

MA88V11B EL DRIVER

Line-up & Specification

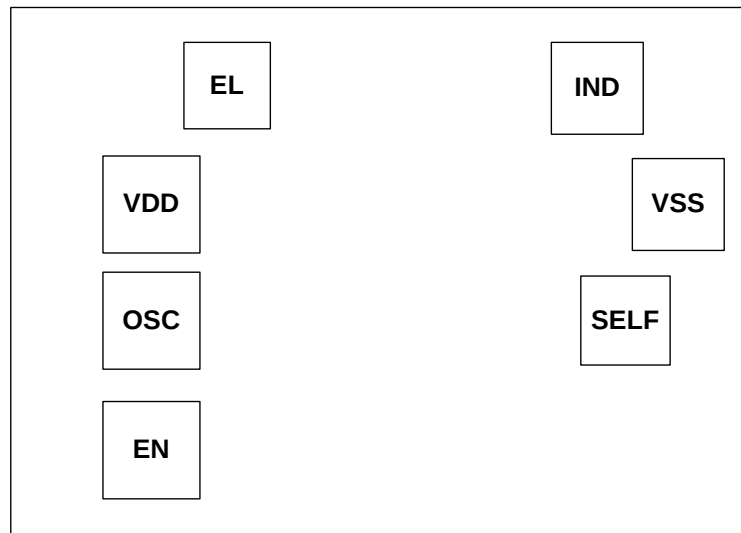
V1.0



MosArt

SEMICONDUCTOR CORP.

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 BONDING DIAGRAM

Chip size : 808um * 665um

Pad size : 90um * 90um

 FEATURES

- 3V battery operation
- No external R-C required for oscillation
- Two EL driving frequency can be selected to change the colors of EL lights
- 3 seconds delay after EN released

 OVERVIEW

The MA88V11B is designed for driving EL on watch's back light. The operating voltage is 3V. An inductor is used to generate the high voltage, and one diode, 2 transistors and a resistor are necessary. The EL deriving frequency can be selected for changing the color of EL lights. MA88V11B can be selected for normal trigger or delay 3 seconds.

 PIN DESCRIPTION

Pin	Pin name	Pin description
1	EL	Output for EL charge
2	VDD	Chip Power positive
3	OSC	Oscillator pin
4	EN	Enable pin, High enable. (*note1)
5	SELF	EL driving frequency selection(*note1)
6	VSS	Chip power ground
7	IND	Output for EL discharge

*Note1 : Built in pull down resistor

 OPERATION DESCRIPTION

1) EL driving frequency selection

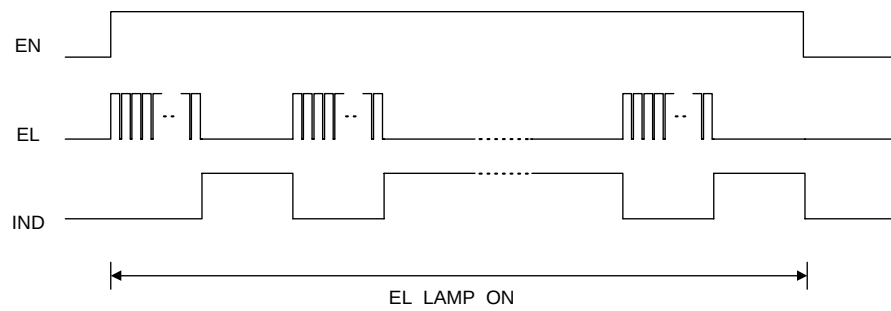
SELF	EL driving frequency	Color of EL lights
Floating	500Hz	Green
1	1000Hz	Blue

