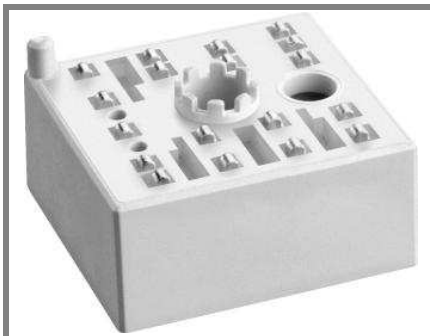


SKiiP 02AC066V1



MiniSKiiP[®]0

3-phase bridge inverter

SKiiP 02AC066V1

Preliminary Data

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*

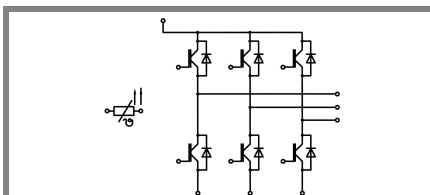
- Inverter up to 5 kVA
- Typical motor power 2,2 kW

Remarks

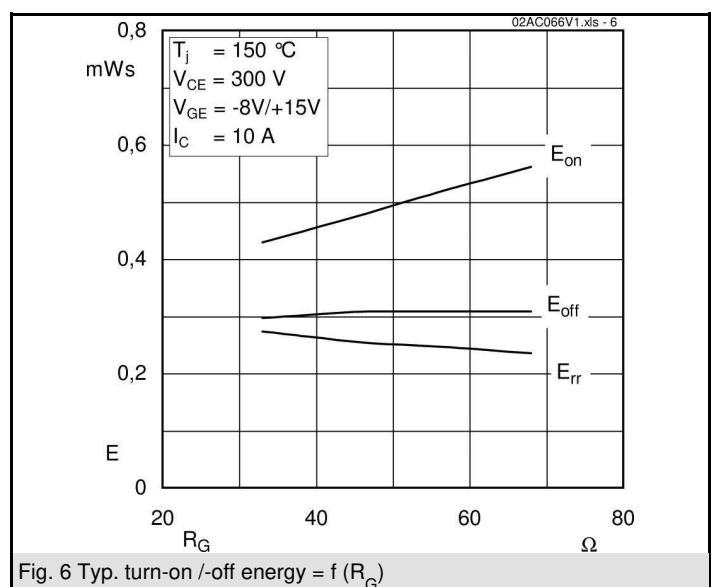
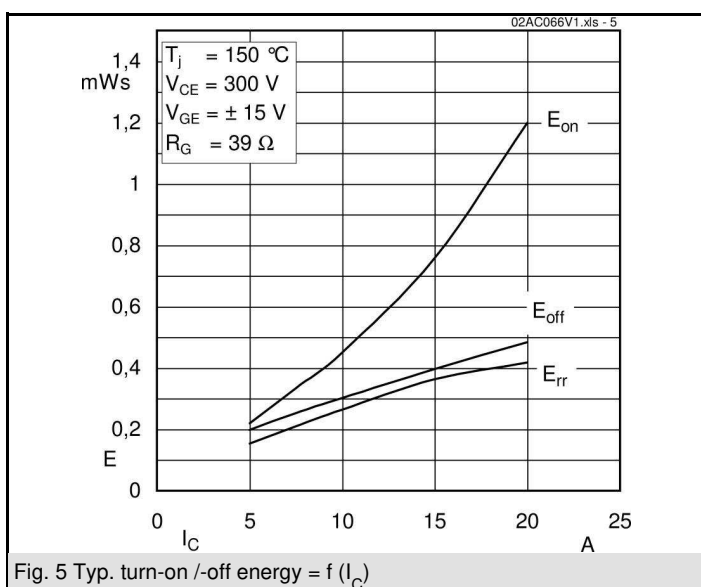
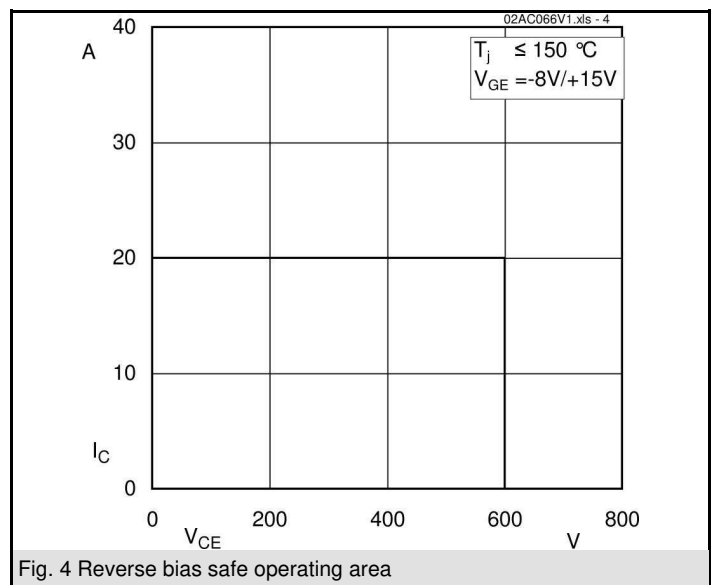
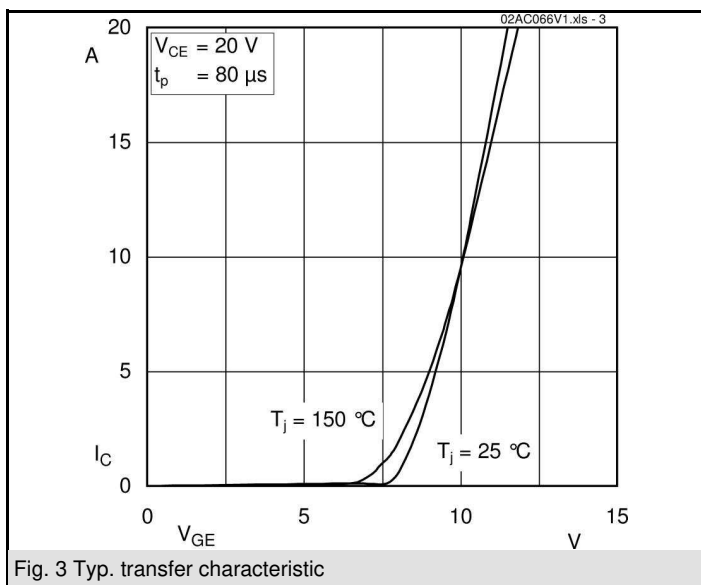
