

ELECTRICAL PARAMETERS**Voltage ratings**

| Voltage class | U_{RRM} | U_{RSM} | I_{RRM} |
|---------------|-----------|-----------|-----------|
| | V | V | mA |
| 04 | 400 | 500 | 30 |
| 06 | 600 | 700 | |
| 08 | 800 | 900 | |
| 10 | 1000 | 1100 | |
| 12 | 1200 | 1300 | |
| 14 | 1400 | 1500 | |
| 16 | 1600 | 1700 | |

du/dt group codes

| Group code | du/dt |
|------------|--------------------|
| | V/ μ s |
| 0 | no specified value |
| 5 | 320 |
| 6 | 500 |
| 7 | 1000 |

Electrical properties

| Parameter | | Unit | Test conditions | Value |
|---|--------------|------------------------|---|-------|
| Average on-state current | $I_{T(AV)}$ | A | | 260 |
| Case temperature | T_C | °C | | 85 |
| RMS on-state current | $I_{T(RMS)}$ | A | | 408 |
| Surge current | I_{TSM} | A | $T_j=125^\circ\text{C}$, $U_R=0,8U_{RRM}$, $t_p=10\text{ms}$ | 7000 |
| I^2t – value | I^2t | kA^2s | | 245 |
| On-state voltage max. | U_{TM} | V | $T_j=25^\circ\text{C}$, $I_{TM}=1500\text{A}$ | 1,7 |
| Threshold voltage | $U_{T(T0)}$ | V | | 0,84 |
| Slope resistance | r_T | $\text{m}\Omega$ | | 0,67 |
| Latching current | I_L | mA | $T_j=25^\circ\text{C}$, $U_D=12\text{V}$ | 800 |
| Holding current | I_H | mA | $T_j=25^\circ\text{C}$, $U_D=12\text{V}$ | 200 |
| Circuit commutated turn-off time (typical) | t_q | μs | $T_j=125^\circ\text{C}$, $I_{TM}=250\text{A}$, $di_R/dt=25\text{A}/\mu\text{s}$, $du/dt=20\text{V}/\mu\text{s}$, $U_D=0,67U_{DRM}$, $U_{RM}=100\text{V}$ | 150 |
| Turn-On time (typical) | t_{gt} | μs | $I_{TM}=100\text{A}$, $U_{DM}=100\text{V}$ | 7 |
| Rate of rise of on-state current-repetitive | di/dt | $\text{A}/\mu\text{s}$ | $T_j=125^\circ\text{C}$, $I_{TM}=3I_{T(AV)}$, $U_D=0,67U_{DRM}$, $f=50\text{Hz}$, $I_{GM}=1\text{A}$, $di_G/dt=1\text{A}/\mu\text{s}$ | 150 |
| Critical rate of raise of off-state voltage | du/dt | $\text{V}/\mu\text{s}$ | $T_j=125^\circ\text{C}$, $U_D=0,67U_{DRM}$, | 320 |
| Gate current to trigger | I_{GT} | mA | $T_j=25^\circ\text{C}$, $U_D=12\text{V}$ | 150 |
| Gate voltage to trigger | U_{GT} | V | $T_j=25^\circ\text{C}$, $U_D=12\text{V}$ | 3 |
| RMS isolation voltage | U_{isol} | V | 1s, circuit to base, all terminals shorted | 2500 |

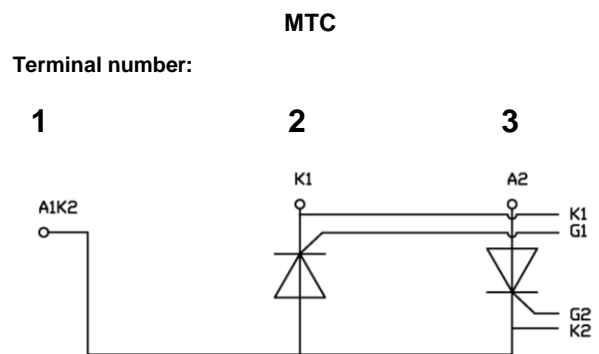
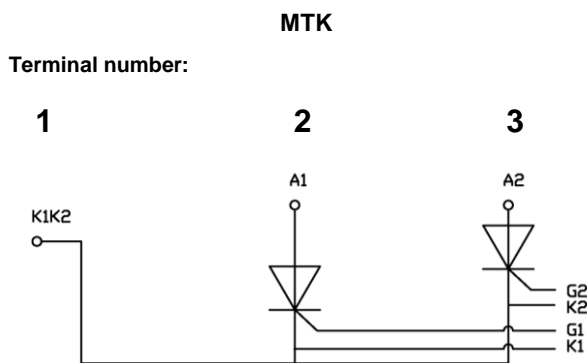
Termal properties

