

# SLIMM™ 2nd Series

## Small Low-Loss Intelligent Molded Module



### IGBT Intelligent Power Module: compact and high-performance AC motor drive for simple and rugged designs up to 3 kW

The SLIMM 2nd series is the new ST's family of compact, high efficiency, dual-in-line intelligent power modules, with optional extra features. This family has been designed using a new internal configuration with two drivers, one high-side driver and one low-side driver and with the improved trench gate field-stop IGBT.

The best compromise between conduction and switching energy with an outstanding robustness and EMI behavior making the new product ideal to enhance the efficiency of compressor, pumps, fans and any motor drives working up to 20 kHz in hard-switching circuitries and for an application power range from 300 W to 3 kW.

#### KEY FEATURES

- 600 V, from 8 A to 35 A DC rating at 25 °C
- Low VCE(sat)
- Optimize driver and silicon for low EMI
- Lowest Rth value on the market for the DBC package versions
- Internal bootstrap diode
- 175 °C of maximum operating junction temperature
- Separate open emitter outputs
- NTC on board
- Integrated temperature sensor on Low side driver
- Comparator for fault protection
- Shutdown input/fault output
- Isolation rating of 1500 Vrms/min

#### KEY BENEFITS

- Easy to drive through microcontroller
- 175 °C of maximum junction temperature for an higher robustness and reliability

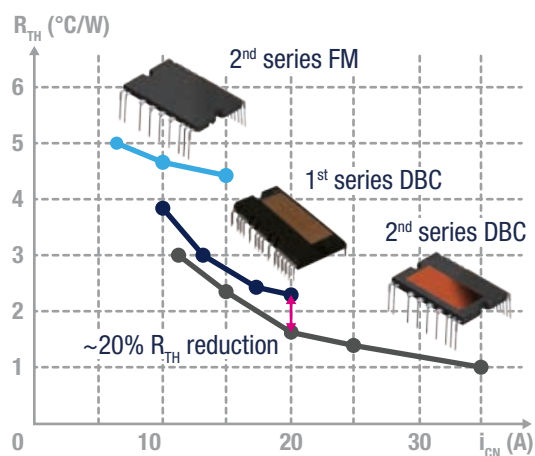
#### KEY APPLICATIONS

- Industrial motor drives
- 3-phase inverter for motor drives up to 3 kW
- Home appliances

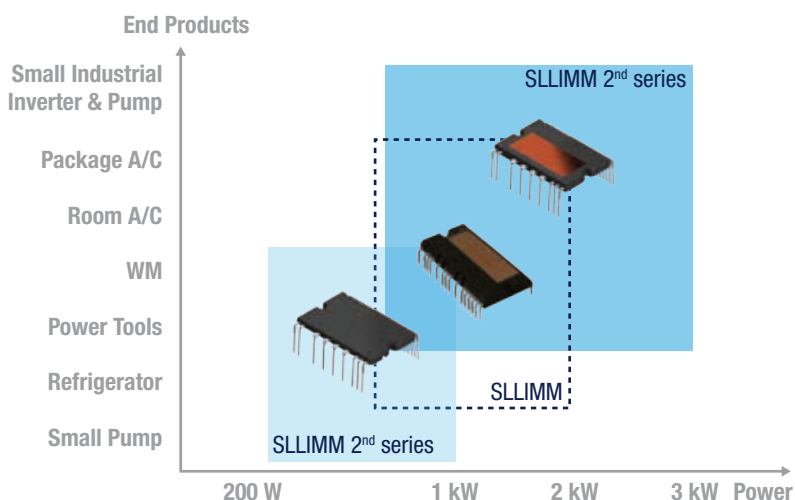


This series will complement and overcome the already available SLLIMM series in term of power and features, packages' types and flexibility and it takes over the main functions of previous one, adding some more features and enlarging the technology package option.

## SLLIMM $R_{TH}$



## SLLIMM Series: Positioning



Package	Part Number	$I_{CN}$ (A) @ 25 $^{\circ}\text{C}$ (@ 80 $^{\circ}\text{C}$ )	Voltage (V)	$V_{ce(sat)}$ (V) at $I_{CN}$ 25 $^{\circ}\text{C}$ (80 $^{\circ}\text{C}$ )	$R_{thj-c}$ (max) ( $^{\circ}\text{C/W}$ )	Min Viso (V)	Max $T_J$ ( $^{\circ}\text{C}$ )
SDIP2F-26L	STGIF5CH60TS-L(E)	8 (5)	600	1.7 (1.5)	5.0	1500	175
	STGIF7CH60TS-L(E)	10 (7)			4.8		
	STGIF10CH60TS-L(E)	15 (10)			4.6		
SDIP2B-26L	STGIB8CH60TS-L(E)	12 (8)			3.0		
	STGIB10CH60TS-L(E)	15 (10)			2.26		
	STGIB15CH60TS-L(E)	20 (15)			1.85		
	STGIB20M60TS-L(E)	25 (20)			1.4		
	STGIB30M60TS-L(E)	35 (30)			1.2		

Temperature sensing/protection:  
T= NTC on board  
S= Temperature sensing

Package and Leads finish options:  
F= Full Molded  
B= DBC, direct bond copper  
E= Short leads and emitter forward  
L= Long leads



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