2) Trigger mode

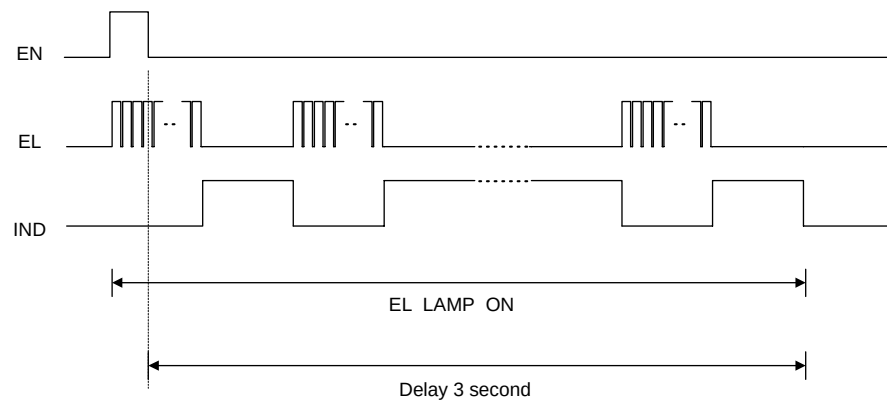
EN	Trigger mode
No connect	Normal
EN pin connect a capacitor to VDD	3 sec. delay

Operation in 3V use 0.1uf capacitor.

(i) Normal mode

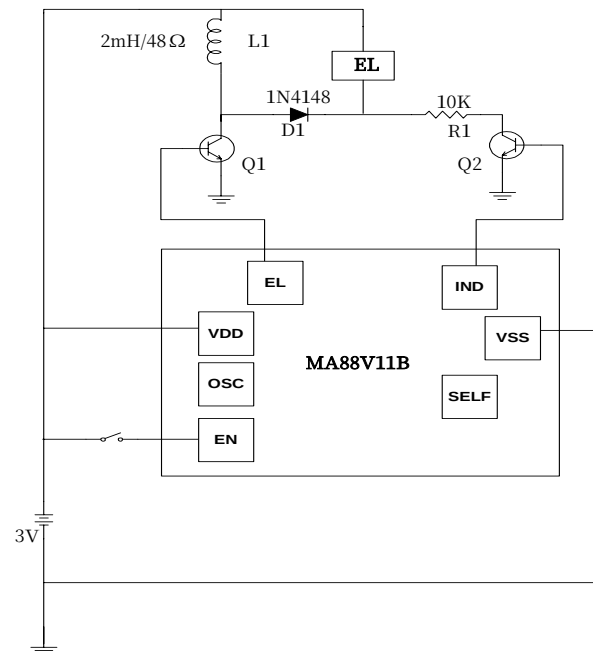


(ii) Delay mode (EN pin connect a capacitor to VDD)

