

Diodes type D42 are designed for use in power electronic circuits and equipment under normal operating conditions.

## KEY PARAMETERS

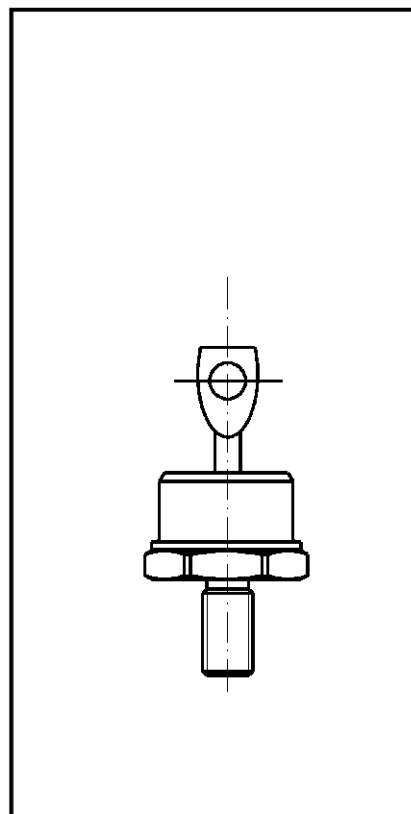
|             |              |
|-------------|--------------|
| $U_{RRM}$   | up to 1400 V |
| $I_{F(AV)}$ | 70 A         |
| $I_{FSM}$   | 950 A        |

## FEATURES

- high current capabilities
- high surge current capabilities
- 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: DO-5

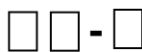
See package details for further information

## 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.

**D42-70-**



Polarization code: N or R

voltage class (hundreds of volts)

# D42-70

## Diode

**LAMINA S.I.**

KKD4270, April 2004 version

### ELECTRICAL PARAMETERS

#### Voltage ratings

| Voltage class | $U_{RRM}$ | $U_{RSM}$ | $I_{RRM}$ |
|---------------|-----------|-----------|-----------|
|               | V         | V         | mA        |
| 02            | 200       | 300       | 10        |
| 04            | 400       | 500       |           |
| 06            | 600       | 700       |           |
| 08            | 800       | 900       |           |
| 10            | 1000      | 1100      |           |
| 12            | 1200      | 1300      |           |
| 14            | 1400      | 1500      |           |

#### Electrical properties

| Parameter                                     |              | Unit      | Test conditions                                          | Value |
|-----------------------------------------------|--------------|-----------|----------------------------------------------------------|-------|
| Average forward current<br>@ case temperature | $I_{F(AV)}$  | A         |                                                          | 70    |
|                                               | $T_c$        | °C        |                                                          | 100   |
| RMS forward current                           | $I_{F(RMS)}$ | A         |                                                          | 110   |
| Surge current                                 | $I_{FSM}$    | A         | $T_j = T_{jmax}$ , $U_R = 0,8 U_{RRM}$ ,<br>$t_p = 10ms$ | 950   |
| $I^2t$ – value                                | $I^2t$       | $kA^2s$   |                                                          | 4,5   |
| Forward voltage drop max.                     | $U_{FM}$     | V         | $T_j = 25^\circ C$ , $I_{FM} = 200A$                     | 1,35  |
| Threshold voltage                             | $U_{F(T0)}$  | V         |                                                          | 0,8   |
| Slope resistance                              | $r_F$        | $m\Omega$ |                                                          | 2,3   |

#### Thermal properties

| Parameter                            |                           | Unit | Test conditions | Value      |
|--------------------------------------|---------------------------|------|-----------------|------------|
| Thermal resistance, junction to case | $R_{thJC}$                | °C/W | DC              | 0,55       |
| Operating junction temperature       | $T_{jmin} \dots T_{jmax}$ | °C   |                 | -25...+150 |
| Storage temperature                  | $T_{stg}$                 | °C   |                 | -25...+150 |

#### Mechanical properties

| Parameter       |   | Unit | Value       |
|-----------------|---|------|-------------|
| Mounting torque | M | Nm   | 2,0 ... 2,5 |
| Weight          | m | g    | 18          |

