

查询"SK75GD066T"供应商



**SEMITOP® 4**

## IGBT Module

**SK75GD066T**

Target Data

## Features

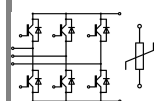
- One screw mounting module
- Fully compatible with SEMITOP®1,2,3
- Improved thermal performances by aluminium oxide substrate
- Trench IGBT technology
- CAL technology FWD
- Integrated NTC temperature sensor

## Typical Applications

- Inverter up to 16 kVA
- Typ. motor power 7,5 kW

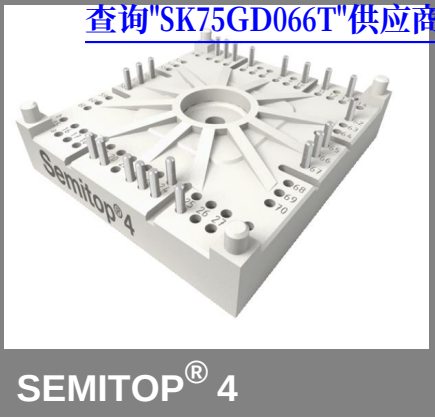
| Absolute Maximum Ratings |                                                                                                         | $T_s = 25\text{ °C}$ , unless otherwise specified |                    |
|--------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------|
| Symbol                   | Conditions                                                                                              | Values                                            | Units              |
| <b>IGBT</b>              |                                                                                                         |                                                   |                    |
| $V_{CES}$                | $T_j = 25\text{ °C}$                                                                                    | 600                                               | V                  |
| $I_C$                    | $T_j = 175\text{ °C}$                                                                                   | $T_s = 25\text{ °C}$                              | 83 A               |
|                          |                                                                                                         | $T_s = 70\text{ °C}$                              | 67 A               |
| $I_{CRM}$                | $I_{CRM} = 2 \times I_{Cnom}$                                                                           | 150                                               | A                  |
| $V_{GES}$                |                                                                                                         | $\pm 20$                                          | V                  |
| $t_{psc}$                | $V_{CC} = 360\text{ V}$ ; $V_{GE} \leq 20\text{ V}$ ; $T_j = 125\text{ °C}$<br>$V_{CES} < 600\text{ V}$ | 6                                                 | $\mu\text{s}$      |
| <b>Inverse Diode</b>     |                                                                                                         |                                                   |                    |
| $I_F$                    | $T_j = 175\text{ °C}$                                                                                   | $T_s = 25\text{ °C}$                              | 92 A               |
|                          |                                                                                                         | $T_s = 70\text{ °C}$                              | 73 A               |
| $I_{FRM}$                | $I_{FRM} = 2 \times I_{Fnom}$                                                                           | 80                                                | A                  |
| <b>Module</b>            |                                                                                                         |                                                   |                    |
| $I_{t(RMS)}$             |                                                                                                         |                                                   | A                  |
| $T_{vj}$                 |                                                                                                         | -40 ... +150                                      | $^{\circ}\text{C}$ |
| $T_{stg}$                |                                                                                                         | -40 ... +125                                      | $^{\circ}\text{C}$ |
| $V_{isol}$               | AC, 1 min.                                                                                              | 2500                                              | V                  |

