

Description

WPM4DT502QTA1 is half-bridge Modules (IPM) designed for advanced appliance motor drive applications such as energy efficient fans and pumps.

These modules Integrated 2 MOSFET and 1 high voltage gate driver in a familiar package.



QFN7X7-25L

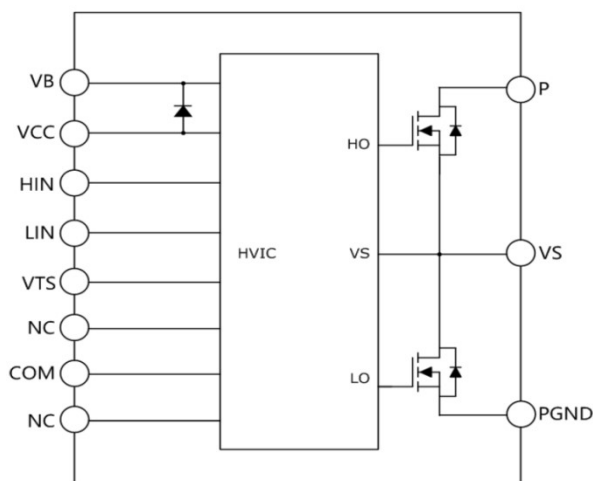
Features

- 500V half-bridge including high voltage gate drivers
- Works with 3.3V/5V MCU, Active-High interface
- Integrated bootstrap functionality
- HVIC for Under-voltage Protection
- HVIC Temperature-Sensing Built-In for temperature Monitoring