| Parameter | | Unit | Test conditions | Value |
|---|---------------------------|------|-----------------|------------|
| Thermal resistance, junction to case per thyristor/module | R_{thJC} | °C/W | DC | 0,11/0,055 |
| Thermal resistance, case to heatsink per thyristor/module | R_{thCh} | °C/W | | 0,04/0,02 |
| Operating junction temperature | $T_{jmin} \dots T_{jmax}$ | °C | | -40...+125 |
| Storage temperature | T_{stg} | °C | | -40...+125 |

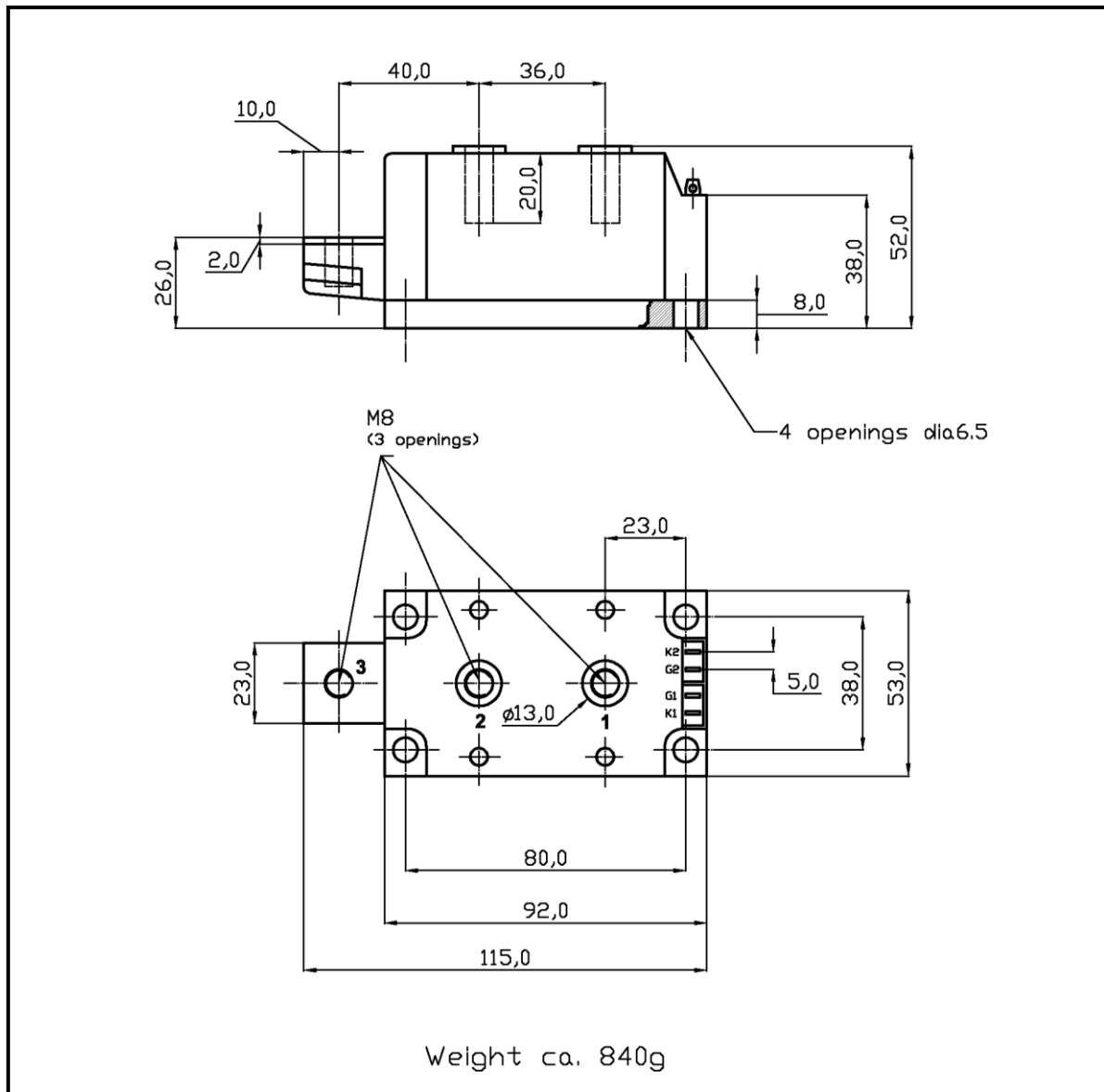
