

# SKiiP 28AC066V1

查询"SKiiP28AC066V1\_06"供应商



MiniSKiiP®2

## 3-phase bridge inverter

SKiiP 28AC066V1

### Features

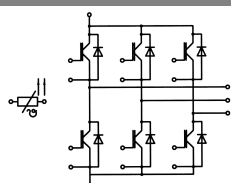
- Trench IGBTs
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

### Typical Applications

- Inverter up to 22 kVA
- Typical motor power 11kW

### Remarks

- Case temperature limited to  $T_C = 125^\circ\text{C}$  max.
- Product reliability results are valid for  $T_j = 150^\circ\text{C}$
- SC data:  $t_p \leq 6 \mu\text{s}$ ;  $V_{GE} \leq 15 \text{ V}$ ;  $T_j = 150^\circ\text{C}$ ;  $V_{CC} = 360 \text{ V}$
- $V_{CEsat}$ ,  $V_F$  = chip level value

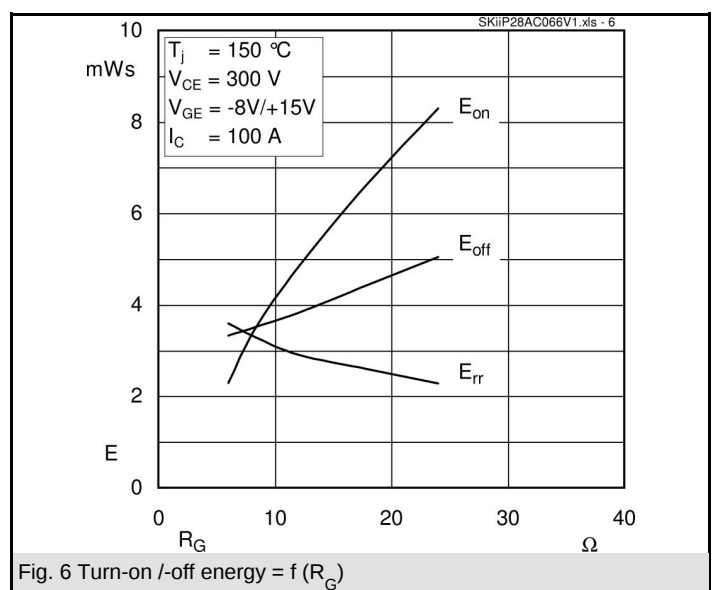
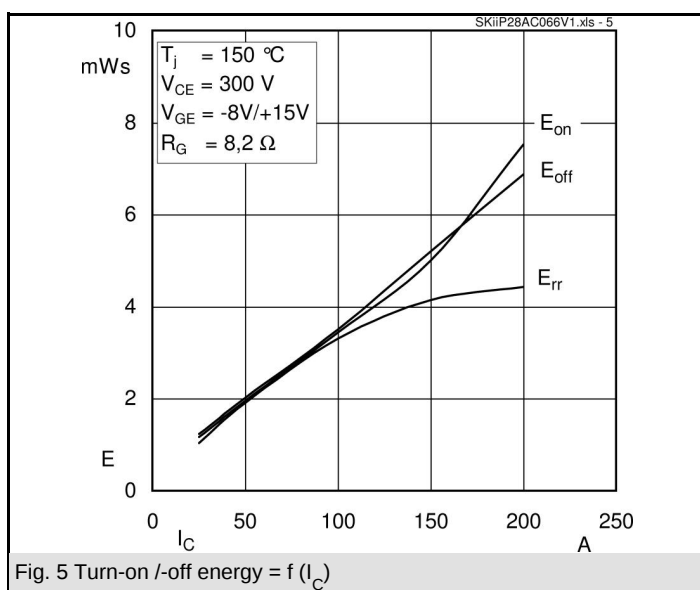
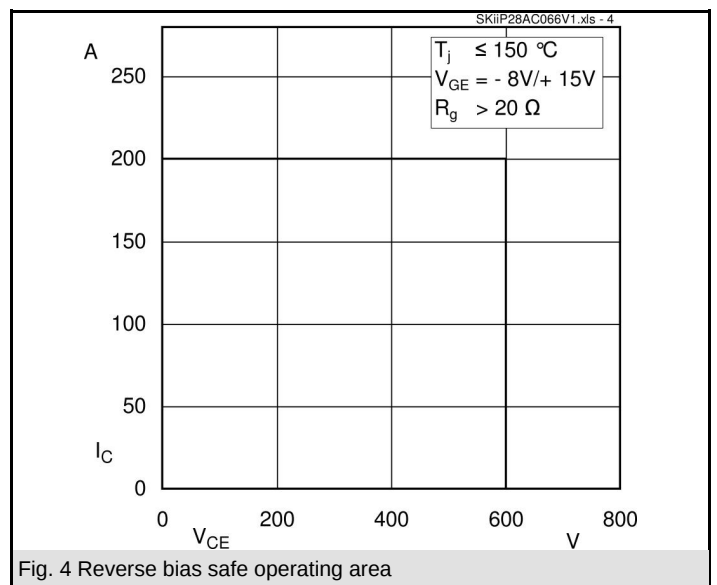
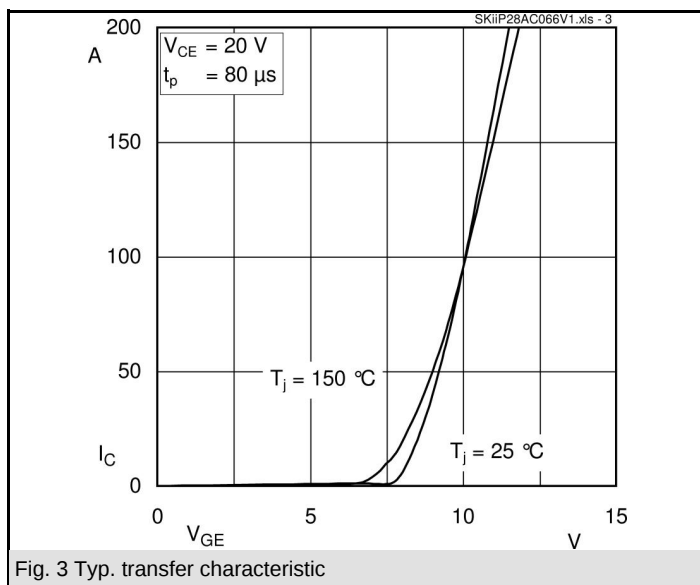
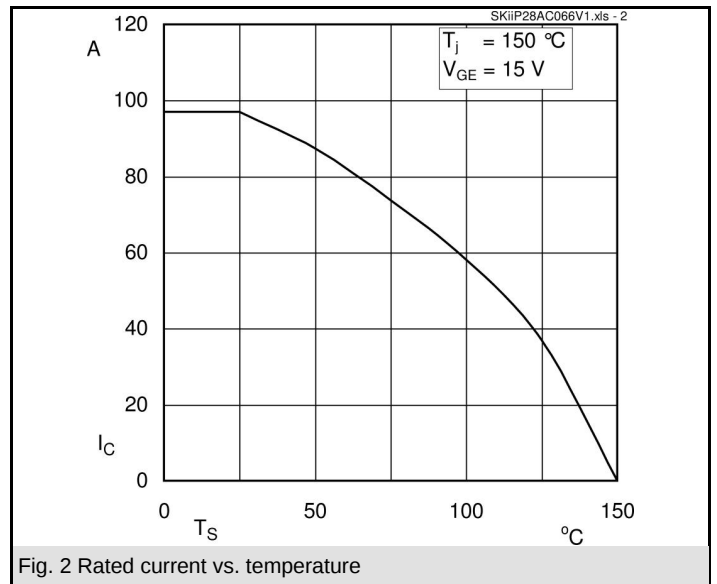
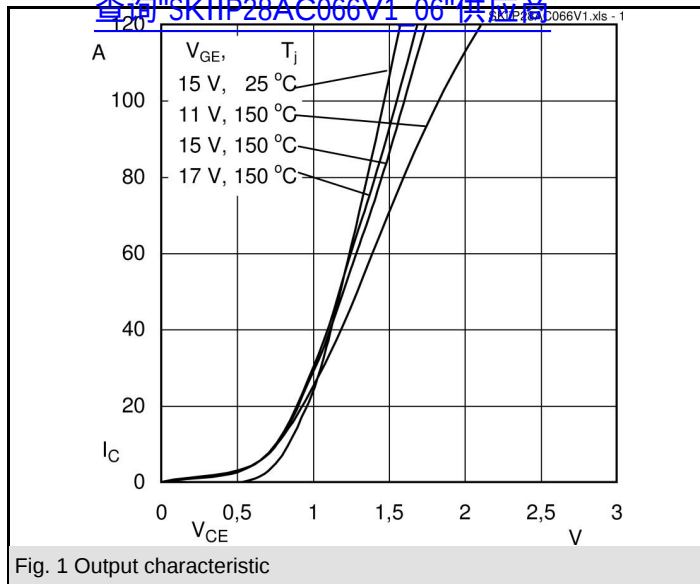


