

Diode type D73 are of modern design with pressure contacts, high alumina ceramic insulator and cold-welding encapsulation. Designed for use in power rectifying circuits and equipment under normal operating conditions.

## KEY PARAMETERS

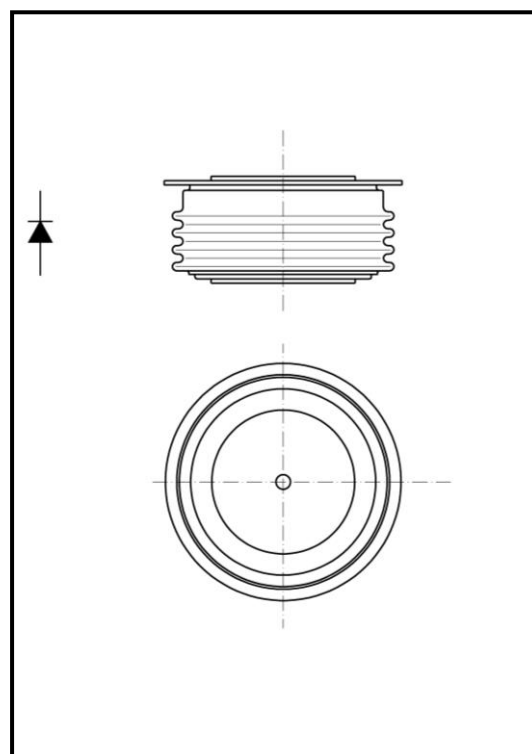
|             |              |
|-------------|--------------|
| $U_{RRM}$   | up to 3200 V |
| $I_{F(AV)}$ | 800 A        |
| $I_{FSM}$   | 7700 A       |

## FEATURES

- all diffused design
- high current capabilities
- high surge current capabilities
- high rated voltages
- low thermal impedance
- tested according to IEC standards
- compact size and small weight

## APPLICATION

- High Voltage Power Supplies
- Motor Control
- Battery Chargers
- Free Wheeling Diode
- Resistance Welding



Outline type code: JEDEC DO-200AB  
See Package Details for further information

Designed for use in high power industrial and commercial electronic circuits and equipment where high currents are encountered and high reliability is essential. Low forward voltages let minimize energy loss.

## ORDERING INFORMATION

When ordering please refer to device code builder presented below.

Please use the complete part number when ordering, quote or in any future correspondence relating to your order.

**D73-800-□□**

\_\_\_\_\_ voltage class (hundreds of volts)

## ELECTRICAL PARAMETERS

## Voltage ratings

| Voltage class | $U_{RRM}$ | $U_{RSM}$ | $I_{RRM}$ |
|---------------|-----------|-----------|-----------|
|               | V         | V         | mA        |
| 04            | 400       | 500       | 50        |
| 06            | 600       | 700       |           |
| 08            | 800       | 900       |           |
| 10            | 1000      | 1100      |           |
| 12            | 1200      | 1300      |           |
| 14            | 1400      | 1500      |           |
| 16            | 1600      | 1700      |           |
| 18            | 1800      | 1900      |           |
| 20            | 2000      | 2100      |           |
| 22            | 2200      | 2300      |           |
| 24            | 2400      | 2500      |           |
| 26            | 2600      | 2700      |           |
| 28            | 2800      | 2900      |           |
| 30            | 3000      | 3100      |           |
| 32            | 3200      | 3300      |           |

## Electrical properties

| Parameter                                     |              | Unit    | Test conditions                                               | Value                |    |
|-----------------------------------------------|--------------|---------|---------------------------------------------------------------|----------------------|----|
| Average forward current<br>@ case temperature | $I_{F(AV)}$  | A       |                                                               | 800                  |    |
|                                               | $T_c$        | °C      |                                                               | $U_{RRM} \leq 1200V$ | 95 |
|                                               |              |         |                                                               | $U_{RRM} > 1200V$    | 80 |
| RMS forward current                           | $I_{F(RMS)}$ | A       |                                                               | 1250                 |    |
| Surge current                                 | $I_{FSM}$    | A       | $T_j = 175^\circ C$ , $U_R = 0,8 U_{RRM}$ , $t_p = 10ms$      | 7700                 |    |
| $I^2t$ – value                                | $I^2t$       | $kA^2s$ |                                                               | 300                  |    |
| Forward voltage drop max.                     | $U_{FM}$     | V       | $T_j = 25^\circ C$ , $I_{FM} = 1500A$                         | 1,60                 |    |
| Threshold voltage                             | $U_{F(T0)}$  | V       |                                                               | 0,70                 |    |
| Slope resistance                              | $r_F$        | mΩ      |                                                               | 0,426                |    |
| Reverse recovery charge                       | $Q_r$        | μC      | $T_j = 25^\circ C$ , $I_{FM} = 1500A$ , $di_R/dt = 25A/\mu s$ | 2500                 |    |