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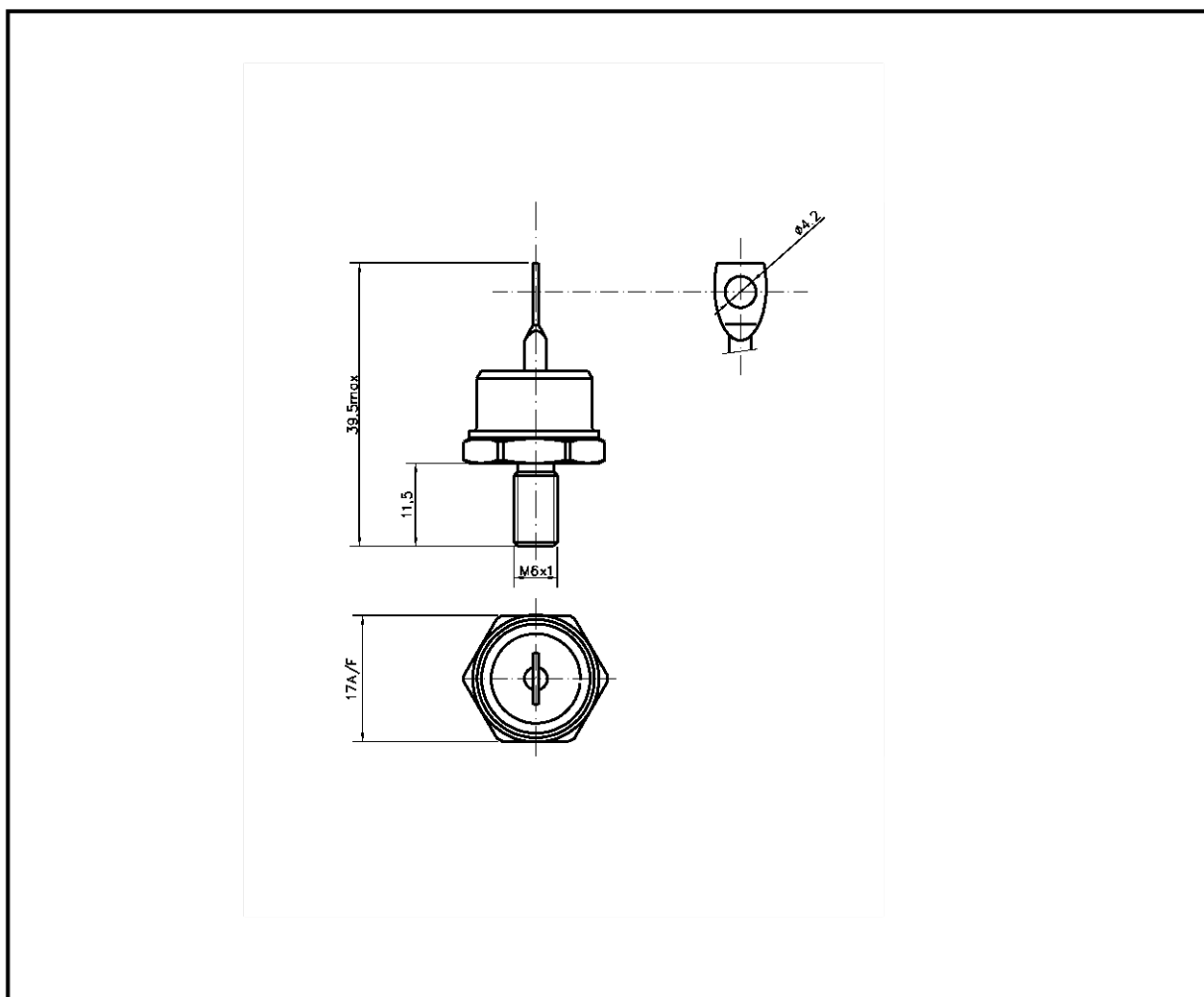
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### Package details



