

Description

CRM60GK06E4 are 3-phase Integrated Power Modules (IPM) designed for advanced appliance motor drive applications such as water pump, washing machine etc.

CRM60GK06E4 Integrated 6 low-loss IGBTs and FRDs, 3-phase half bridge high voltage gate drivers in a familiar package. The modules are optimized for low EMI characteristics.

CRM60GK06E4 internal integration of undervoltage, short circuit and other protection functions, providing excellent protection and a wide range of safe working area. The CRM60GK06E4 designed with high insulation and easy thermal conductivity, especially suitable for compact installation.

Features

- 600V/6A three-phase inverter
- Works with 3.3V/5V MCU
- Built-in high voltage gate drive circuit
- Integrated over temperature protection
- Integrated under-voltage protection
- Integrated high accurate short-circuit current protection
- Integrated enable shut down function
- Integrated cross-conduction prevention logic
- Floating channel designed for bootstrap operation
- Isolation rating: 1500 Vrms/min



DIP-25A

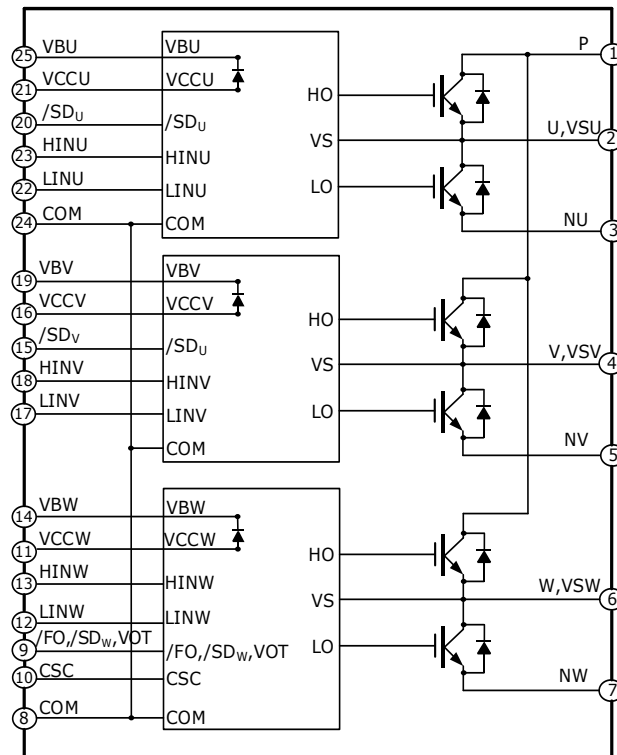
Applications

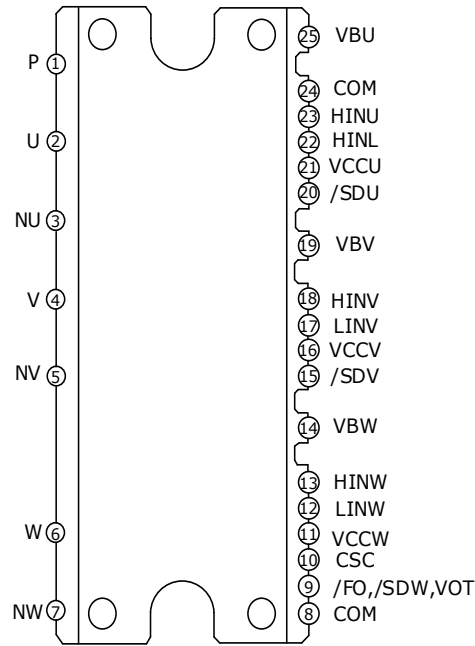
- washing machine
- Pumps

Package Marking and Ordering Information

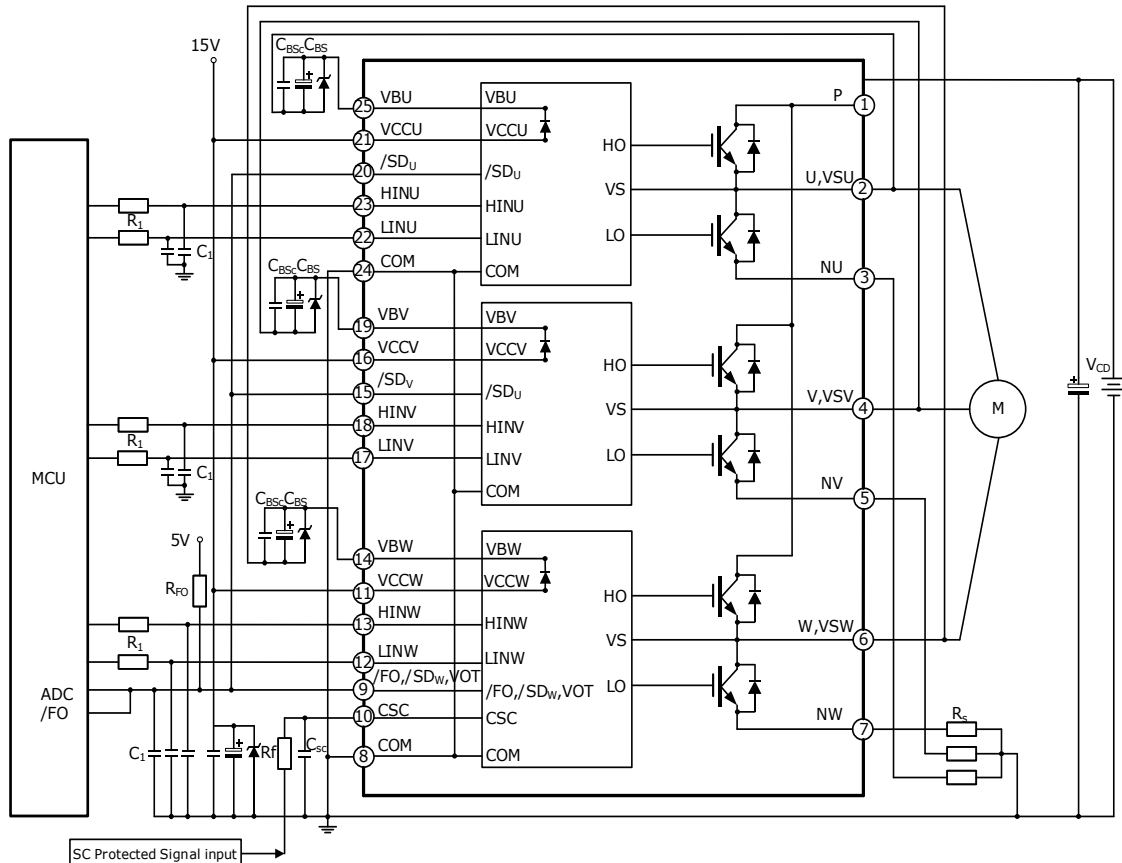