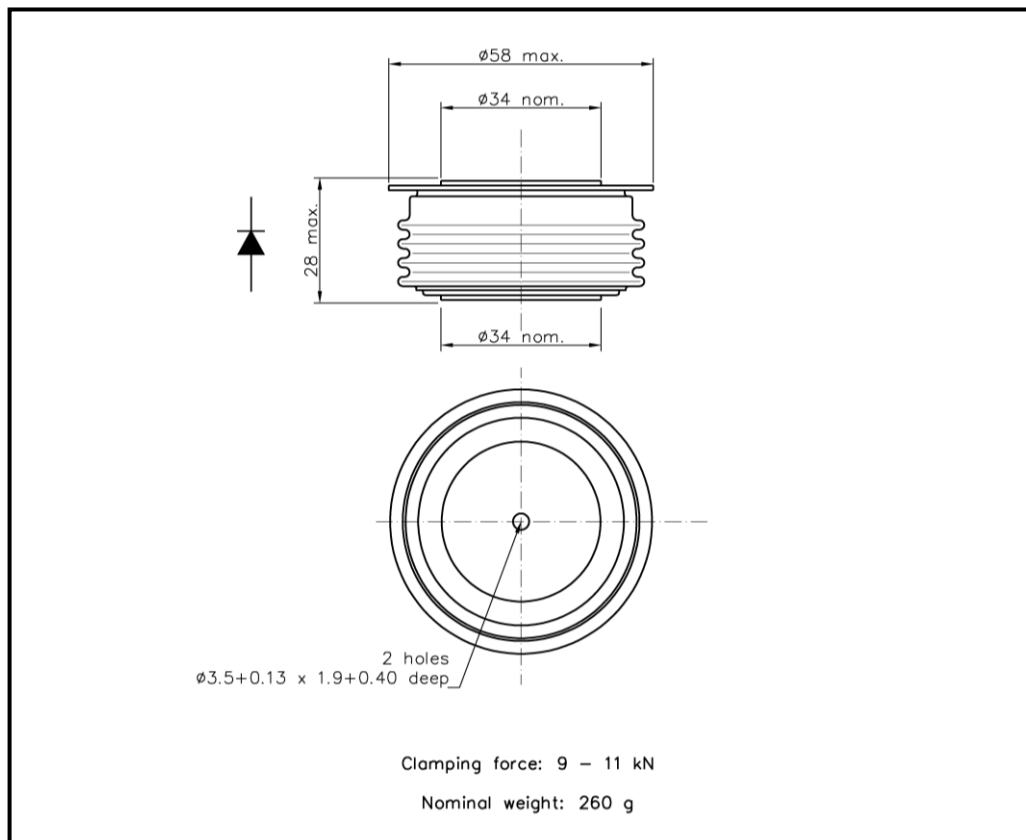
## Thermal properties

| Parameter                            | Unit                  | Test conditions | Value                                                           |
|--------------------------------------|-----------------------|-----------------|-----------------------------------------------------------------|
| Thermal resistance, junction to case | $R_{thJC}$            | $^{\circ}C/W$   | two sided, DC                                                   |
| Thermal resistance, case to heatsink | $R_{thCS}$            | $^{\circ}C/W$   | two sided                                                       |
| Operating junction temperature       | $T_{jmin}...T_{jmax}$ | $^{\circ}C$     | $U_{RRM} \leq 1200V$ -40...+190<br>$U_{RRM} > 1200V$ -40...+175 |
| Storage temperature                  | $T_{stg}$             | $^{\circ}C$     | -40...+190                                                      |

## Mechanical properties

| Parameter      | Unit  | Value        |
|----------------|-------|--------------|
| Clamping force | $F_M$ | 9,0 ... 11,0 |
| Weight         | m     | 260          |

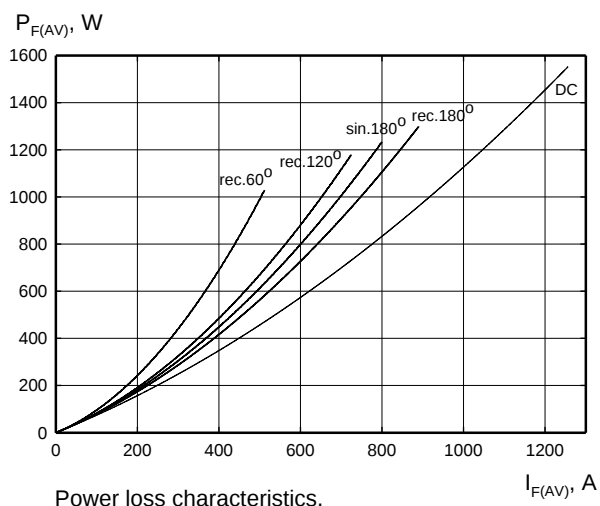
## Package details



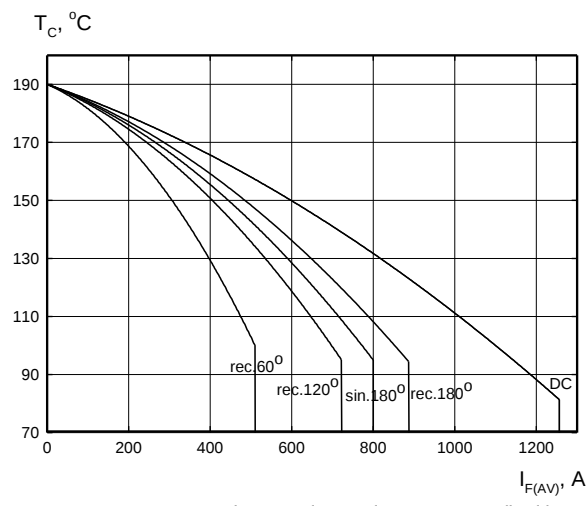
For further package information, please contact Sales & Marketing Department. All dimensions in mm, unless stated otherwise.