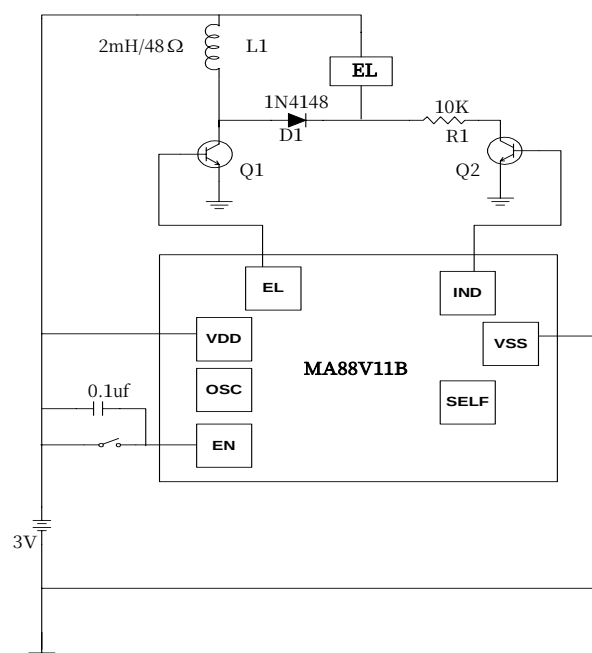


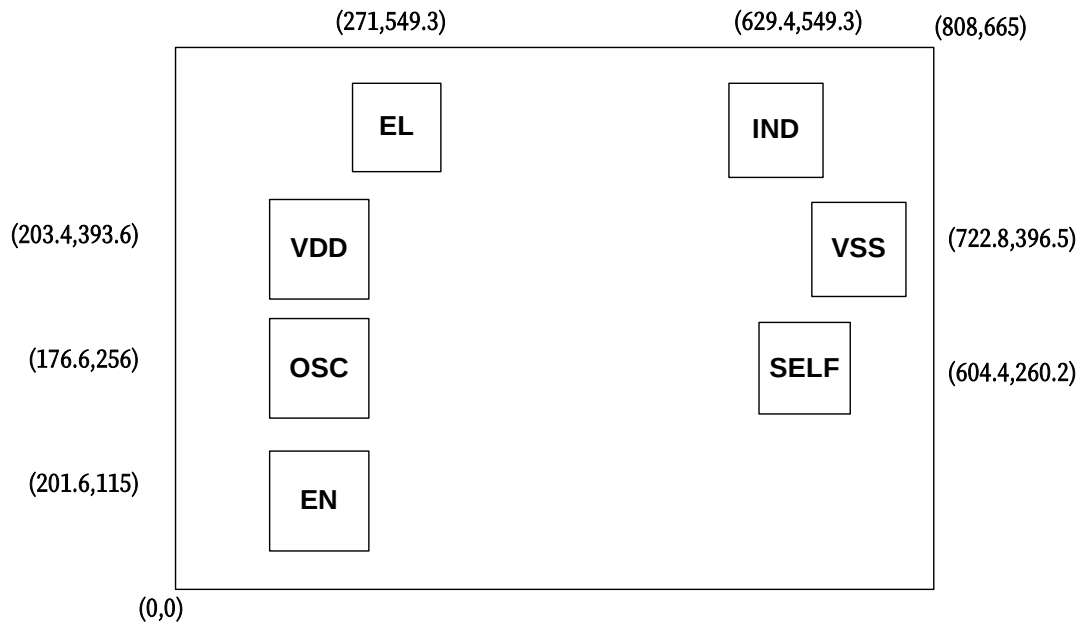
APPLICATION CIRCUIT

(1) Operation voltage 3V, normal trigger mode



(2) Operation voltage 3V, delay 3 seconds mode



 PAD DIAGRAM

Chip size : 808um×665um