Part #	Marking	Package	Packing	Quantity	Green
CRM60GK06E4	CRM60GK06E4	DIP-25A	Tube	308	RoHS/HF

Internal Electrical Schematic



Module Pin-Out Description

Top view

Pin Number	Pin Name	Description
1	P	DC Bus Voltage Positive
2	U	Output - Phase U, High Side Floating Supply Offset U
3	NU	Phase U Low Side Emitter
4	V	Output - Phase V, High Side Floating Supply Offset V
5	NV	Phase V Low Side Emitter
6	W	Output - Phase W, High Side Floating Supply Offset W
7	NW	Phase W Low Side Emitter
8	COM	Logic Ground
9	/FO _r /SD _w ,VOT	Fault output ,W phase shut down, Temperature Output
10	CSC	External capacitance, Over current shutdown input
11	VCCW	W phase IC supply voltage
12	LINW	Logic Input for Low Side Gate Driver - Phase W
13	HINW	Logic Input for High Side Gate Driver - Phase W
14	VBW	High Side Floating Supply Voltage W
15	/SD _v	V phase shut down
16	VCCV	V phase IC supply voltage
17	LINV	Logic Input for Low Side Gate Driver - Phase V
18	HINV	Logic Input for High Side Gate Driver - Phase V
19	VBV	High Side Floating Supply Voltage V
20	/SD _u	U phase shut down
21	VCCU	U phase IC supply voltage
22	LINU	Logic Input for Low Side Gate Driver - Phase U
23	HINU	Logic Input for High Side Gate Driver - Phase U
24	COM	Logic Ground
25	VBU	High Side Floating Supply Voltage U