| Characteristics |                                                   | $T_s = 25\text{ °C}$ , unless otherwise specified |      |      |                                       |
|-----------------|---------------------------------------------------|---------------------------------------------------|------|------|---------------------------------------|
| Symbol          | Conditions                                        | min.                                              | typ. | max. | Units                                 |
| <b>IGBT</b>     |                                                   |                                                   |      |      |                                       |
| $V_{GE(th)}$    | $V_{GE} = V_{CE}$ , $I_C = 1,2\text{ mA}$         | 5                                                 | 5,8  | 6,5  | V                                     |
| $I_{CES}$       | $V_{GE} = 0\text{ V}$ , $V_{CE} = V_{CES}$        |                                                   |      |      | $T_j = 25\text{ °C}$<br>mA            |
|                 |                                                   |                                                   |      |      | $T_j = 125\text{ °C}$<br>mA           |
| $I_{GES}$       | $V_{CE} = 0\text{ V}$ , $V_{GE} = 20\text{ V}$    |                                                   |      | 600  | $T_j = 25\text{ °C}$<br>nA            |
|                 |                                                   |                                                   |      |      | $T_j = 125\text{ °C}$<br>nA           |
| $V_{CE0}$       |                                                   |                                                   |      |      | $T_j = 25\text{ °C}$<br>V             |
|                 |                                                   |                                                   |      |      | $T_j = 150\text{ °C}$<br>V            |
| $r_{CE}$        | $V_{GE} = 15\text{ V}$                            |                                                   |      |      | $T_j = 25\text{ °C}$<br>m $\Omega$    |
|                 |                                                   |                                                   |      |      | $T_j = 150\text{ °C}$<br>m $\Omega$   |
| $V_{CE(sat)}$   | $I_{Cnom} = 75\text{ A}$ , $V_{GE} = 15\text{ V}$ |                                                   |      |      | $T_j = 25\text{ °C}_{chiplev.}$<br>V  |
|                 |                                                   |                                                   |      |      | $T_j = 150\text{ °C}_{chiplev.}$<br>V |
| $C_{ies}$       | $V_{CE} = 25$ , $V_{GE} = 0\text{ V}$             |                                                   |      |      | 4,7 nF                                |
| $C_{oes}$       |                                                   |                                                   |      |      | 0,3 nF                                |
| $C_{res}$       |                                                   |                                                   |      |      | 0,145 nF                              |
| $t_{d(on)}$     | $R_{Gon} = 32\text{ }\Omega$                      |                                                   |      |      | 127 ns                                |
| $t_r$           |                                                   |                                                   |      |      | 117 ns                                |
| $E_{on}$        | $R_{Goff} = 32\text{ }\Omega$                     |                                                   |      |      | 5,9 mJ                                |
| $t_{d(off)}$    |                                                   |                                                   |      |      | 925 ns                                |
| $t_f$           |                                                   |                                                   |      |      | 73 ns                                 |
| $E_{off}$       |                                                   |                                                   |      |      | 3,1 mJ                                |
| $R_{th(j-s)}$   | per IGBT                                          |                                                   |      | 0,75 | K/W                                   |



**GD-T**

SK75GD066T



IGBT Module

SK75GD066T

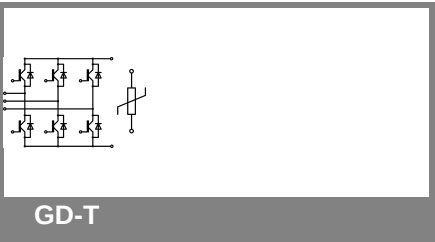
Target Data

Features

- One screw mounting module
- Fully compatible with SEMITOP<sup>®</sup>1,2,3
- Improved thermal performances by aluminium oxide substrate
- Trench IGBT technology
- CAL technology FWD
- Integrated NTC temperature sensor