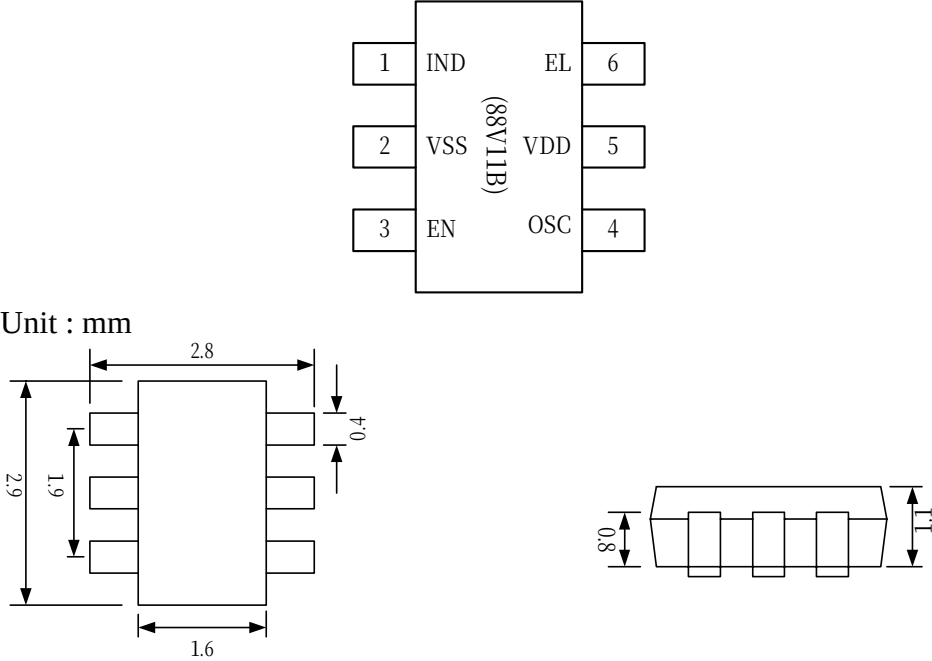
Pad size : 90um×90um

Substrate connect to VSS

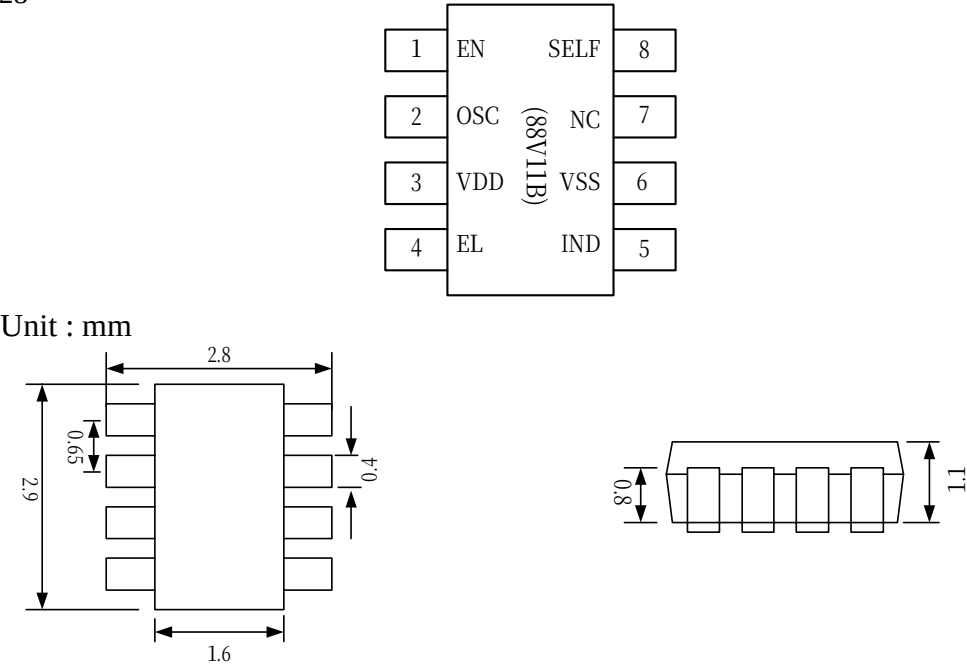
NO	NAME	X	Y
1	EL	271	549.3
2	VDD	203.4	393.6
3	OSC	176.6	256
4	EN	201.6	115
5	SELF	604.4	260.2
6	VSS	722.8	396.5
7	IND	629.4	549.3