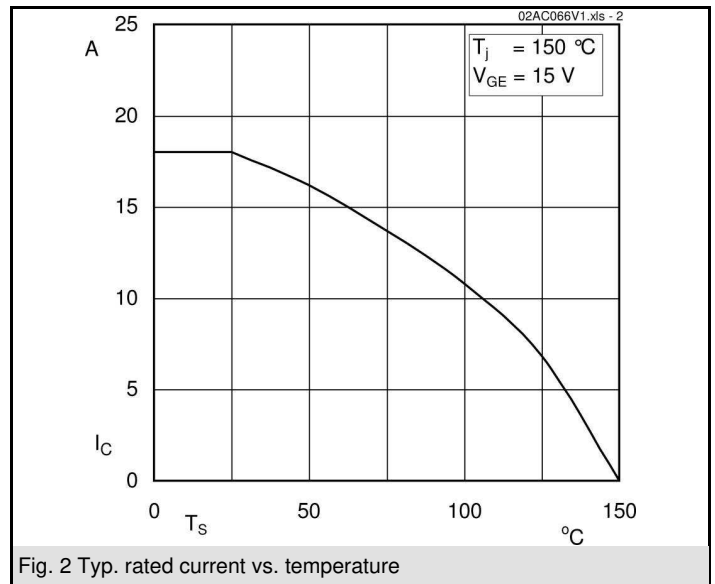
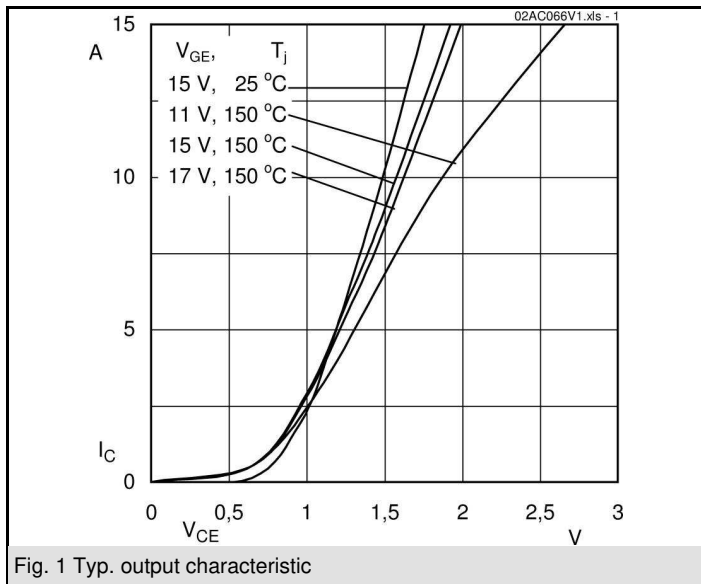
- Case temperature limited to $T_C = 125^\circ\text{C}$ max., product reliability results are valid for $T_j = 150^\circ\text{C}$
- SC data: $t_p \leq 6 \text{ s}$; $V_{GE} \leq 15 \text{ V}$; $T_j = 150^\circ\text{C}$; $V_{CC} = 360 \text{ V}$
- V_{CEsat} , $V_F =$ chip level value
- Temp. Sensor: No basic insulation to main circuit, max. potential difference 850V to -DC