Mechanical properties

| Parameter | | Unit | Value |
|---------------------------------|----|------|------------|
| Mounting torque (M6) | M1 | Nm | 5,00 ±15% |
| Terminal connection torque (M8) | M2 | Nm | 12,00 ±10% |
| Weight | M | g | 840 |

Cofigurations

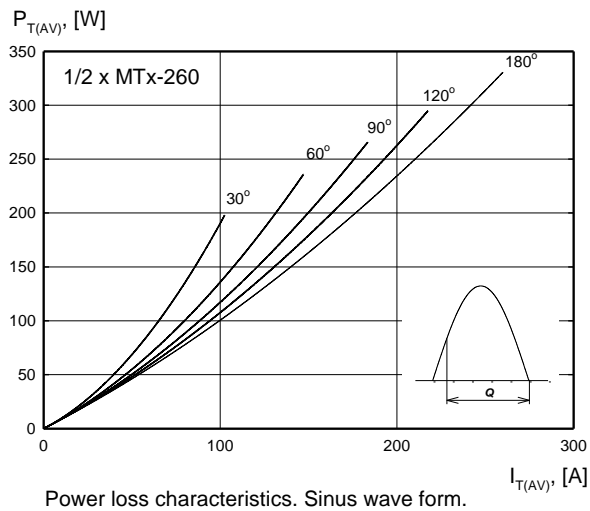


Package details

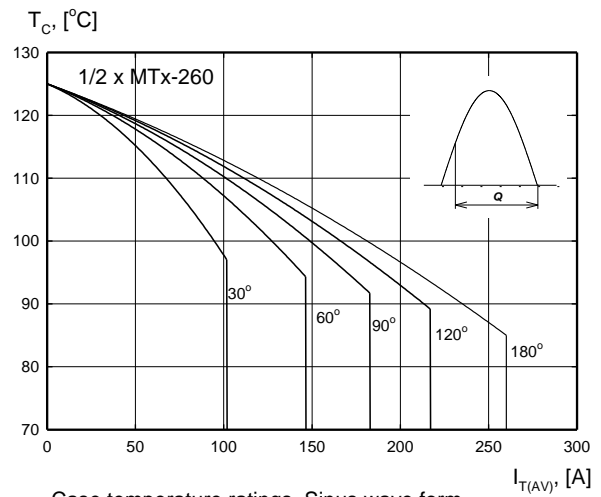


For further package information, please contact Sales & Marketing Department. All dimensions in mm, unless stated otherwise.
Do not scale.