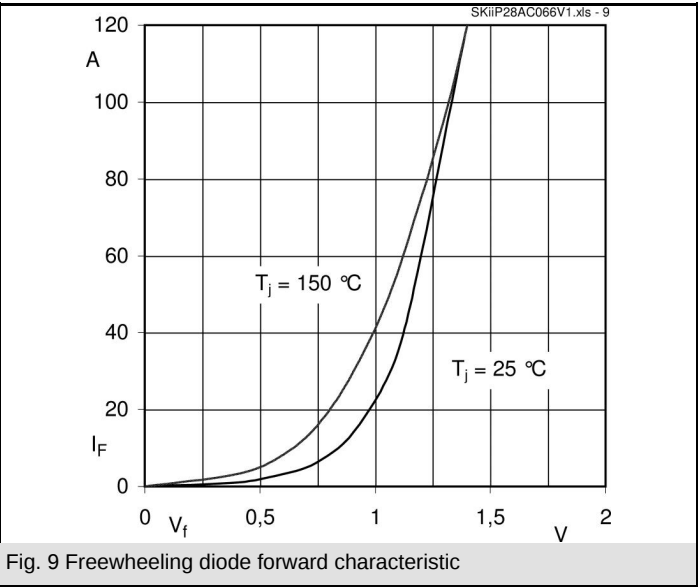
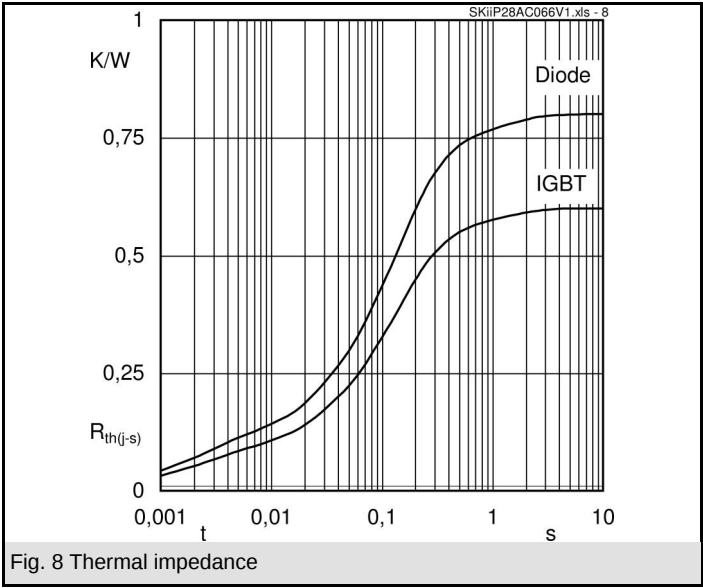
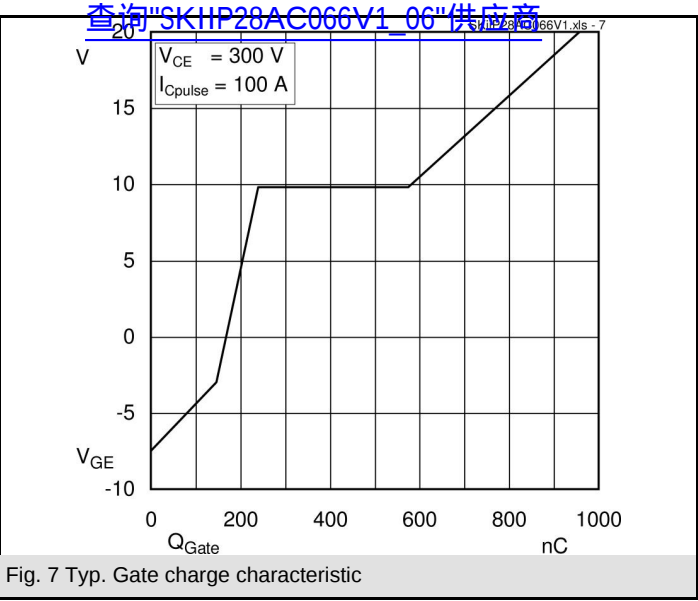
AC