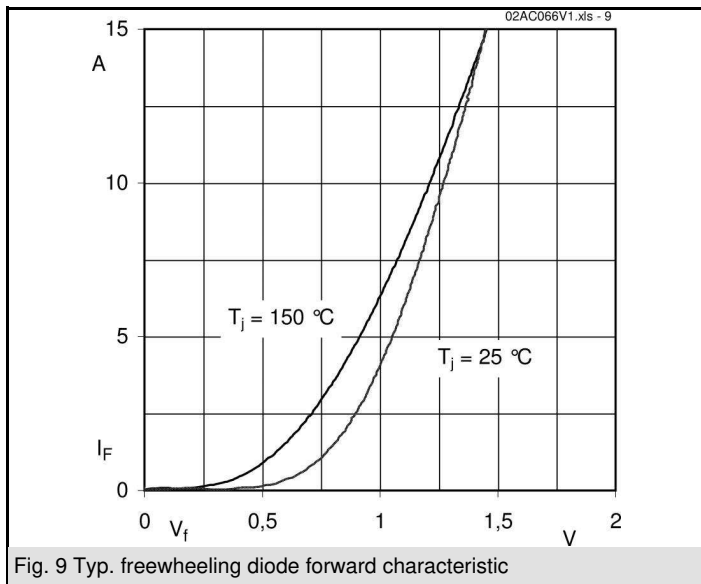
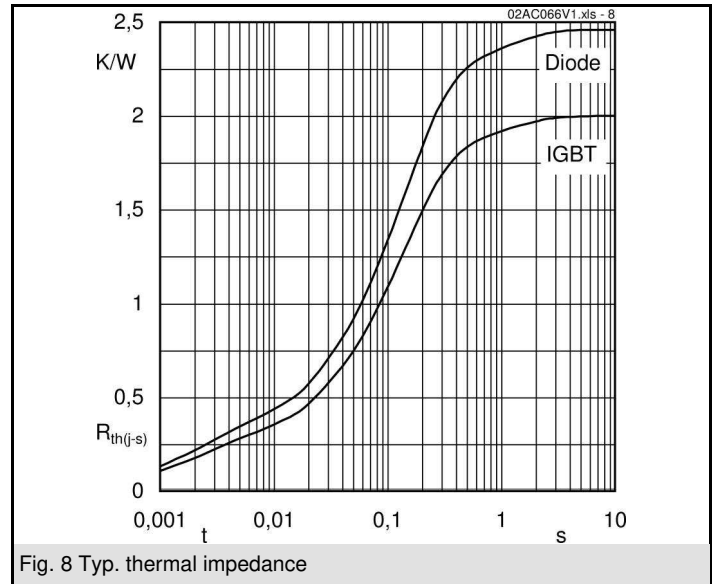
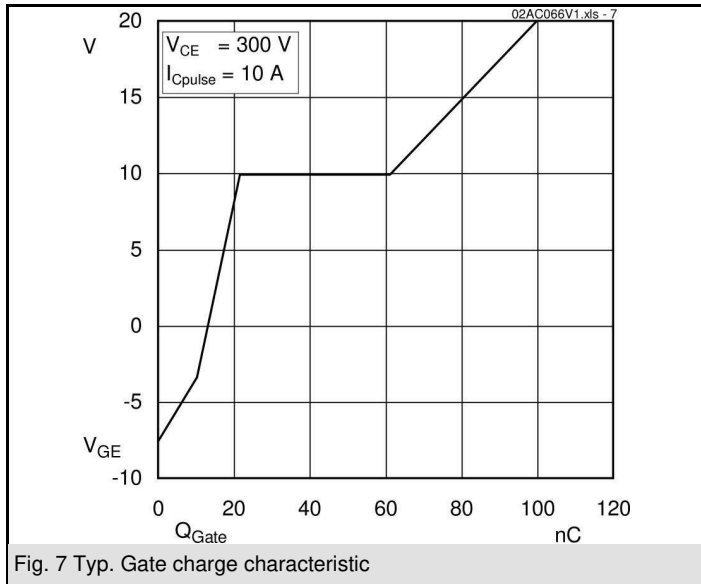
| Absolute Maximum Ratings | | $T_S = 25^\circ\text{C}$, unless otherwise specified | |
|--------------------------|--|---|------------------|
| Symbol | Conditions | Values | Units |
| IGBT - Inverter | | | |
| V_{CES} | | 600 | V |
| I_C | $T_S = 25 (70)^\circ\text{C}, T_j = 150^\circ\text{C}$ | 17 (14) | A |
| I_C | $T_S = 25 (70)^\circ\text{C}, T_j = 175^\circ\text{C}$ | 20 (16) | A |
| I_{CRM} | $t_p = 1 \text{ ms}$ | 20 | A |
| V_{GES} | | ± 20 | V |
| T_j | | -40...+175 | $^\circ\text{C}$ |
| Diode - Inverter | | | |
| I_F | $T_S = 25 (70)^\circ\text{C}, T_j = 150^\circ\text{C}$ | 20 (15) | A |
| I_F | $T_S = 25 (70)^\circ\text{C}, T_j = 175^\circ\text{C}$ | 20 (18) | A |
| I_{FRM} | $t_p = 1 \text{ ms}$ | 20 | A |
| T_j | | -40...+175 | $^\circ\text{C}$ |
| I_{RMS} | per power terminal (20 A / spring) | 20 | A |
| T_{stg} | $T_{op} \leq T_{stg}$ | -40...+125 | $^\circ\text{C}$ |
| V_{isol} | AC, 1 min. | 2500 | V |

