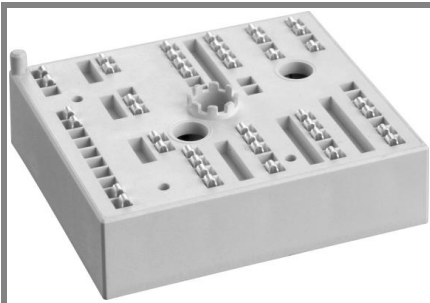


SKiiP 26AC12T4V1



MiniSKiiP[®]2

3-phase bridge inverter

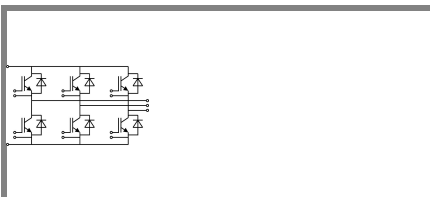
SKiiP 26AC12T4V1

Target Data

Features

- Trench 4 IGBT's
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications

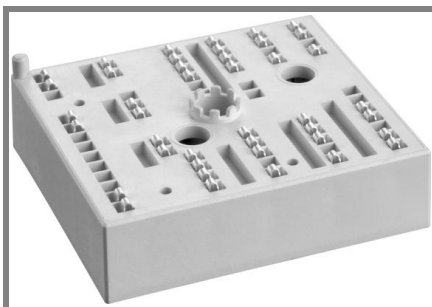


AC

| Absolute Maximum Ratings | | $T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified | | |
|--------------------------|--|---|-----|------------------|
| Symbol | Conditions | Values | | Units |
| IGBT | | | | |
| V_{CES} | $T_j = 25\text{ }^\circ\text{C}$ | 1200 | | V |
| I_C | $T_j = 175\text{ }^\circ\text{C}$ | $T_c = 25\text{ }^\circ\text{C}$ | 96 | |
| | | $T_c = 70\text{ }^\circ\text{C}$ | 78 | |
| I_{CRM} | $I_{CRM} = 3 \times I_{Cnom}$ | 225 | | A |
| V_{GES} | | ± 20 | | V |
| t_{psc} | $V_{CC} = 600\text{ V}; V_{GE} \leq 20\text{ V}; T_j = 150\text{ }^\circ\text{C}$ $V_{CES} < 1200\text{ V}$ | 10 | | μs |
| Inverse Diode | | | | |
| I_F | $T_j = 175\text{ }^\circ\text{C}$ | $T_c = 25\text{ }^\circ\text{C}$ | 83 | |
| | | $T_c = 70\text{ }^\circ\text{C}$ | 66 | |
| I_{FRM} | $I_{CRM} = 3 \times I_{Cnom}$ | 225 | | A |
| I_{FSM} | $t_p = 10\text{ ms}; \text{sin.}$ | $T_j = 150\text{ }^\circ\text{C}$ | 429 | |
| Module | | | | |
| $I_{t(RMS)}$ | | 100 | | A |
| T_{vj} | | -40...+175 | | $^\circ\text{C}$ |
| T_{stg} | | -40...+125 | | $^\circ\text{C}$ |
| V_{isol} | AC, 1 min. | 2500 | | V |

| Characteristics | | $T_c = 25\text{ }^\circ\text{C}$, unless otherwise specified | | | |
|-----------------|--|--|------|------|----------|
| Symbol | Conditions | min. | typ. | max. | Units |
| IGBT | | | | | |
| $V_{GE(th)}$ | $V_{GE} = V_{CE}, I_C = \text{mA}$ | 5 | 5,8 | 6,5 | V |
| I_{CES} | $V_{GE} = V, V_{CE} = V_{CES}, T_j = \text{ }^\circ\text{C}$ | | | | mA |
| V_{CE0} | | $T_j = 25\text{ }^\circ\text{C}$ | 1,1 | | 1,3 |
| | | $T_j = 150\text{ }^\circ\text{C}$ | 1 | | 1,2 |
| r_{CE} | $V_{GE} = 15\text{ V}$ | $T_j = 25\text{ }^\circ\text{C}$ | 10 | | 10 |
| | | $T_j = 150\text{ }^\circ\text{C}$ | 17 | | 17 |
| $V_{CE(sat)}$ | $I_{Cnom} = 75\text{ A}, V_{GE} = 15\text{ V}$ | $T_j = 25\text{ }^\circ\text{C}_{chiplev.}$ | 1,85 | | 2,05 |
| | | $T_j = 150\text{ }^\circ\text{C}_{chiplev.}$ | 2,25 | | 2,45 |
| C_{res} | $V_{CE} = , V_{GE} = V$ | $f = \text{MHz}$ | | | nF |
| C_{oes} | | | | | nF |
| C_{res} | | | | | nF |
| R_{Gint} | $T_j = 25\text{ }^\circ\text{C}$ | 0 | | | Ω |
| $t_{d(on)}$ | $R_{Gon} =$ | $V_{CC} = 600\text{ V}$ $I_{Cnom} = 75\text{ A}$ $T_j = 150\text{ }^\circ\text{C}$ $V_{GE} = \pm 15\text{ V}$ | | | ns |
| t_r | | | | | ns |
| E_{on} | $R_{Goff} =$ | | 8,5 | | mJ |
| $t_{d(off)}$ | | | | | ns |
| t_f | | | | | ns |
| E_{off} | | | 5,5 | | mJ |
| $R_{th(j-s)}$ | per IGBT | 0,52 | | | K/W |