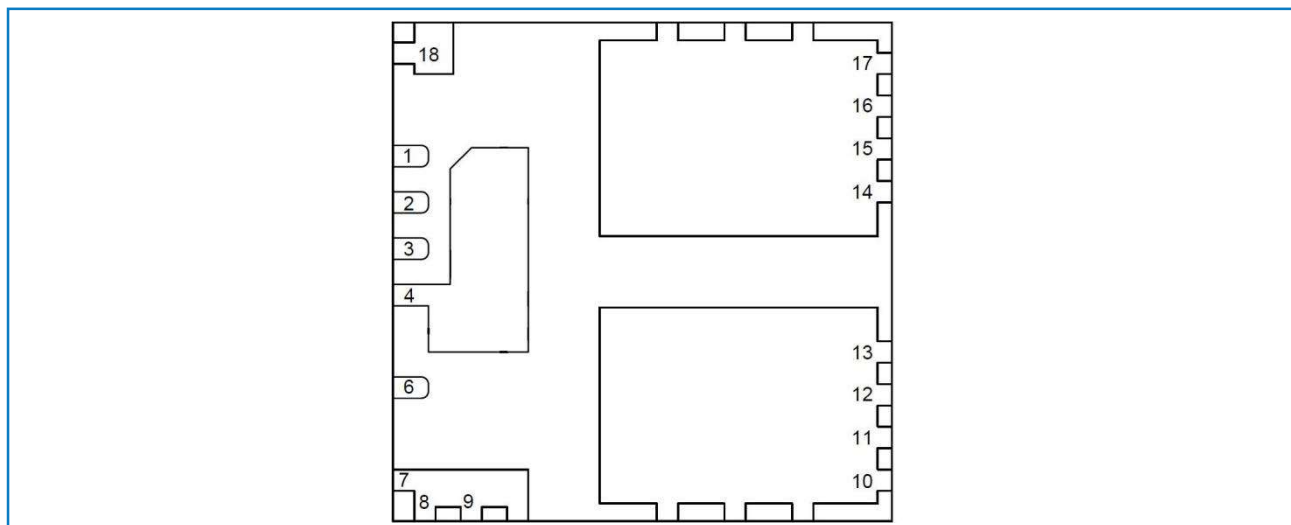
Applications

- Energy efficient fans
- Pumps
- High speed hair dryer

Internal Electrical Schematic

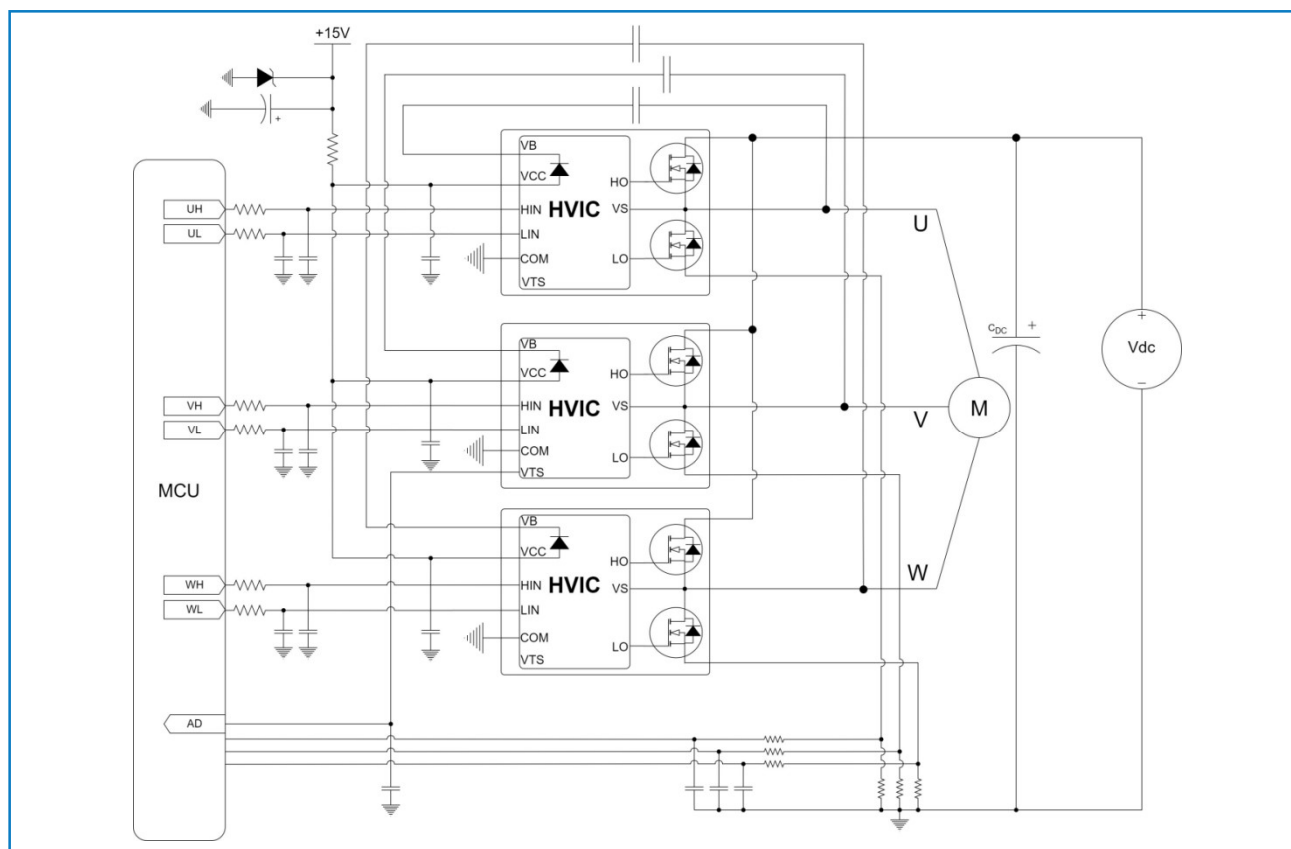


● Module Pin-Out Description



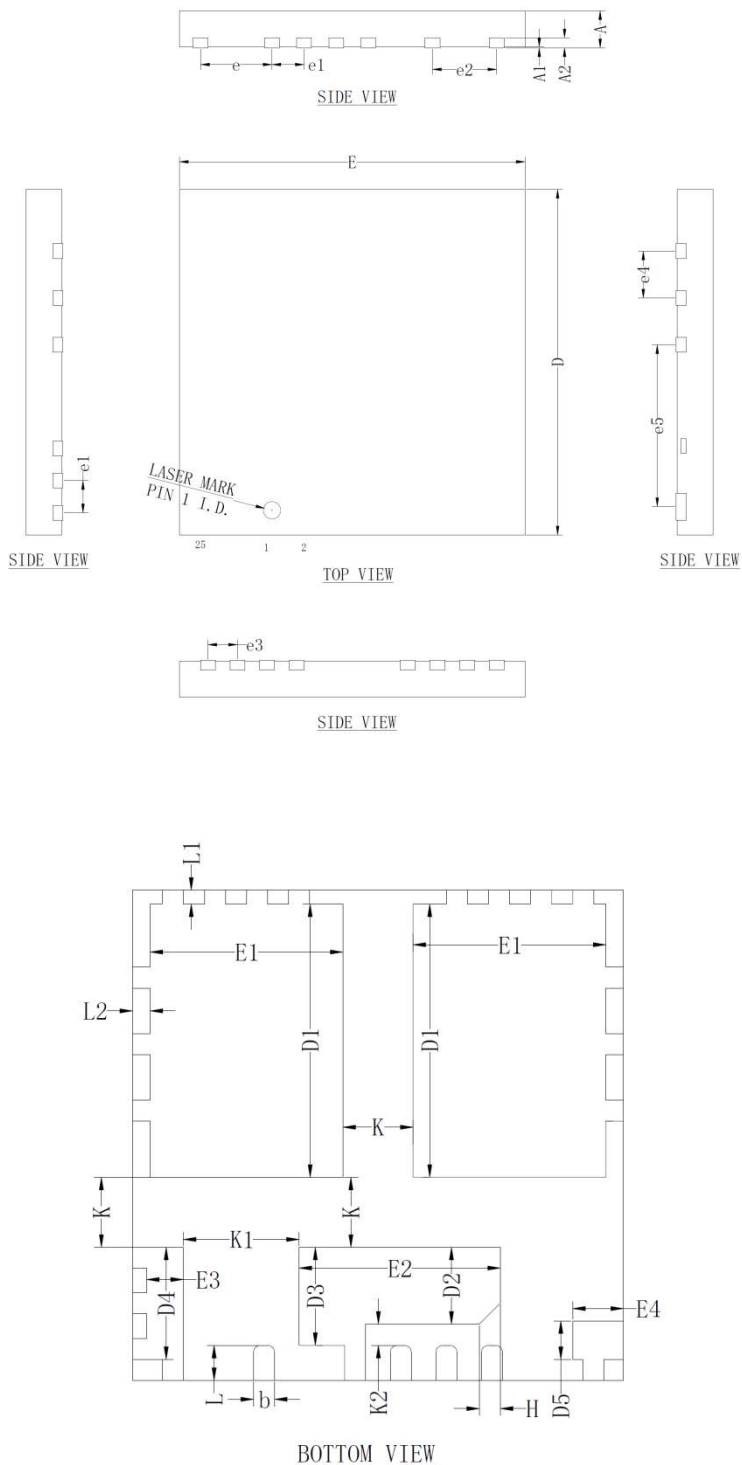
Pin Number	Pin Name	Pin Description
1	VCC	Power Supply for Low Side
2	HIN	Logic Input for High Side Gate Driver
3	LIN	Logic Input for Low Side Gate Driver
4	COM	Logic Ground
5	VTS	Temperature-sensing Voltage Output
7,8,9	PGND	Source for Low Side MOSFET
10,11,12,13	VS	High Side Floating Offset Voltage
14,15,16,17	P	DC Bus Voltage Positive
18	VB	High Side Floating Supply Voltage

● Example of Application Circuit



Mechanical Dimensions for SOICW16-12

UNIT:mm



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.70	0.75	0.80
A1	--	0.02	0.05
A2	0.203REF		
b	0.25	0.30	0.35
D	6.90	7.00	7.10
E	6.90	7.00	7.10
D1	3.80	3.90	4.00
E1	2.65	2.75	2.85
D2	1.00	1.10	1.20
D3	1.30	1.40	1.50
E2	2.77	2.87	2.97
D4	1.50	1.60	1.70
E3	0.42	0.52	0.62
D5	0.45	0.55	0.65
E4	0.63	0.73	0.83
e	1.44BSC		
e1	0.65BSC		
e2	1.30BSC		
e3	0.60BSC		
e4	0.95BSC		
e5	3.27BSC		
H	0.25	0.30	0.35
K	1.00REF		
K1	1.65REF		
K2	0.30REF		
L	0.45	0.50	0.55
L1	0.15	0.20	0.25
L2	0.20	0.25	0.30

- **Ordering Information**

Part	Package	Marking	QTY(PCS)	Packing method
WPM4DT502QTA1	QFN7X7-25L	WPM4DT502QTA1	TBD	Tape and reel

Contact Information

No.1001, Shiwan(7) Road, Pudong District, Shanghai, P.R.China.201207

Tel: 86-21-50310888 Fax: 86-21-50757680 Email: market@way-on.com

WAYON website: <http://www.way-on.com>

For additional information, please contact your local Sales Representative.

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Product Specification Statement

1.The product specification aims to provide users with a reference regarding various product parameters, performance, and usage. It presents certain aspects of the product's performance in graphical form and is intended solely for users to select product and make product comparisons, enabling users to better understand and evaluate the characteristics and advantages of the product. It does not constitute any commitment, warranty, or guarantee.

2.The product parameters described in the product specification are numerical values, characteristics, and functions obtained through actual testing or theoretical calculations of the product in an independent or ideal state. Due to the complexity of product applications and variations in test conditions and equipment, there may be slight fluctuations in parameter test values. WAYON shall not guarantee that the actual performance of the product when installed in the customer's system or equipment will be entirely consistent with the product specification, especially concerning dynamic parameters. It is recommended that users consult with professionals for product selection and system design. Users should also thoroughly validate and assess whether the actual parameters and performance when installed in their respective systems or equipment meet their requirements or expectations. Additionally, users should exercise caution in verifying product compatibility issues, and WAYON assumes no responsibility for the application of the product.

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