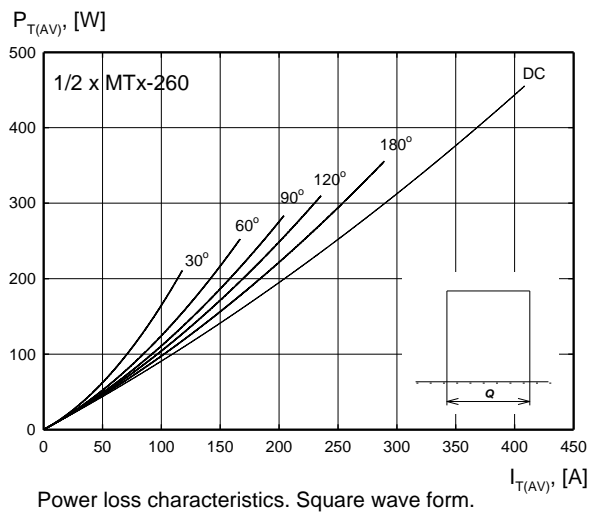
CHARACTERISTICS



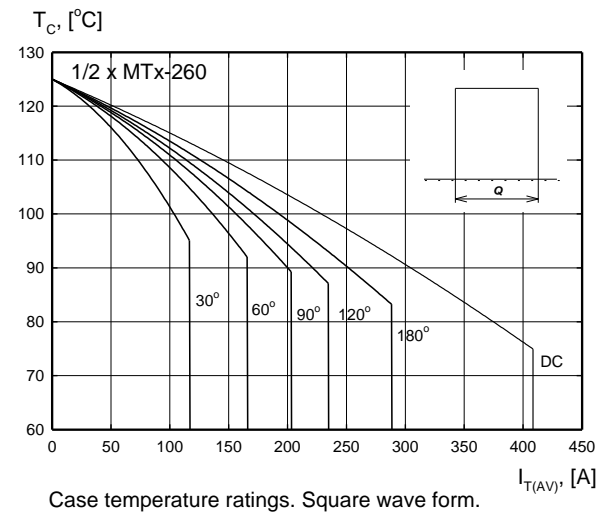
Power loss characteristics. Sinus wave form.



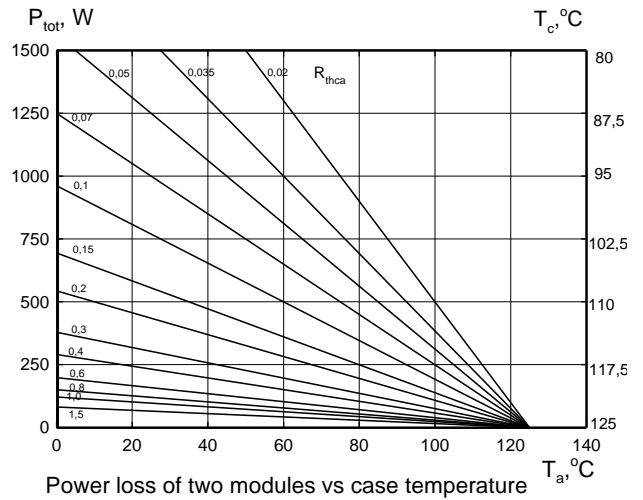
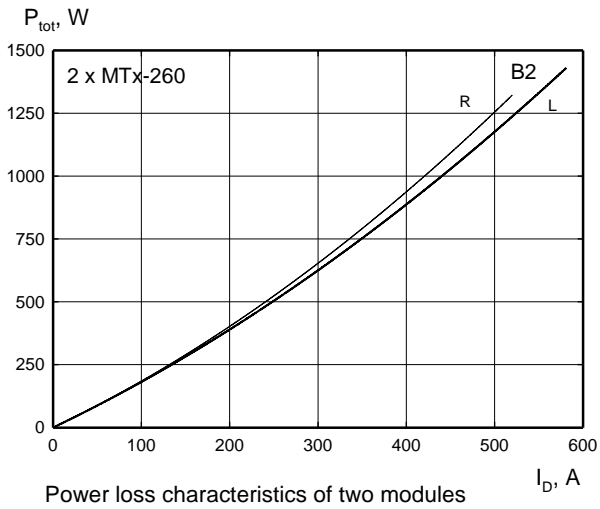
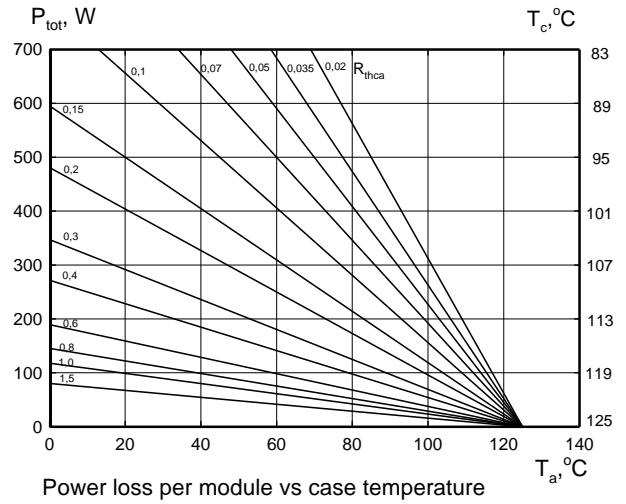
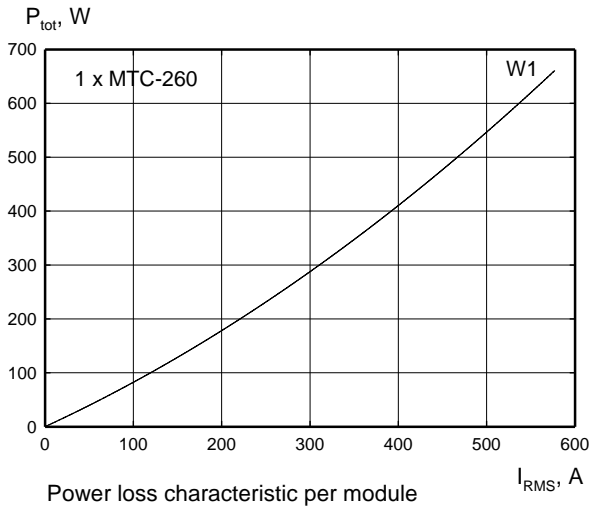
Case temperature ratings. Sinus wave form.