Typical Applications

- Inverter up to 16 kVA
- Typ. motor power 7,5 kW

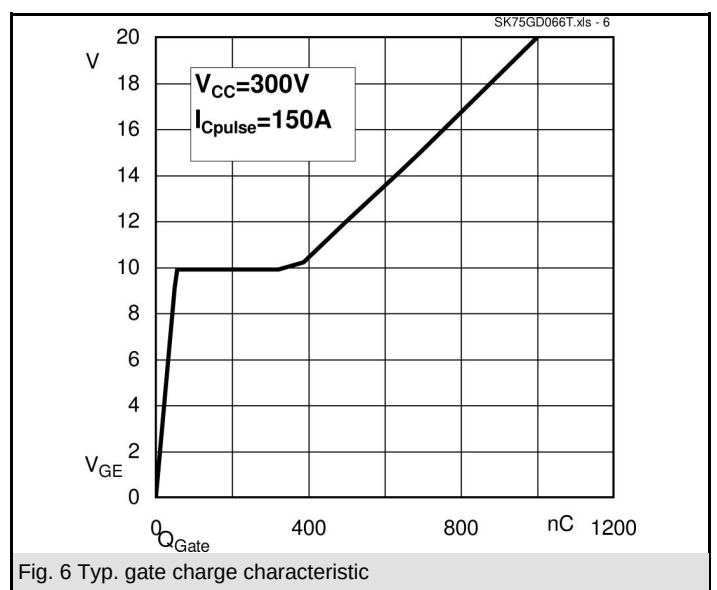
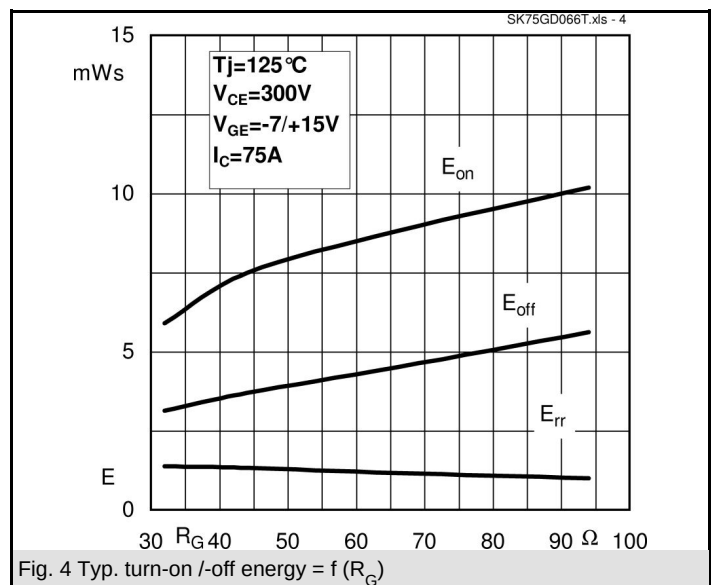
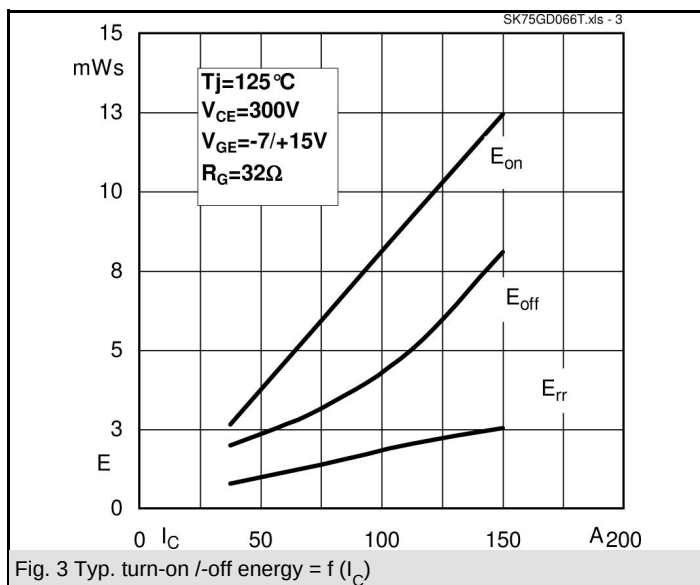
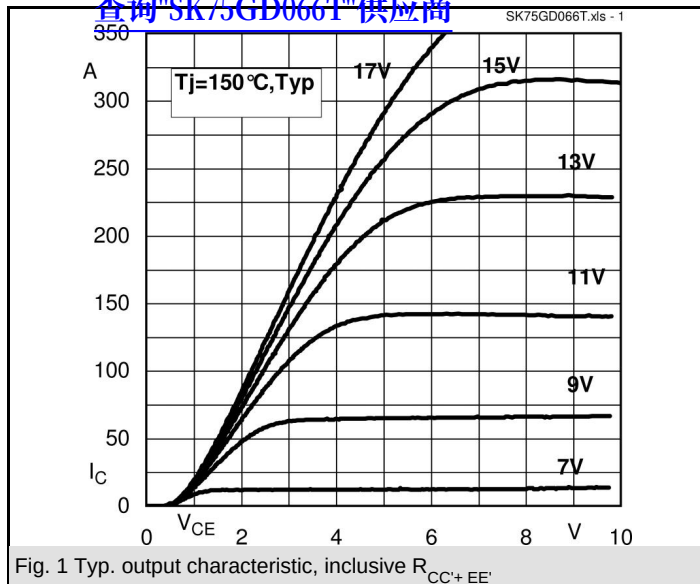