 PACKAGE

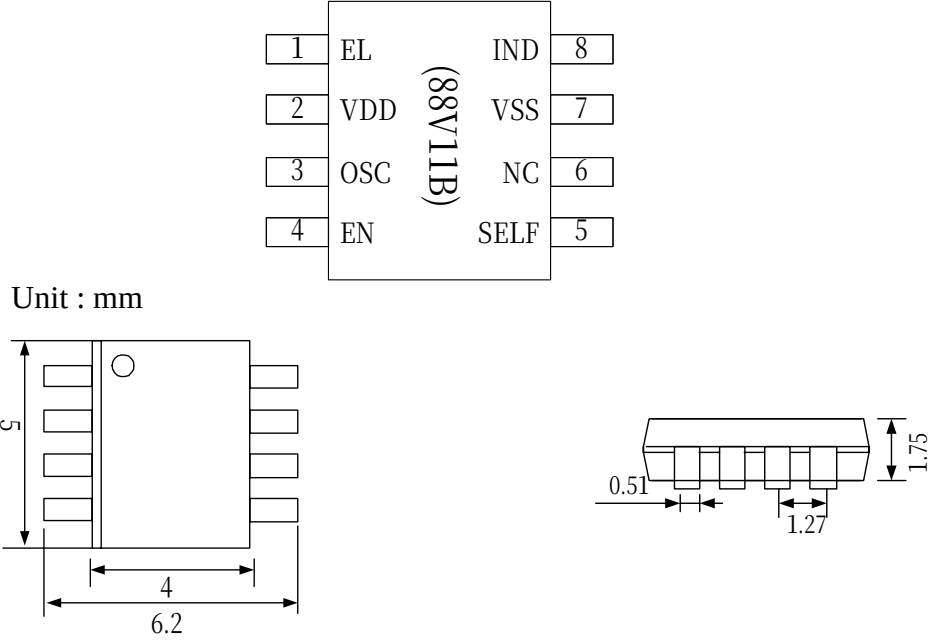
(a) SOT26



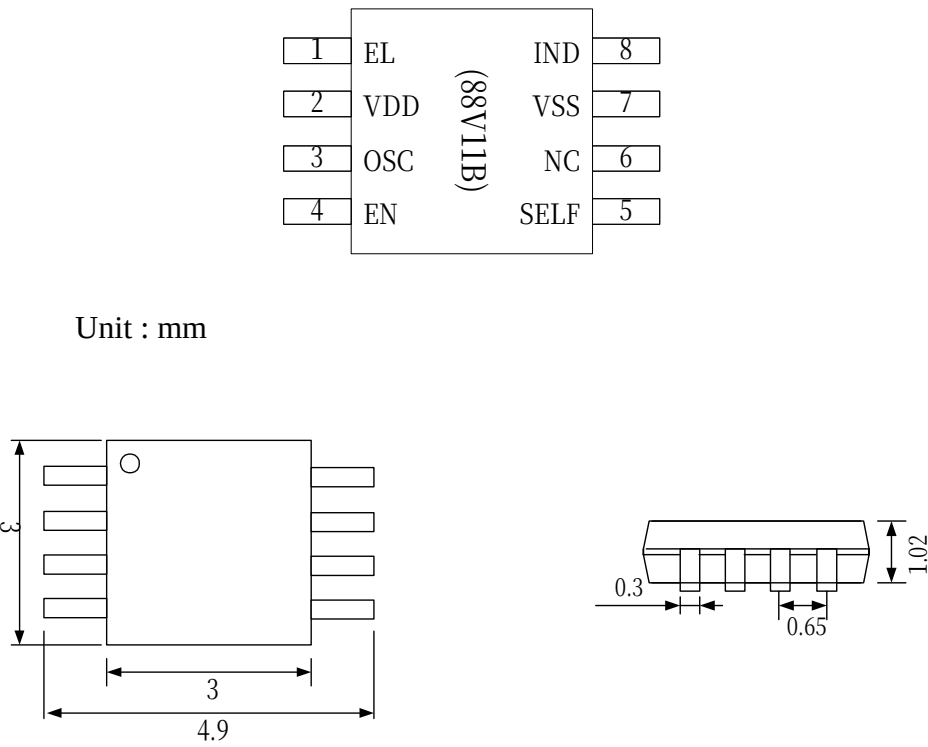
(b) SOT28



(c) SOP



(d) MSOP



 DC CHARACTERISTICS

Item	Symbol	Condition	Min	Typ	Max	Unit
Oscillation frequency	Fosc	Build-in RC oscillation		1050		KHz
Operating voltage	VDD		1.5	3.0	3.3V	V
Standby current	Istb	VDD=3V		0	0.1	uA
Operating current (3.0V)	Iop	EN=VDD(3V)		889		uA
High level input voltage	Vih	SELF, EN	0.8*Vdd		Vdd	V
Low level input voltage	Vil	SELF, EN	0		0.2*Vdd	V
High level input current (1)	Iih1	SELF	0		0.1	uA
High level input current (2)	Iih2	EN		0.1		uA
Low level input current	Iil	SELV, SELF, EN	0		0.2	uA
Output drive current (3.0V)	Ioh	EL, IND Voh=2.2V		225		uA
Output sink current (3.0V)	Iol	EL, IND Vol=0.8V		11.2		mA