| Absolute Maximum Ratings |                                                           | $T_S = 25^\circ\text{C}$ , unless otherwise specified |                  |
|--------------------------|-----------------------------------------------------------|-------------------------------------------------------|------------------|
| Symbol                   | Conditions                                                | Values                                                | Units            |
| <b>IGBT - Inverter</b>   |                                                           |                                                       |                  |
| $V_{CES}$                |                                                           | 600                                                   | V                |
| $I_C$                    | $T_S = 25 (70)^\circ\text{C}$ , $T_j = 150^\circ\text{C}$ | 101 (68)                                              | A                |
| $I_C$                    | $T_S = 25 (70)^\circ\text{C}$ , $T_j = 175^\circ\text{C}$ | 112 (83)                                              | A                |
| $I_{CRM}$                | $t_p = 1 \text{ ms}$                                      | 200                                                   | A                |
| $V_{GES}$                |                                                           | $\pm 15$                                              | V                |
| $T_j$                    |                                                           | $-40 \dots +175$                                      | $^\circ\text{C}$ |
| <b>Diode - Inverter</b>  |                                                           |                                                       |                  |
| $I_F$                    | $T_S = 25 (70)^\circ\text{C}$ , $T_j = 150^\circ\text{C}$ | 103 (67)                                              | A                |
| $I_F$                    | $T_S = 25 (70)^\circ\text{C}$ , $T_j = 175^\circ\text{C}$ | 112 (81)                                              | A                |
| $I_{FRM}$                | $t_p = 1 \text{ ms}$                                      | 200                                                   | A                |
| $T_j$                    |                                                           | $-40 \dots +175$                                      | $^\circ\text{C}$ |
| $I_{RMS}$                | per power terminal (20 A / spring)                        | 100                                                   | A                |
| $T_{stg}$                | $T_{op} \leq T_{stg}$                                     | $-40 \dots +125$                                      | $^\circ\text{C}$ |
| $V_{isol}$               | AC, 1 min.                                                | 2500                                                  | V                |