Do not scale.

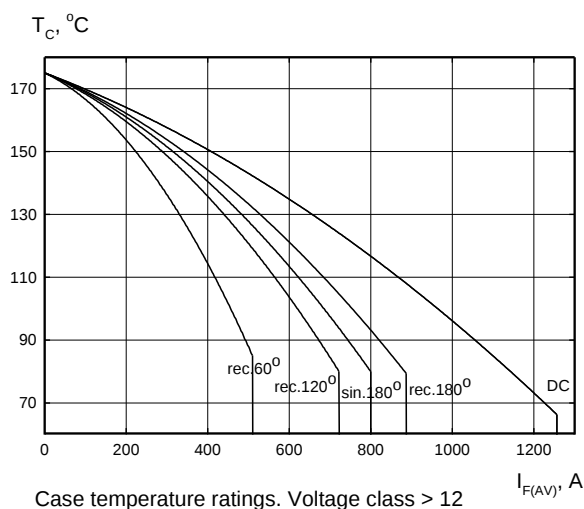
## HARACTERISTICS



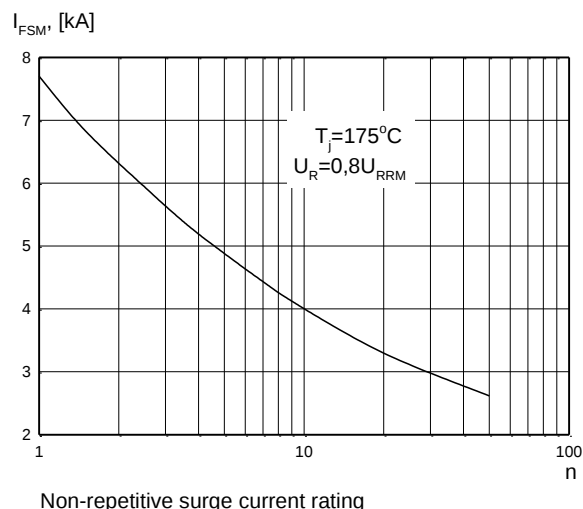
Power loss characteristics.



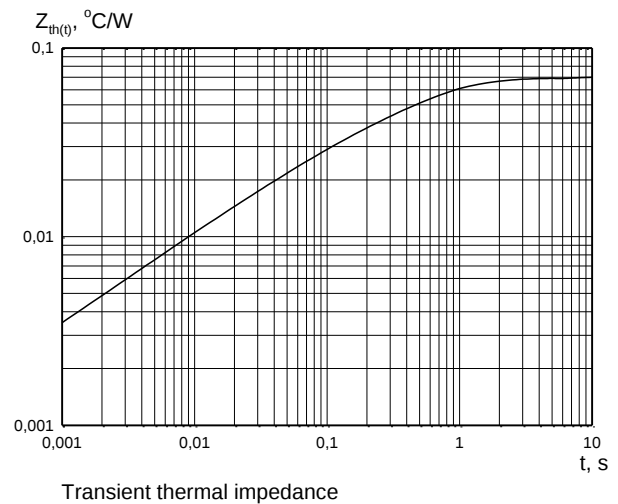
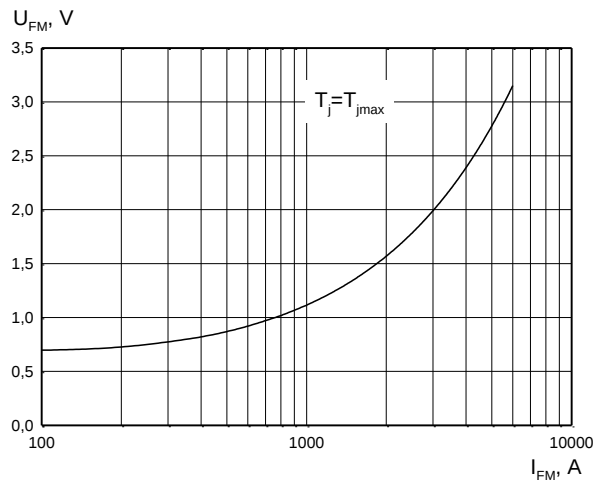
Case temperature ratings. Voltage class up to 12 (incl.)



Case temperature ratings. Voltage class > 12



Non-repetitive surge current rating



## 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. High efficiency water cooled copper heatsinks are also available.

## DEVICE CLAMPS

Disc devices require the correct clamping force to ensure their best operation.

**KUBARA LAMINA SA** offers a wide selection of clamps to suit all of our manufactured devices.

## 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.