

YHM2009

Over Voltage Protection Switch with Digital Signal Transmission

Features

- Input voltage range: 2.5V ~ 28V
- Both IN and OVLO/VDD may supply the chip
- Low on-resistance: typical 27mΩ
- Programmable over voltage protection (OVP) threshold
- Super-fast OVP response time: maximum 370ns
- 8MHz switch bandwidth
- Over temperature protection (OTP)
- Robust ESD and surge immunity capability
HBM > ±2KV
CDM > ±1kV
IEC61000-4-5 > 40V
- Tiny 6-bumps WLCSP 1.19mm x 0.87mm

Applications

- Smart Phone, AR/VR Device, Tablet PC, Wearable etc.

General Description

YHM2009 over-voltage protection devices feature a low 27mΩ (TYP) on-resistance high current integrated MOSFET which actively protect low-voltage systems against voltage supply faults up to +28VDC. An input voltage exceeding the over-voltage threshold will cause the internal MOSFET to turn off, preventing excessive voltage from damaging downstream devices.

The over-voltage protection threshold can be 5.8V, 11V, 16V and 23V configurable by single external resistor at OVLO/VDD pin.

Additionally, YHM2009 internal switch features 8MHz bandwidth and it supports digital signal communication when VIN=0 and powered by OVLO/VDD pin.

YHM2009 is available in tiny 6-bumps WLCSP 1.19mm x 0.87mm, and operates over an ambient temperature range of -40°C to +85°C.

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Pin Configurations

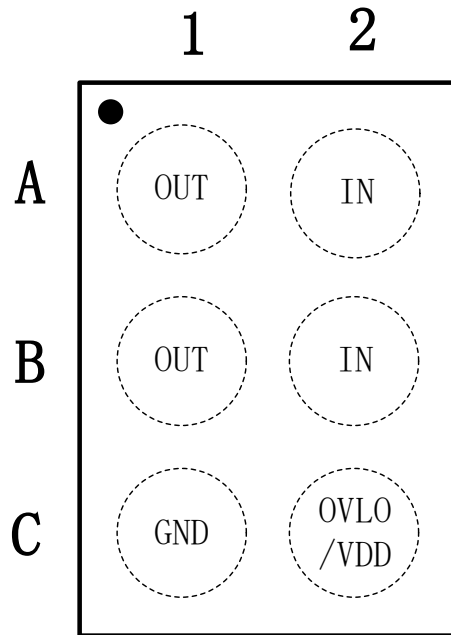


Fig 4. YHM2009 WLP-6 Pin Assignment (Top Through View)

YHM2009 WLP Pin Descriptions

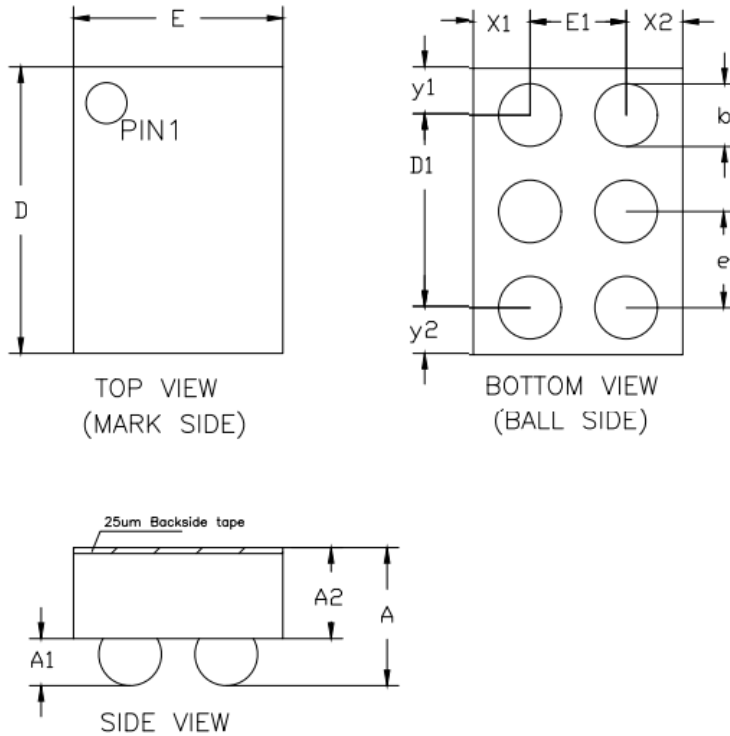
Bump	Name	Description
A1, B1	OUT	Power output.
A2, B2	IN	Power Input.
C1	GND	Device Ground.
C2	OVLO/VDD	Resistor connected to program OVLO threshold. Or connect to system GPIO for communication function. The GPIO is default high impedance, pull to high to enable YHM2009, pull to GND to disable the device).

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Package Dimensions

WLCSP-6 1.19mm x 0.87mm x 0.574mm



COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	NOM	MAX
A	0.534	0.574	0.614
A1	0.176	0.196	0.216
A2	0.358	0.378	0.398
D	1.170	1.190	1.210
D1	0.800BSC		
E	0.850	0.870	0.890
E1	0.400BSC		
b	0.240	0.260	0.280
e	0.400BSC		
x1	0.235 REF		
x2	0.235 REF		
y1	0.195 REF		
y2	0.195 REF		

Ordering Information

Part Number	Temp Range	Pin Package	Top Mark	MOQ
YHM2009W6T	-40°C to 85°C	6 WLCSP	YWW LOT	3000

T = Tape and reel.

YWW: Date Code. Y = year, WW = week.

LOT: The last three number of LOTID.

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