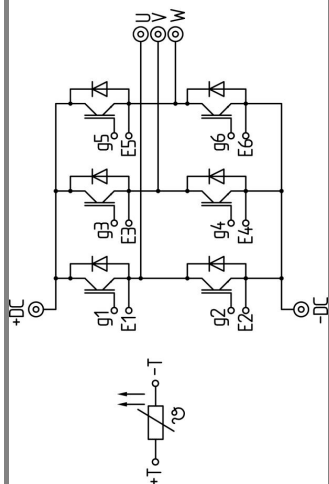
| Characteristics           |                                                                        | $T_C = 25^\circ\text{C}$ , unless otherwise specified |             |             |               |
|---------------------------|------------------------------------------------------------------------|-------------------------------------------------------|-------------|-------------|---------------|
| Symbol                    | Conditions                                                             | min.                                                  | typ.        | max.        | Units         |
| <b>IGBT - Inverter</b>    |                                                                        |                                                       |             |             |               |
| $V_{CEsat}$               | $I_{Cnom} = 100 \text{ A}$ , $T_j = 25 (150)^\circ\text{C}$            | 1,05                                                  | 1,45 (1,65) | 1,85 (2,05) | V             |
| $V_{GE(th)}$              | $V_{GE} = V_{CE}$ , $I_C = 2 \text{ mA}$                               |                                                       | 5,8         |             | V             |
| $V_{CE(TO)}$              | $T_j = 25 (150)^\circ\text{C}$                                         |                                                       | 0,9 (0,8)   | 1,1 (1)     | V             |
| $r_T$                     | $T_j = 25 (150)^\circ\text{C}$                                         |                                                       | 5,5 (8,5)   | 7,5 (10,5)  | m $\Omega$    |
| $C_{ies}$                 | $V_{CE} = 25 \text{ V}$ , $V_{GE} = 0 \text{ V}$ , $f = 1 \text{ MHz}$ |                                                       | 6,15        |             | nF            |
| $C_{oes}$                 | $V_{CE} = 25 \text{ V}$ , $V_{GE} = 0 \text{ V}$ , $f = 1 \text{ MHz}$ |                                                       | 1,12        |             | nF            |
| $C_{res}$                 | $V_{CE} = 25 \text{ V}$ , $V_{GE} = 0 \text{ V}$ , $f = 1 \text{ MHz}$ |                                                       | 0,9         |             | nF            |
| $R_{CC'+EE'}$             | spring contact-chip $T_S = 25 (150)^\circ\text{C}$                     |                                                       |             |             | m $\Omega$    |
| $R_{th(j-s)}$             | per IGBT                                                               |                                                       | 0,6         |             | K/W           |
| $t_{d(on)}$               | under following conditions                                             |                                                       | 40          |             | ns            |
| $t_r$                     | $V_{CC} = 300 \text{ V}$ , $V_{GE} = -8\text{V}/+15\text{V}$           |                                                       | 40          |             | ns            |
| $t_{d(off)}$              | $I_{Cnom} = 100 \text{ A}$ , $T_j = 150^\circ\text{C}$                 |                                                       | 410         |             | ns            |
| $t_f$                     | $R_{Gon} = R_{Goff} = 8,2 \Omega$                                      |                                                       | 50          |             | ns            |
| $E_{on}(E_{off})$         | inductive load                                                         |                                                       | 3,4 (3,5)   |             | mJ            |
| <b>Diode - Inverter</b>   |                                                                        |                                                       |             |             |               |
| $V_F = V_{EC}$            | $I_{Fnom} = 100 \text{ A}$ , $T_j = 25 (150)^\circ\text{C}$            |                                                       | 1,3 (1,3)   | 1,5 (1,5)   | V             |
| $V_{(TO)}$                | $T_j = 25 (150)^\circ\text{C}$                                         |                                                       | 0,9 (0,8)   | 1 (0,9)     | V             |
| $r_T$                     | $T_j = 25 (150)^\circ\text{C}$                                         |                                                       | 4 (5)       |             | m $\Omega$    |
| $R_{th(j-s)}$             | per diode                                                              |                                                       | 0,8         |             | K/W           |
| $I_{RRM}$                 | under following conditions                                             |                                                       | 102         |             | A             |
| $Q_{rr}$                  | $I_{Fnom} = 100 \text{ A}$ , $V_R = 300 \text{ V}$                     |                                                       | 15,5        |             | $\mu\text{C}$ |
| $E_{rr}$                  | $V_{GE} = 0 \text{ V}$ , $T_j = 150^\circ\text{C}$                     |                                                       | 3,3         |             | mJ            |
|                           | $di_F/dt = 2560 \text{ A}/\mu\text{s}$                                 |                                                       |             |             |               |
| <b>Temperature Sensor</b> |                                                                        |                                                       |             |             |               |
| $R_{ts}$                  | 3 %, $T_r = 25 (100)^\circ\text{C}$                                    |                                                       | 1000(1670)  |             | $\Omega$      |
| <b>Mechanical Data</b>    |                                                                        |                                                       |             |             |               |
| m                         |                                                                        |                                                       | 65          |             | g             |
| $M_s$                     | Mounting torque                                                        | 2                                                     |             | 2,5         | Nm            |