| Characteristics | | $T_S = 25^\circ\text{C}$, unless otherwise specified | | | |
|---------------------------|--|---|-------------|-------------|------------|
| Symbol | Conditions | min. | typ. | max. | Units |
| IGBT - Inverter | | | | | |
| V_{CEsat} | $I_{Cnom} = 10 \text{ A}, T_j = 25 (150)^\circ\text{C}$ | 1,1 | 1,45 (1,65) | 1,85 (2,05) | V |
| $V_{GE(th)}$ | $V_{GE} = V_{CE}, I_C = 1 \text{ mA}$ | | 5,8 | | V |
| $V_{CE(TO)}$ | $T_j = 25 (150)^\circ\text{C}$ | | 0,9 (0,7) | 1,1 (1) | V |
| r_T | $T_j = 25 (150)^\circ\text{C}$ | | 60 (100) | 80 (110) | m Ω |
| C_{ies} | $V_{CE} = 25 \text{ V}, V_{GE} = 0 \text{ V}, f = 1 \text{ MHz}$ | | 0,58 | | nF |
| C_{oes} | $V_{CE} = 25 \text{ V}, V_{GE} = 0 \text{ V}, f = 1 \text{ MHz}$ | | 0,12 | | nF |
| C_{res} | $V_{CE} = 25 \text{ V}, V_{GE} = 0 \text{ V}, f = 1 \text{ MHz}$ | | 0,06 | | nF |
| $R_{CC+EE'}$ | spring contact-chip $T_S = 25 (150)^\circ\text{C}$ | | | | m Ω |
| $R_{th(j-s)}$ | per IGBT | | 2 | | K/W |
| $t_{d(on)}$ | under following conditions | | 28 | | ns |
| t_r | $V_{CC} = 300 \text{ V}, V_{GE} = -15\text{V}/+15\text{V}$ | | 30 | | ns |
| $t_{d(off)}$ | $I_{Cnom} = 10 \text{ A}, T_j = 150^\circ\text{C}$ | | 190 | | ns |
| t_f | $R_{Gon} = R_{Goff} = 39 \Omega$ | | 37 | | ns |
| $E_{on}(E_{off})$ | inductive load | | 0,45 (0,3) | | mJ |
| Diode - Inverter | | | | | |
| $V_F = V_{EC}$ | $I_{Fnom} = 10 \text{ A}, T_j = 25 (150)^\circ\text{C}$ | | 1,3 (1,3) | 1,6 (1,6) | V |
| $V_{(TO)}$ | $T_j = 25 (150)^\circ\text{C}$ | | 0,9 (0,8) | 1 (0,9) | V |
| r_T | $T_j = 25 (150)^\circ\text{C}$ | | 40 (50) | 60 (70) | m Ω |
| $R_{th(j-s)}$ | per diode | | 2,5 | | K/W |
| I_{RRM} | under following conditions | | 13,5 | | A |
| Q_{rr} | $I_{Fnom} = 10 \text{ A}, V_R = 300 \text{ V}$ | | 1,3 | | C |
| E_{rr} | $V_{GE} = 0 \text{ V}, T_j = 150^\circ\text{C}$ | | 0,3 | | mJ |
| | $di_F/dt = 600 \text{ A/s}$ | | | | |
| Temperature Sensor | | | | | |
| R_{ts} | 3 %, $T_r = 25 (100)^\circ\text{C}$ | | 1000(1670) | | Ω |
| Mechanical Data | | | | | |
| m | | | 21,5 | | g |
| M_s | Mounting torque | 2 | | 2,5 | Nm |



