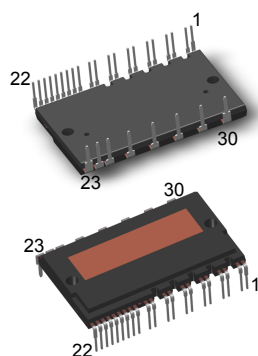
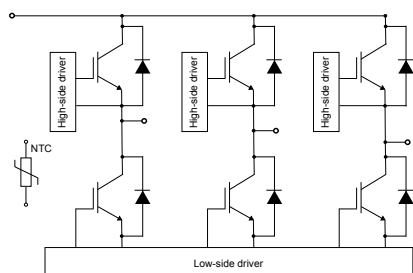


## SLLIMM high power IPM, 3-phase inverter, 50 A, 650 V short-circuit rugged IGBT



SDIPHP-30L



GADG121020201109GT



### Features

- IPM 650 V, 50 A 3-phase inverter bridge including control ICs for gates driving
- 3.3 V, 5 V TTL/CMOS inputs with hysteresis
- Under-voltage lockout of gate drivers
- Built-in bootstrap diodes
- Short-circuit protection
- Shutdown input/fault output
- Separate open emitter outputs
- Comparator for fault protection
- Short-circuit rugged
- Very fast, soft recovery diodes
- Fully isolated package
- Isolation rating of 2500 Vrms/min
- 100 kΩ NTC for temperature monitoring

### Applications

- HVAC
- GPI
- Servo motor

### Description

This new IPM (intelligent power module) is part of the high power SLLIMM (small low-loss intelligent molded module) family and provides a compact, high-performance AC motor drive in a simple, rugged design. It combines driver control with improved short-circuit rugged 650 V trench gate field-stop IGBTs, resulting ideal for 3-phase inverters motor drives.

#### Product status link

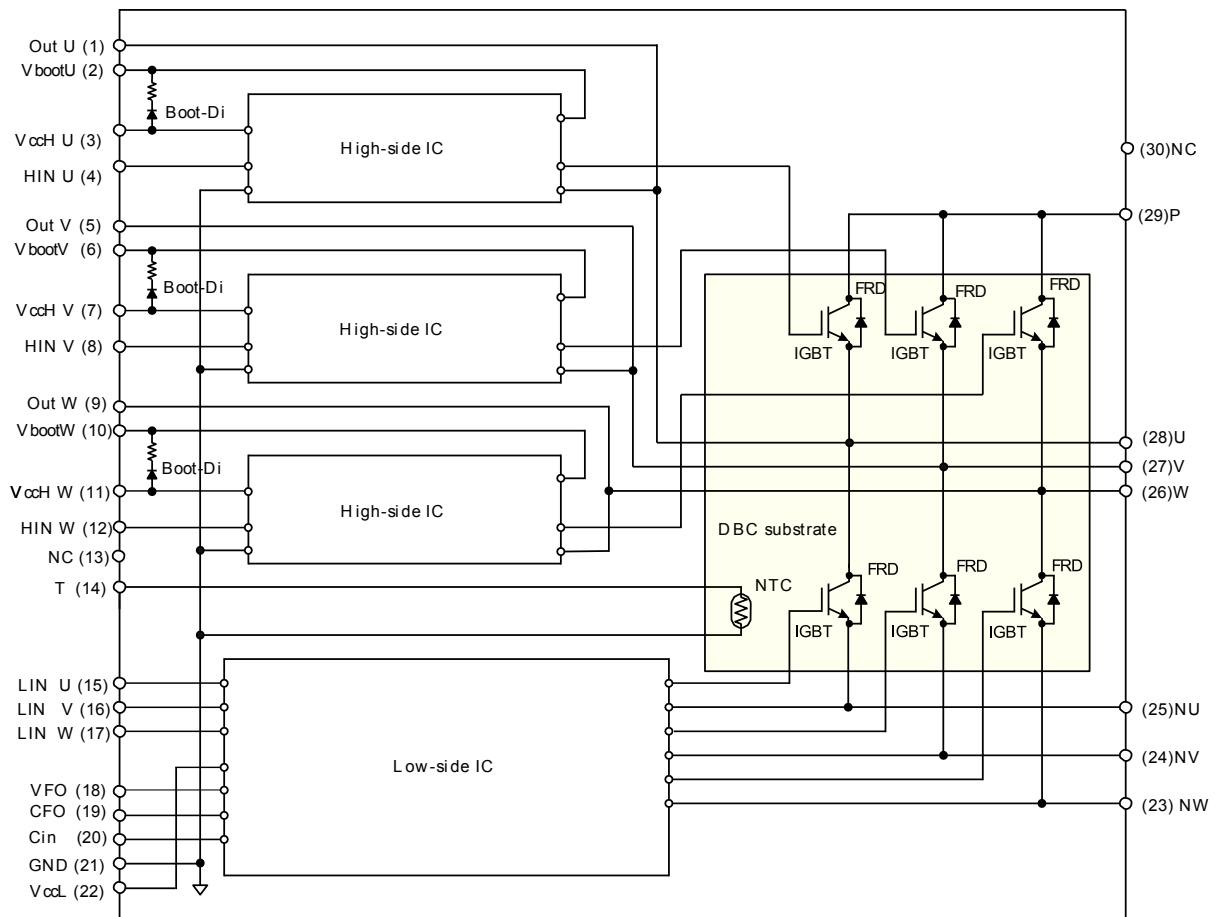
[STGIK50CH65T](#)

