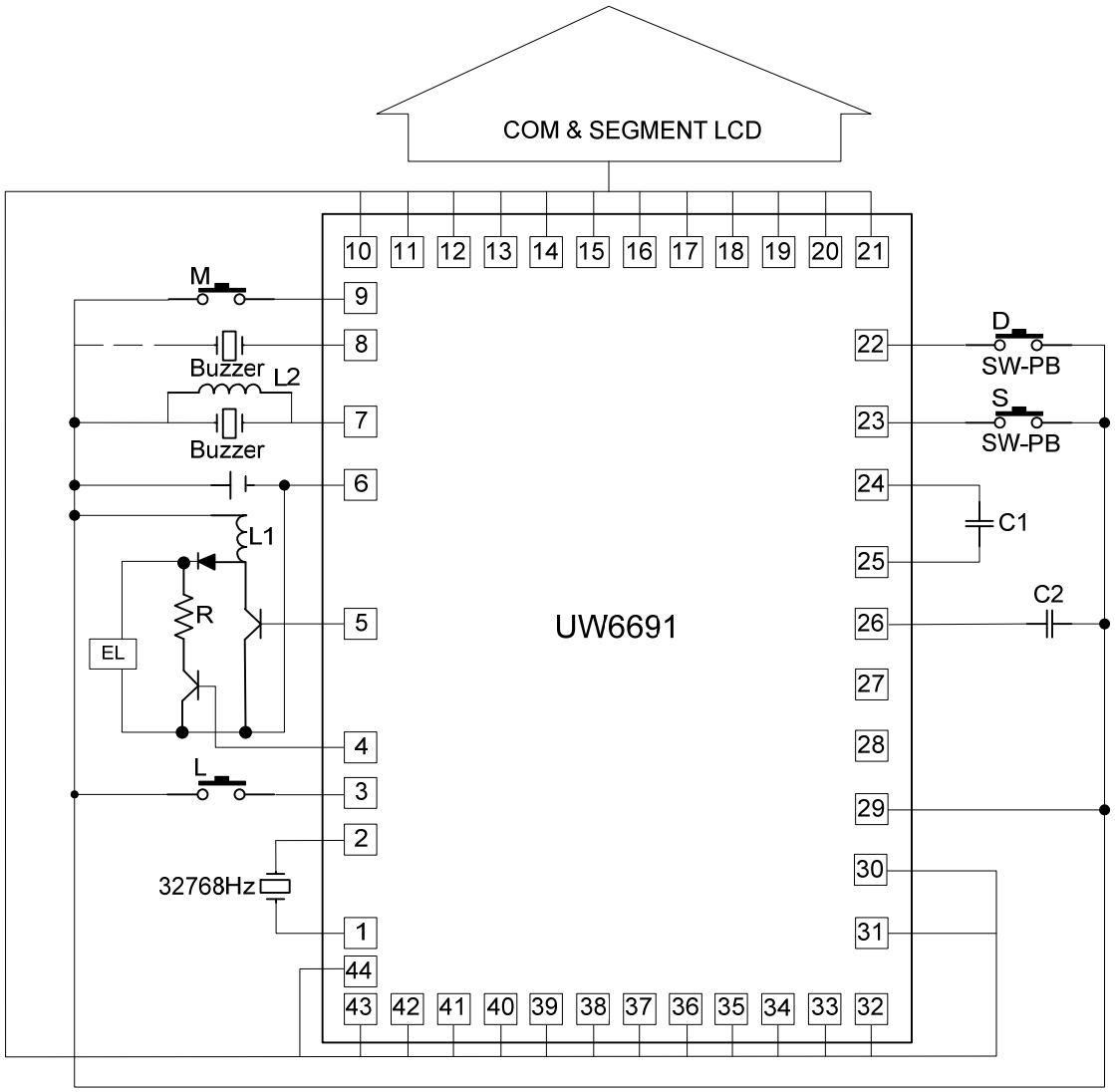
Pad	Name	Pad	Name	Pad	Name	Pad	Name
1	OSCI	12	A1/SU	23	S	34	G5/D5
2	OSCO	13	C1/B1	24	CAP	35	F5/E5
3	L	14	A2/MO	25	F1K	36	B4/C4
4	DIS	15	CL/TU	26	V_{EE}	37	G4/D4
5	IND	16	A3/WE	27	AC	38	F4/E4
6	GND	17	A4/TH	28	T1	39	B3/C3
7	ALA1	18	A5/fr	29	V_{DD}	40	G3/D3
8	ALA2	19	A6/SA	30	B6/C6	41	F3/E3
9	M	20	DM/AL	31	G6/D6	42	B2/C2
10	COM2	21	COM1	32	F6/E6	43	G2/D2
11	PM/AM	22	D	33	B5/C5	44	F2/E2

■ ELECTRICAL CHARACTERISTICS (V_{DD}=1.5V, V_{DD}=0V, T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Voltage	V_{DD}		1.2	1.5	1.8	V
Operating Current	I_{DD1}	No Load		2.0	4.0	μA
	I_{DD2}	EL			9.0	mA
Input High Voltage	V_{IH}		V_{DD}-0.3		V_{DD}	V
Input Low Voltage	V_{IL}		V_{SS}		V_{SS}+0.3	V
Key Switch Current Consumption	I_{SW}	V_{IN}=V_{DD}			3	μA
Oscillation Starting Voltage	V_{OSO}	Within 2 Seconds			1.3	V
Alarm drive current	I_{ALA}	Vala=0.5V	0.5	2		mA
Alarm drive current	I_{ALAB}	Vala=0.5V	10	20		μA
Oscillator Frequency	F_{OSC}			32768		Hz
LCD Frequency	F_{LCD}			32		Hz
Time stability	T_{STB}	V_{DD}=3V		1.0		P_{PM}
Output Current	I_{OUT}	V_{OUT}=0.5V	1.0			mA

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ TYPICAL APPLICATIONS



Notes: 1. L1=1.0~2.5mH, 10~20Ω, determined by the area of the light-emitting sheet EL, C1=C2=0.1μF, R=10K.

2. The EL drive output IND and DIS lines should be as far away as possible from the wiring of each trigger control terminal (M.L.S.D), and the wiring should be thick and short.
3. The EL high-voltage part of the circuit is isolated with the ground line V_{SS} or the power supply V_{DD} line to reduce the interference to other connections.
4. 7 8 pins can be selected (only one of them can be selected during application), the sound of the buzzer can be adjusted to the L2 inductance value, and it is recommended that L2=15~25mH.