

YHM2511

Dual Output Load Switch with Adjustable Current Regulation

Features

- Low Input Voltage: 2.2V to 5.5V
- Enable/Disable and current regulation setting from ISNS pins.
- 20uA Supply Current
- 500nA Shutdown Current
- Ultra-Low On-State Resistance (R_{ON})
 - $R_{ON} = 76m\Omega$ at $V_{IN} = 5.0V$
 - $R_{ON} = TBDm\Omega$ at $V_{IN} = 3.6V$
 - $R_{ON} = TBDm\Omega$ at $V_{IN} = 2.5V$
 - $R_{ON} = 76m\Omega$ at $V_{IN} = 1.8V$
- 2A Maximum Total Continuous Current
- Quick Output Discharge
- Reverse Current Blocking for both channels.
- Tiny 0.67mm x 1.02mm 6-pin WLP with 0.35mm pitch

General Description

The YHM2511 is a dual output, ultra-small, low R_{ON} and active low load switch. The device contains a N-channel MOSFET that operates over an input voltage range of 2.2V to 5.5V. The switch is controlled by ISNS pin.

YHM2511 device limits the output current to a safe level by using a constant current mode when the output load exceeds the current regulation threshold. The current regulation threshold is adjusted by an external resistor added to ISNS pin. It also has hard short protection for some abnormal situations.

An internal reverse voltage comparator disables the power switch when the output voltage is driven higher than the input voltage to protect devices on the input side of the switch. YHM2511 is available in a 6-bump, 0.35mm pitch, 0.67mm x 1.02mm wafer-level package (WLP).