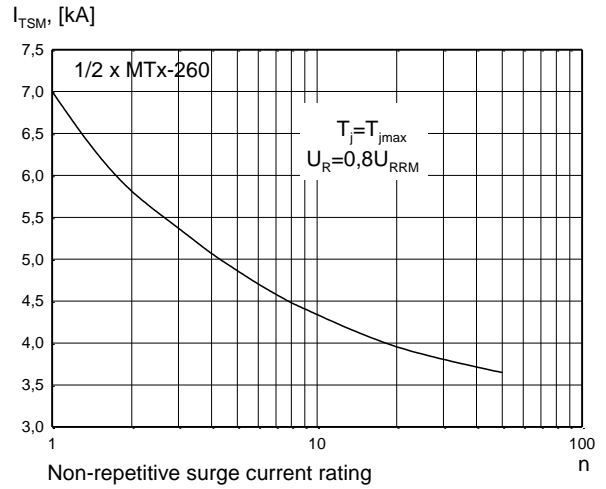
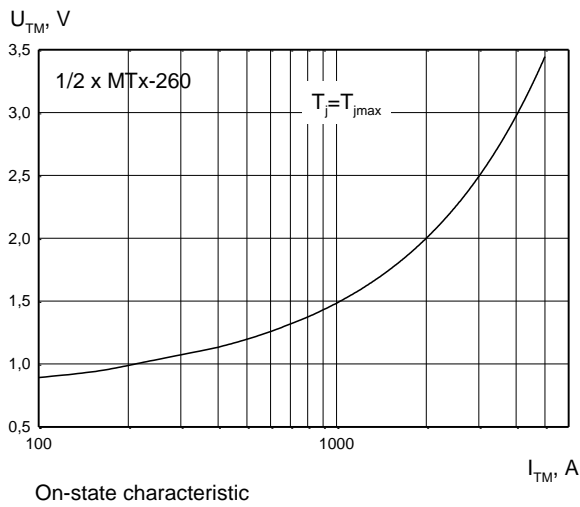
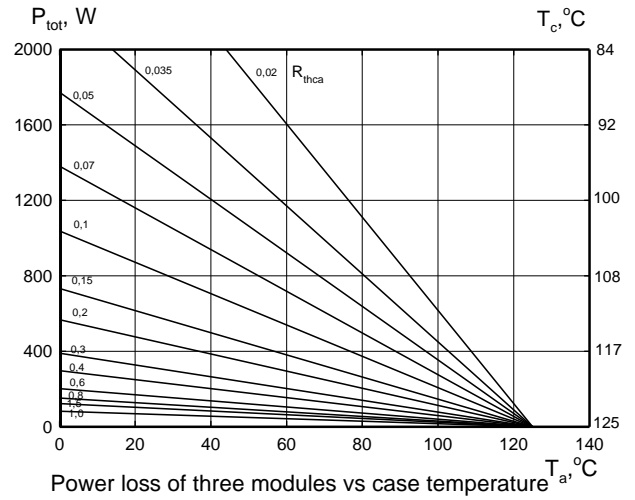
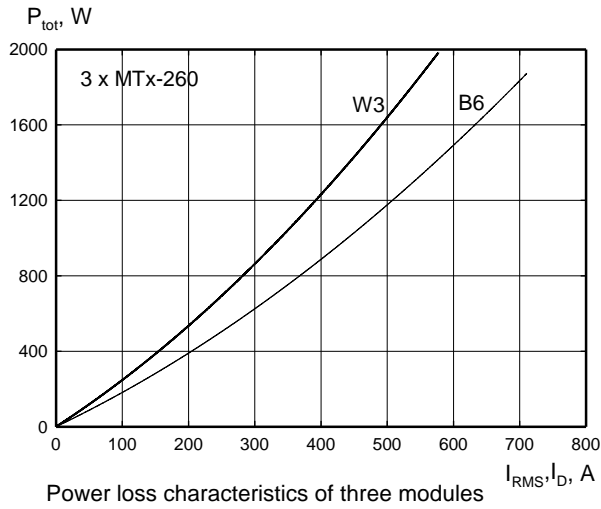