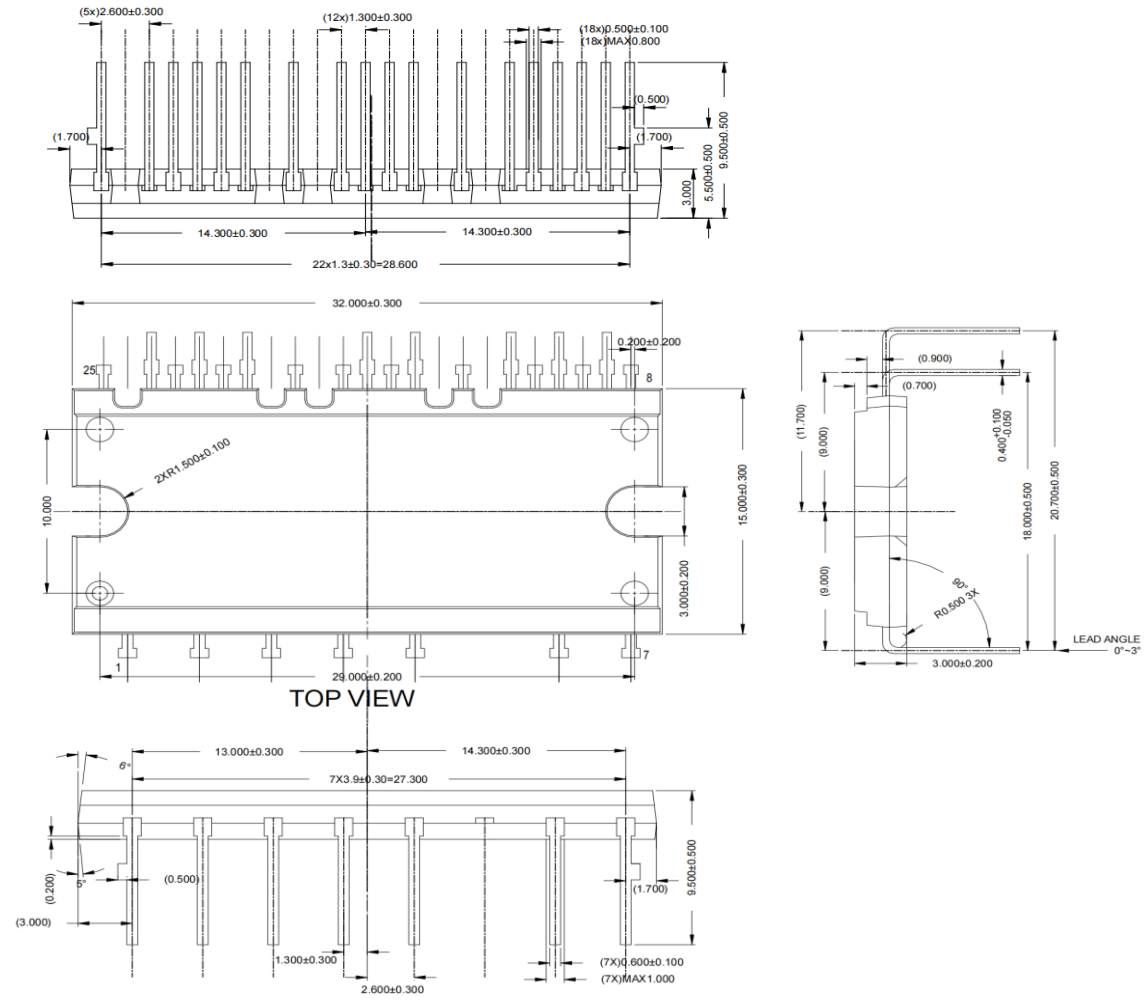
Application Circuit

Remark:

- 1、 To prevent malfunction, the wiring of each input should be as short as possible.
- 2、 Input drive is High-Active type. There is a $5.6k\Omega$ (typ.) pull-down resistor integrated in the IC input circuit. And adding RC filter circuit to the input will prevent the surge noise caused by incorrect input.
- 3、 To prevent surge damage, it is recommended to add a high-frequency non-inductive flat capacitor (0.1 μ F to 0.22 μ F) between P and N. The cable connection of the capacitor should be as short as possible.
- 4、 The line between the current detection resistor and the IPM should be as short as possible, otherwise the large surge voltage generated by the connecting inductor may cause damage.
- 5、 All capacitors should be mounted as close to the terminals of the IPM as possible.
- 6、 FO output is open drain type. It should be pulled up to the positive side of 5V power supply by a resistor of about 6.8k Ω .
- 7、 The time constant R_f and C_{sc} of the protection circuit should be selected in the range of 1.5-2.0 μ s.

Package Outline

DIP-25A

UNIT:mm



单击下面可查看定价，库存，交付和生命周期等信息

[>>CRMICRO\(华润微\)](#)