

STPOWER SLLIMM HP

Integration and higher power for your motor drive designs



The new SLLIMM High Power (HP) products simplify design challenges and shrink the BOM for motor drive platforms up to 5 kW

SLLIMM High Power is the new family of compact, powerful, dual-in-line intelligent power modules (IPMs).

Designed using a new internal drivers' configuration and trench gate field-stop IGBTs plus freewheeling diodes for power stage, this new High Power family expands the existing SLLIMM series in terms of breakdown voltage, current capability and power range, adding 650 V/50 A and 1200 V/10 A devices which are tailored for industrial applications working in a frequency range up to 20 kHz and up to 5 kW.



KEY FEATURES & BENEFITS

- Trench gate field-stop IGBT technology: 650 V/50 A and 1200 V/10 A
- Low V_{CEsat}
- Short-circuit protection
- Very fast, soft recovery diodes
- Separate open emitter outputs
- Comparator for fault protection
- Shutdown input/fault output
- Fully isolated package with Top-side cooling
- Isolation rating of 2500 V_{RMS}/min
- 100 k Ω NTC for temperature monitoring

KEY APPLICATIONS

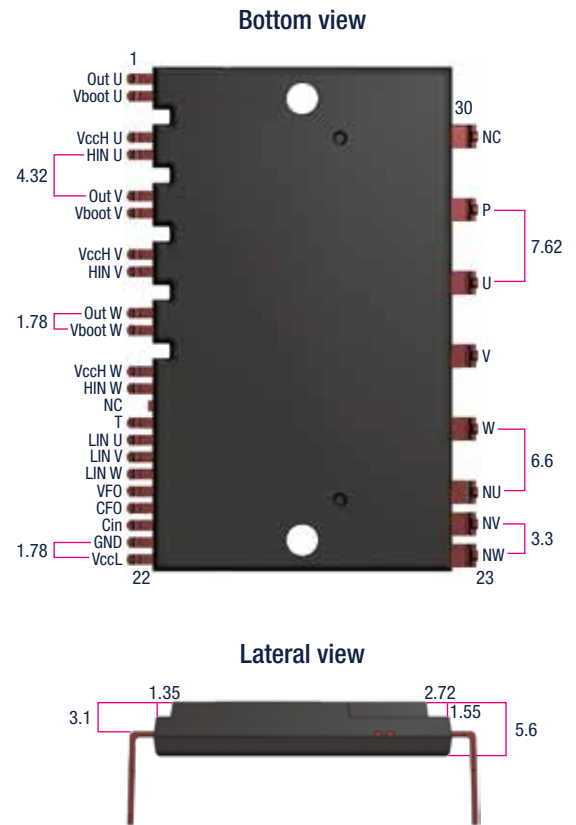
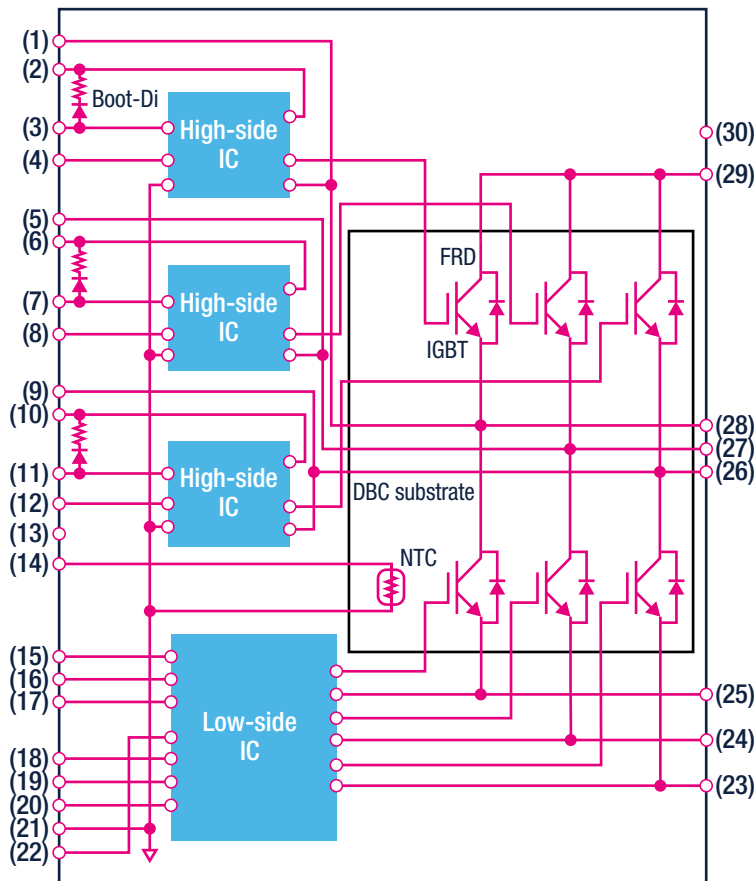
- HVAC, GPI, servo motors, professional washing machine

New fully isolated package with top-side cooling

The new compact SDIPHP-30L package offers to customers more compact and higher performance solutions at high-power range than discrete options and allows them to reduce the total system costs. The package is pin-to-pin compatible with the main competitor's devices. With an increased thickness up to 5.6 mm, this new package ensures higher isolation voltage ($\geq 2.5 \text{ kV}_{\text{RMS}}/\text{min}$) from pin to heatsink. Moreover, the package area dimension of $31 \times 52.5 \text{ mm}^2$ enables a safer distance between the high power terminals.

The new SLLIMM HP series at 650 V/50 A will be also available in automotive-grade (AG) option targeting automotive applications such as high-voltage auxiliary motors (climate e-compressors, oil, fuel and water pumps) and cooling fans.

Internal schematic and package overview



Dimensions are in mm

Product table

Part number	Switch type	BV (V)	Current (A)
STGIK50CH65T ¹	IGBT	650	50
STGIK10M120T ¹		1200	10

Notes: 1 in development

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