SKiiP 26AC12T4V1



MiniSKiiP[®]2

3-phase bridge inverter

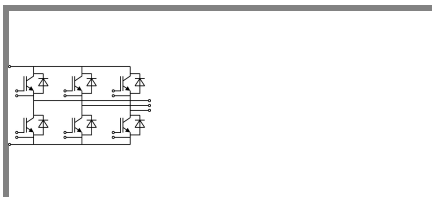
SKiiP 26AC12T4V1

Target Data

Features

- Trench 4 IGBT's
- Robust and soft freewheeling diodes in CAL technology
- Highly reliable spring contacts for electrical connections
- UL recognised file no. E63532

Typical Applications

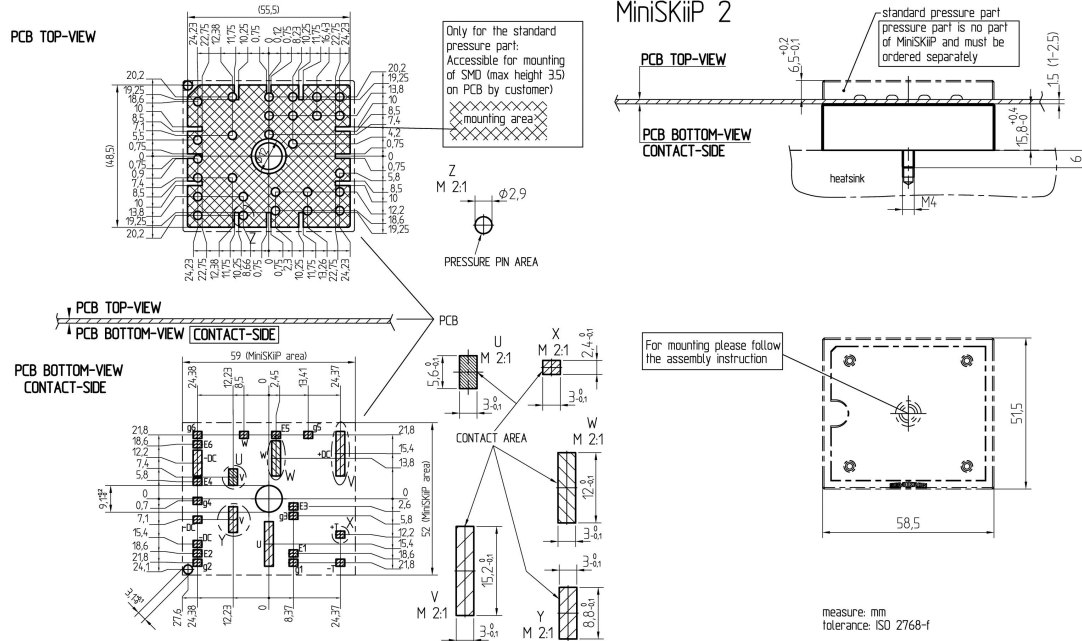


AC

| Characteristics | | min. | typ. | max. | Units |
|---------------------------|---------------------------------------|------|------|------|-------|
| Inverse Diode | | | | | |
| $V_F = V_{EC}$ | $I_{Fnom} = 75 \text{ A}; V_{GE} = V$ | | 2,2 | 2,5 | V |
| | | | 2,1 | 2,45 | V |
| | | | | | |
| V_{F0} | | | 1,3 | 1,5 | V |
| | | | 0,9 | 1,1 | V |
| r_F | | | 12 | 13 | mΩ |
| | | | 15 | 18 | mΩ |
| I_{RRM} | $I_{Fnom} = A$ | | | | A |
| Q_{rr} | | | | | μC |
| E_{rr} | $V_{GE} = \pm 15V$ | | 5,6 | | mJ |
| $R_{th(j-s)}$ | per diode | | 0,74 | | K/W |
| M_s | to heat sink | | | | Nm |
| M_t | to terminals | 2 | | 2,5 | Nm |
| w | | | 65 | | g |
| Temperature sensor | | | | | |
| R_{ts} | 3%, $T_r = 25^\circ\text{C}$ | | 1000 | | Ω |
| R_{ts} | 3%, $T_r = 100^\circ\text{C}$ | | 1670 | | Ω |

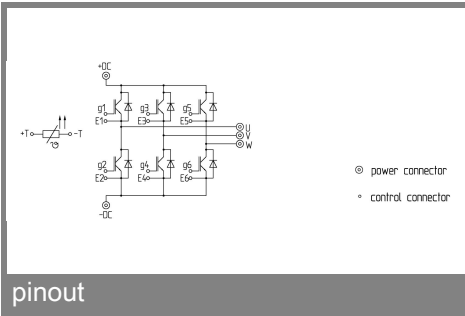
This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

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case



pinout