#### Product summary

Order code	STGIK50CH65T
Marking	GIK50CH65T
Package	SDIPHP-30L
Packing	Tube

## 1 Internal schematic and pin description

**Figure 1. Internal schematic diagram and pin configuration**



GADG121020200908GT

**Table 1. Pin description**

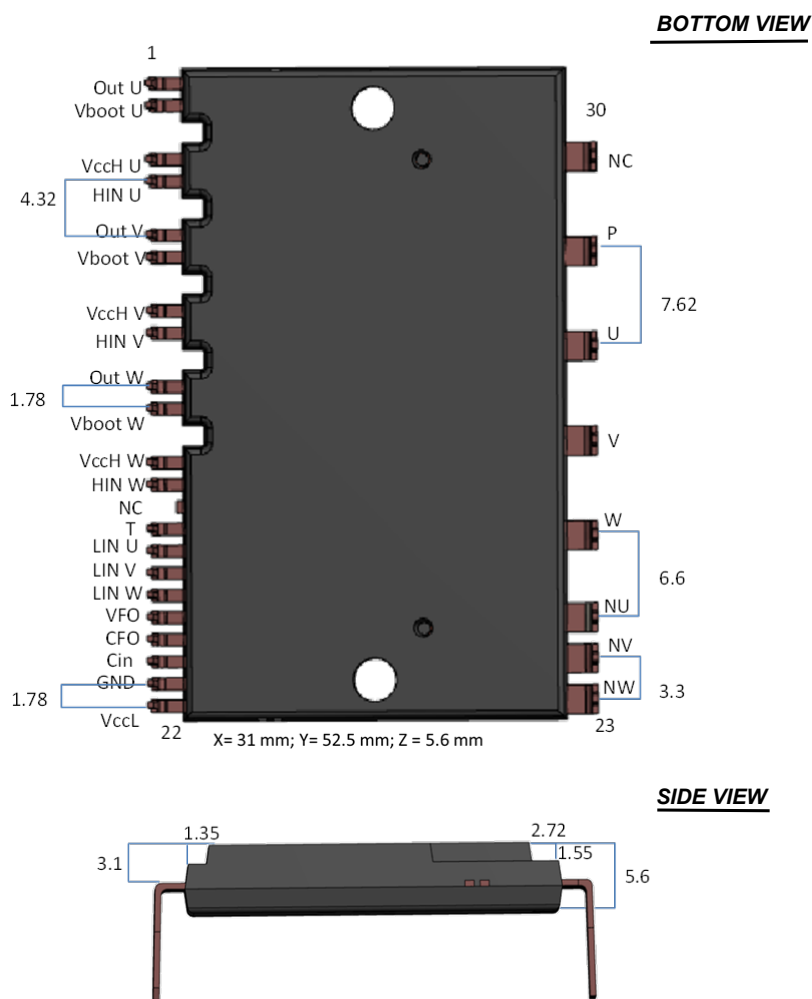
Pin	Symbol	Description
1	Out U	High-side reference output for U phase
2	Vboot U	Bootstrap voltage for U phase
3	VccH U	High-side low voltage power supply U phase
4	HIN U	High-side logic input for U phase
5	Out V	High-side reference output for V phase
6	Vboot V	Bootstrap voltage for V phase
7	VccH V	High-side low voltage power supply V phase
8	HIN V	High-side logic input for V phase
9	Out W	High-side reference output for W phase
10	Vboot W	Bootstrap voltage for W phase
11	VccH W	High-side low voltage power supply W phase
12	HIN W	High-side logic input for W phase
13	NC	Not connected (cut pin)
14	T	NTC thermistor output
15	LIN U	Low-side logic input for U phase
16	LIN V	Low-side logic input for V phase
17	LIN W	Low-side logic input for W phase
18	VFO	Shutdown/fault output
19	CFO	Capacitor for fault output setting
20	Cin	Comparator input
21	GND	Ground
22	VccL	Low-side low voltage power supply
23	NW	Negative DC input for W phase
24	NV	Negative DC input for V phase
25	NU	Negative DC input for U phase
26	W	W phase output
27	V	V phase output
28	U	U phase output
29	P	Positive DC input
30	NC	Not connected

## 2 Package information

In order to meet environmental requirements, ST offers these devices in different grades of **ECOPACK** packages, depending on their level of environmental compliance. ECOPACK specifications, grade definitions and product status are available at: [www.st.com](http://www.st.com). ECOPACK is an ST trademark.

### 2.1 SDIPHP-30L package information

**Figure 2. SDIPHP-30L package outline**



(Dimensions are in mm)

## Revision history

**Table 2. Document revision history**

Date	Version	Changes
20-Oct-2020	1	First release.

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