查询"SKiiP28AC066V1 06"供应商



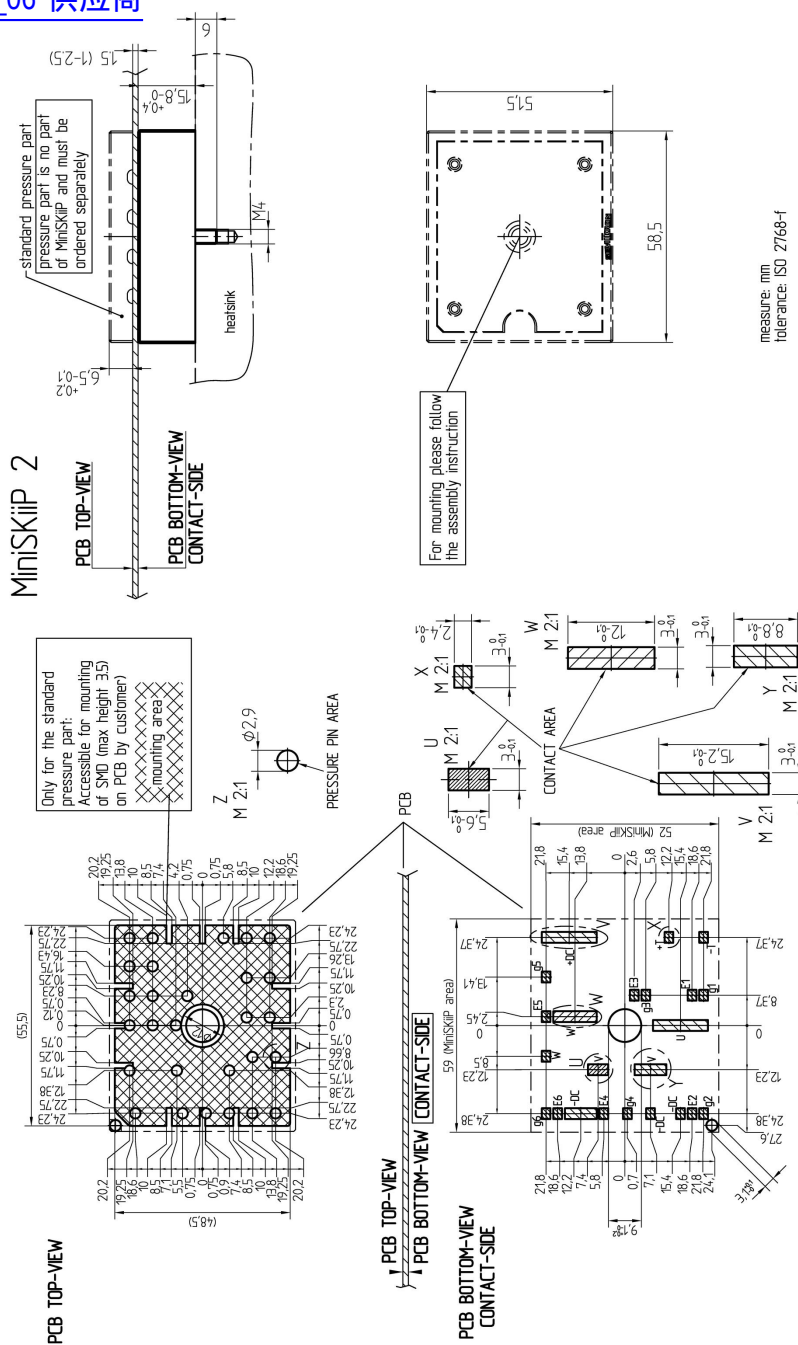


查询"SKIIP28AC066V1\_06"供应商



circuit

- power connector
- control connector



measure: mm  
tolerance: ISO 2768-f

These documents are Semkron property. Semkron reserves all copyrights. All copying and transmitting of this information requires written permission. For the case of industrial property rights, Semkron reserves all rights.

## pinout, dimensions

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.