| Characteristics                  |                                                                         |                                             |      |        |      |       |
|----------------------------------|-------------------------------------------------------------------------|---------------------------------------------|------|--------|------|-------|
| Symbol                           | Conditions                                                              |                                             | min. | typ.   | max. | Units |
| Inverse Diode                    |                                                                         |                                             |      |        |      |       |
| V <sub>F</sub> = V <sub>EC</sub> | I <sub>Fnom</sub> = 60 A; V <sub>GE</sub> = 0 V                         | T <sub>j</sub> = 25 °C <sub>chiplev.</sub>  |      | 1,35   |      | V     |
|                                  |                                                                         | T <sub>j</sub> = 150 °C <sub>chiplev.</sub> |      | 1,31   |      | V     |
| V <sub>F0</sub>                  |                                                                         | T <sub>j</sub> = 25 °C                      |      |        |      | V     |
|                                  |                                                                         | T <sub>j</sub> = 150 °C                     |      | 0,85   |      | V     |
| r <sub>F</sub>                   |                                                                         | T <sub>j</sub> = 25 °C                      |      |        |      | mΩ    |
|                                  |                                                                         | T <sub>j</sub> = 150 °C                     |      | 7,8    |      | mΩ    |
| I <sub>RRM</sub>                 | I <sub>Fnom</sub> = 75 A<br>di/dt = 2400 A/μs<br>V <sub>CC</sub> = 300V | T <sub>j</sub> = 125 °C                     |      | 35     |      | A     |
| Q <sub>rr</sub>                  |                                                                         |                                             |      | 10     |      | μC    |
| E <sub>rr</sub>                  |                                                                         |                                             |      | 1,4    |      | mJ    |
| R <sub>th(j-s)D</sub>            | per diode                                                               |                                             |      | 1,2    |      | K/W   |
| M <sub>s</sub>                   | to heat sink                                                            |                                             |      |        | 3,5  | Nm    |
| w                                |                                                                         |                                             |      | 60     |      | g     |
| Temperature sensor               |                                                                         |                                             |      |        |      |       |
| R <sub>100</sub>                 | T <sub>s</sub> = 100°C (R <sub>25</sub> =5kΩ)                           |                                             |      | 493±5% |      | Ω     |

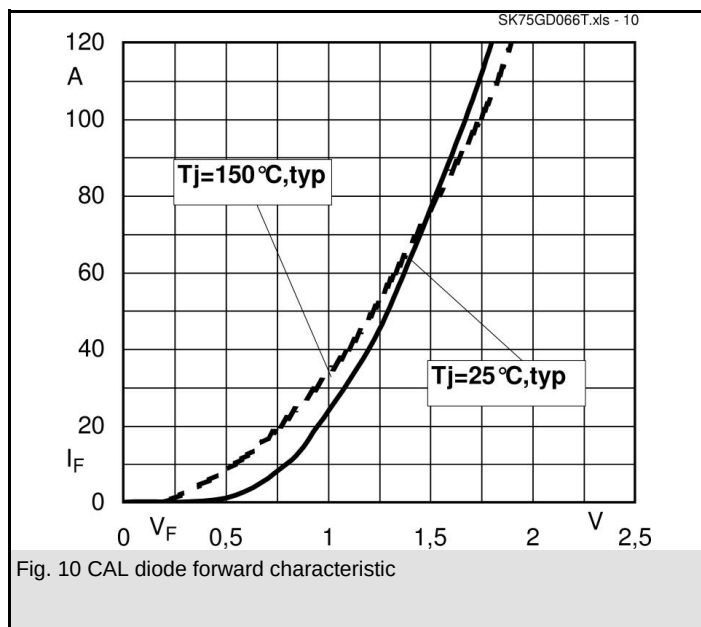
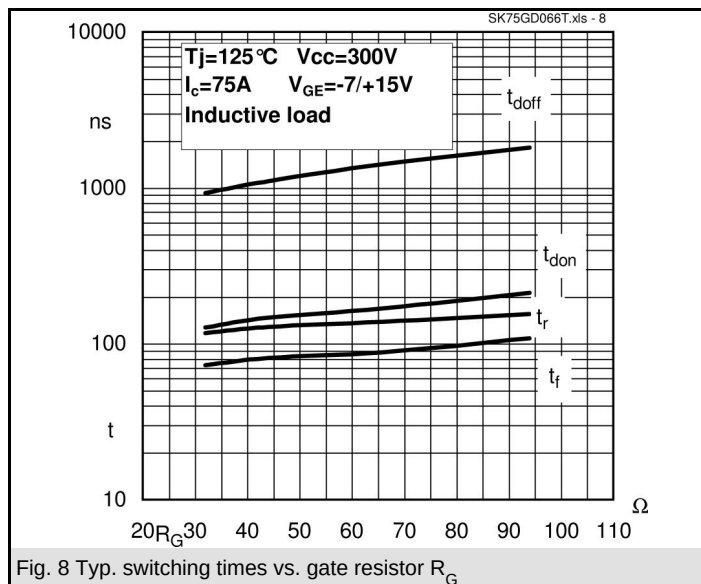
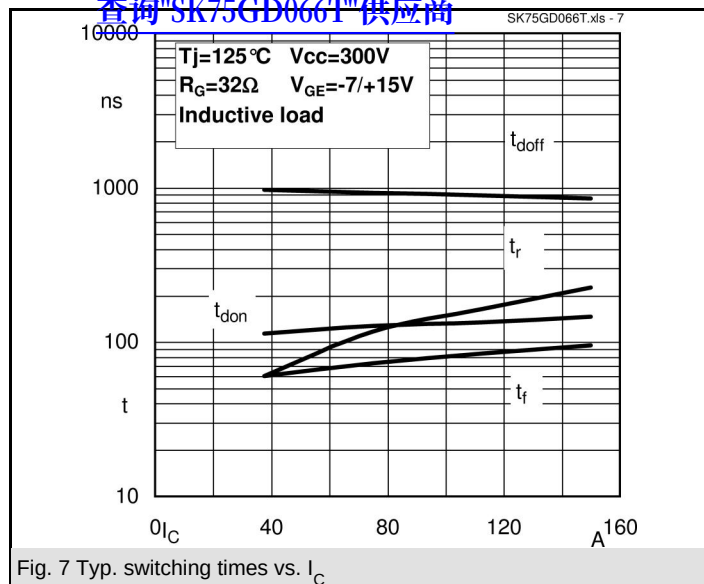
This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