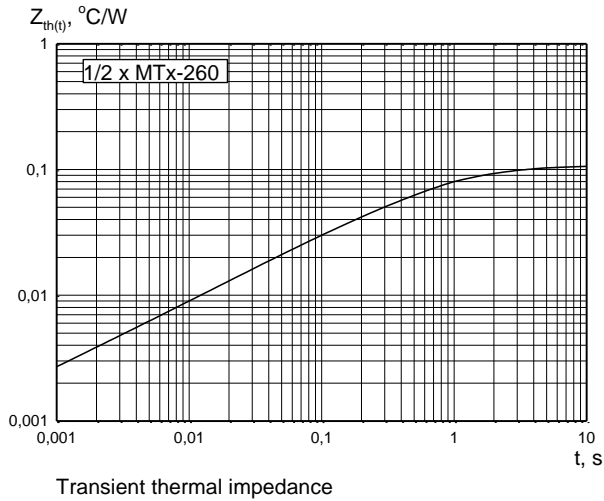
Power loss characteristics. Square wave form.



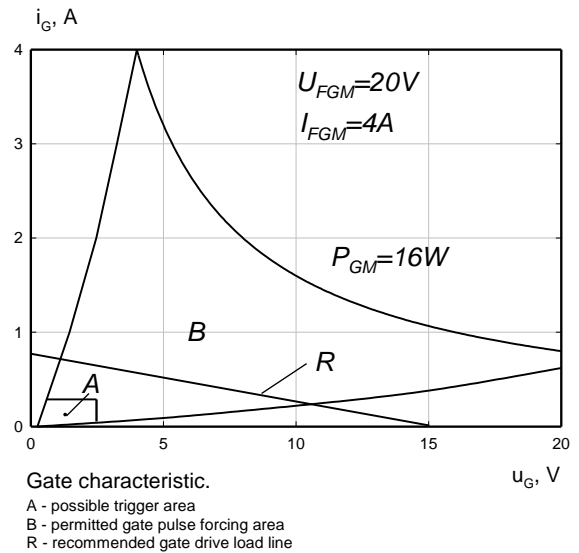
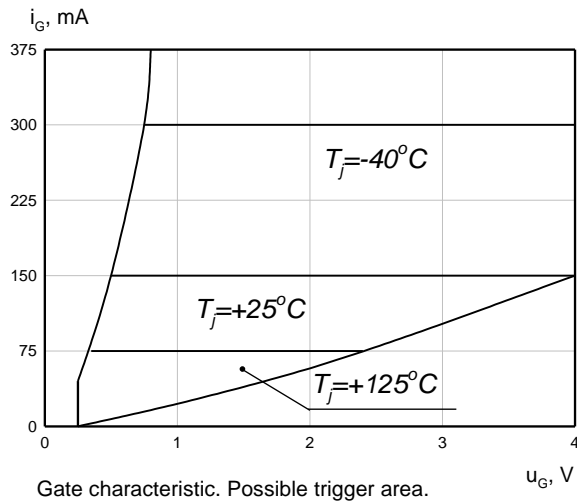
Case temperature ratings. Square wave form.







GATE CHARACTERISTICS



HEATSINKS

KUBARA LAMINA SA has its own proprietary range of extruded aluminium heatsinks designed to optimise the performance of our semiconductors with natural and forced air flow.

POWER ASSEMBLY CAPABILITY

KUBARA LAMINA SA provides a support for those customers requiring more than a basic semiconductor and offers precisely assembled Power Blocks according to factory or customer standards.