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

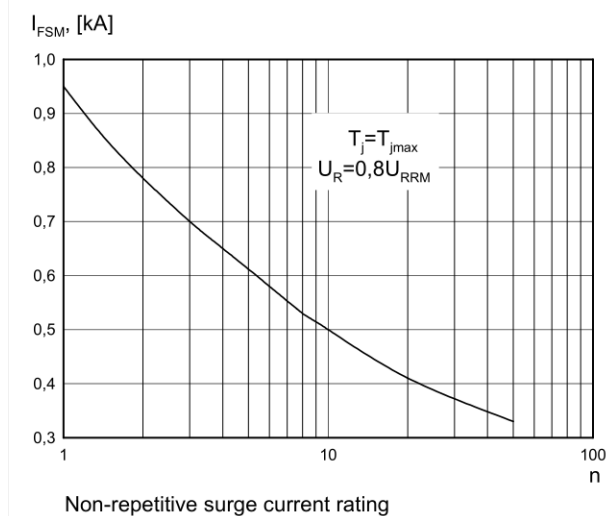
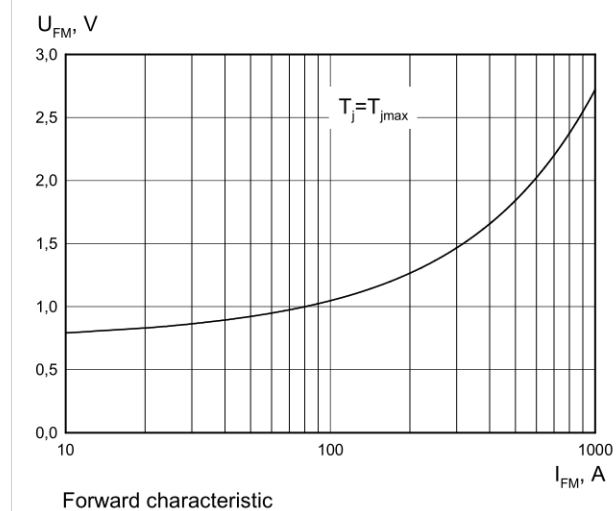
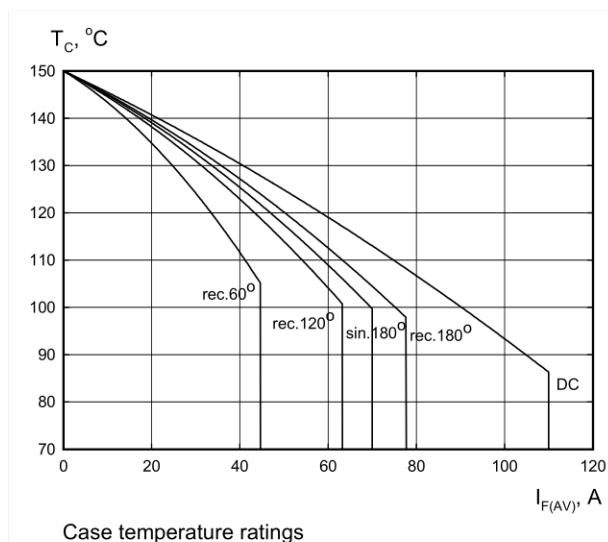
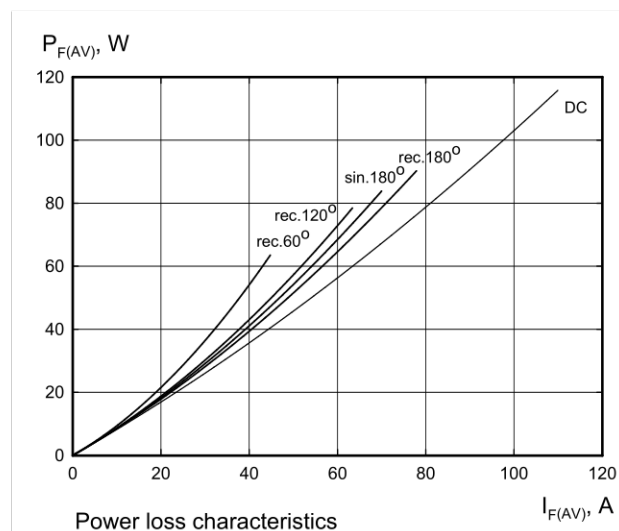
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### CHARACTERISTICS



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