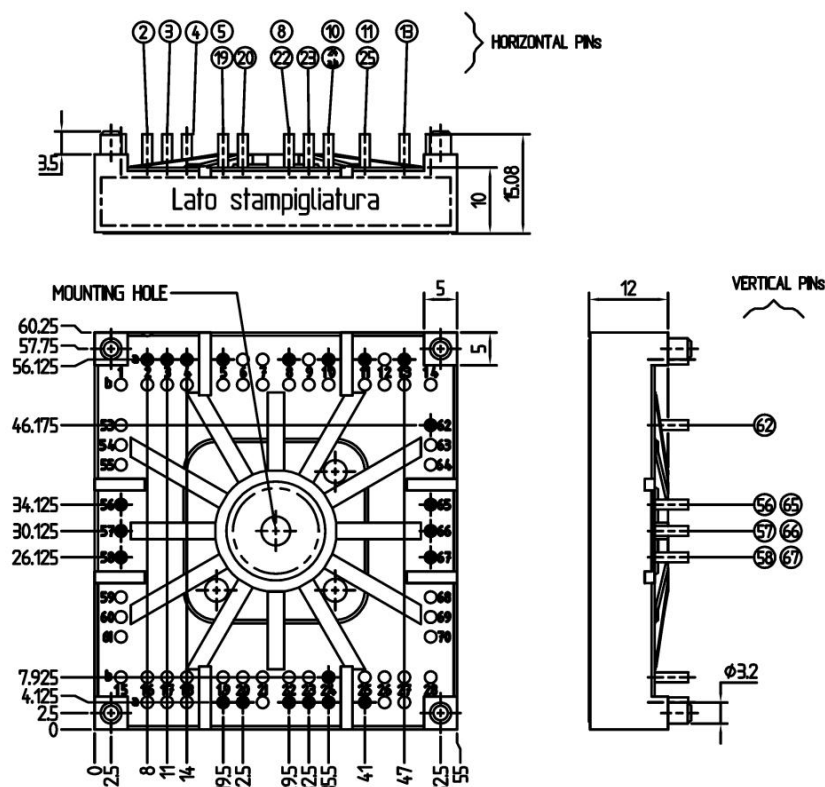
查询"SK75GD066T"供应商



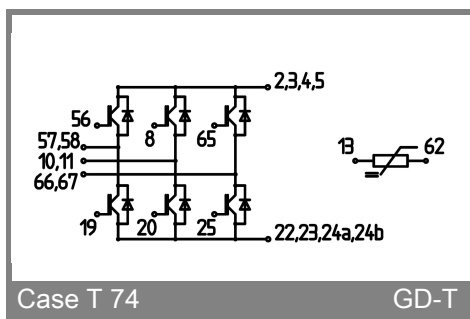
查询"SK75GD066T"供应商



[查询"SK75GD066T"供应商](#)



Case T74 (Suggested hole diameter for the solder pins in the circuit board: 2mm. Suggested hole diameter for the mounting pins in the circuit board: 3,6mm )



Case T 74

GD-T