AC





X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [IGBT Modules category](#):

Click to view products by [Semikron manufacturer](#):

Other Similar products are found below :

[F3L100R07W2E3_B11](#) [F3L15R12W2H3_B27](#) [F3L400R07ME4_B22](#) [F3L400R12PT4_B26](#) [F4-100R12KS4](#) [F4-50R07W2H3_B51](#) [F4-75R12KS4_B11](#) [FB15R06W1E3](#) [FB20R06W1E3_B11](#) [FD1000R33HE3-K](#) [FD300R06KE3](#) [FD300R12KE3](#) [FD300R12KS4_B5](#) [FD400R12KE3](#) [FD400R33KF2C-K](#) [FD401R17KF6C_B2](#) [FD-DF80R12W1H3_B52](#) [FF100R12KS4](#) [FF1200R17KE3_B2](#) [FF150R12KE3G](#) [FF200R06KE3](#) [FF200R06YE3](#) [FF200R12KT3](#) [FF200R12KT3_E](#) [FF200R12KT4](#) [FF200R17KE3](#) [FF300R06KE3_B2](#) [FF300R12KE4_E](#) [FF300R12KS4HOSA1](#) [FF300R12ME4_B11](#) [FF300R12MS4](#) [FF300R17ME4](#) [FF450R12ME4P](#) [FF450R17IE4](#) [FF600R12IE4V](#) [FF600R12IP4V](#) [FF800R17KP4_B2](#) [FF900R12IE4V](#) [MIXA30W1200TED](#) [MIXA450PF1200TSF](#) [FP06R12W1T4_B3](#) [FP100R07N3E4](#) [FP100R07N3E4_B11](#) [FP10R06W1E3_B11](#) [FP10R12W1T4_B11](#) [FP10R12YT3](#) [FP10R12YT3_B4](#) [FP150R07N3E4](#) [FP15R12KT3](#) [FP15R12W2T4](#)