Applications

- Wearables
- Smartphones
- Tablets
- Portable Device

Internal Block diagram

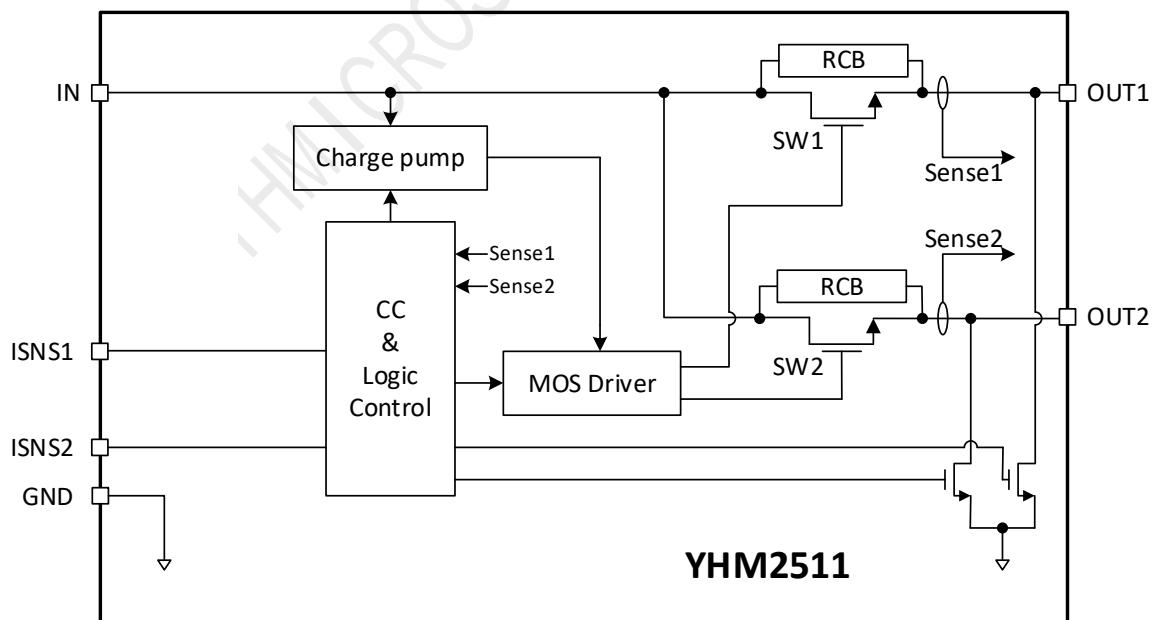


Figure 1. YHM2511 Internal Block Diagram

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YHM2511 Pin Configurations

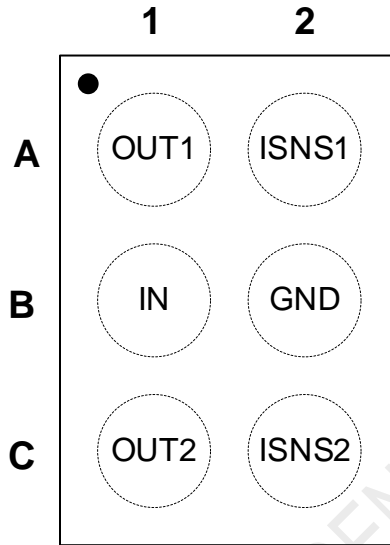


Figure 2. YHM2511 WLP-6 Pin Assignment (Top Through View)

YHM2511 WLP Pin Descriptions

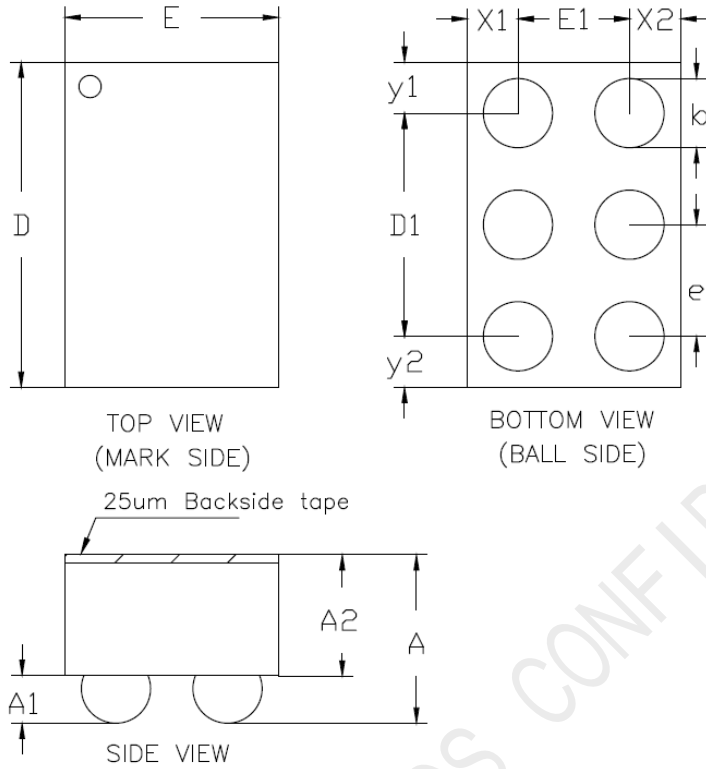
WLP	Name	Description
A1	OUT1	Output 1. Internal pull down to GND when switch off for 20ms.
B1	IN	Input and Power Supply. Bypass this input with 1 μ F or greater ceramic capacitor to ground.
C1	OUT2	Output 2. Internal pull down to GND when switch off for 20ms.
A2	ISNS1	Enable and current regulation setting for output 1. <ul style="list-style-type: none"> • Connect external 0.1% resistor to set current regulation threshold. • Pull high to disable the switch 1. • Pull to GND directly to disable current regulation.
B2	GND	Ground.
C2	ISNS2	Enable and current regulation setting for output 2. <ul style="list-style-type: none"> • Connect external 0.1% resistor to set current regulation threshold. • Pull high to disable the switch 2. • pull to GND directly to disable current regulation.

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7 Package Dimensions(TBD)

WLCSP-6 0.67mmx1.02mm



COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	NOM	MAX
A	0.483	0.528	0.573
A1	0.130	0.150	0.170
A2	0.353	0.378	0.403
D	1.000	1.020	1.040
D1	0.700BSC		
E	0.650	0.670	0.690
E1	0.350BSC		
b	0.200	0.220	0.240
e	0.350BSC		
x1	0.160 REF		
x2	0.160 REF		
y1	0.160 REF		
y2	0.160 REF		

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8 Order Information

Part Number	Package	Active Logic	Top Mark (Note 1)	MOQ
YHM2511W6T	6 WLCSP	L	xxxK	3000

Note 1: The first three letters are Lot id and production date information.

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