

Diode type D42 are design for use in power rectifying circuits under normal operating conditions.

**KEY PARAMETERS**

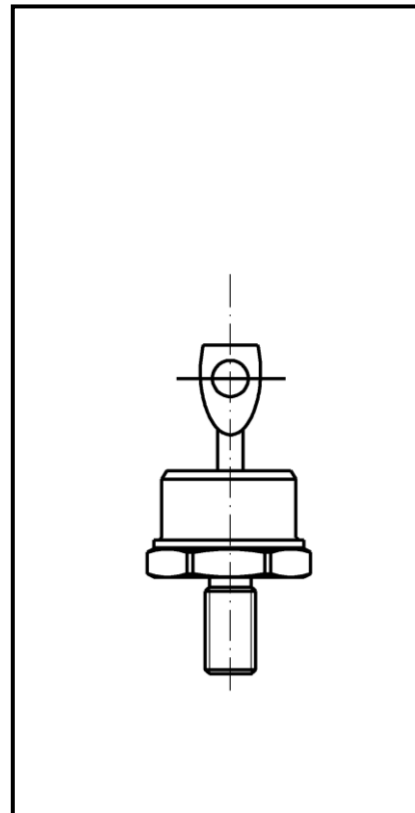
<b>U<sub>RRM</sub></b>	<b>up to 1400 V</b>
<b>I<sub>F(AV)</sub></b>	<b>40 A</b>
<b>I<sub>FSM</sub></b>	<b>600 A</b>

**FEATURES**

- all diffused design
- high current capabilities
- high surge current capabilities
- compact size and small weight
- tested according to IEC standards

**APPLICATION**

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



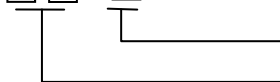
**Outline type code: DO-5**

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.

**D42-40-**   **-**  **0**



Polarization code: N or R

voltage class (hundreds of volts)

### ELECTRICAL PARAMETERS

#### Voltage ratings

Voltage class	$U_{RRM}$	$I_{RRM}$
	V	mA
01	100	6
02	200	
04	400	
06	600	
08	800	
10	1000	
12	1200	
14	1400	

#### Electrical properties

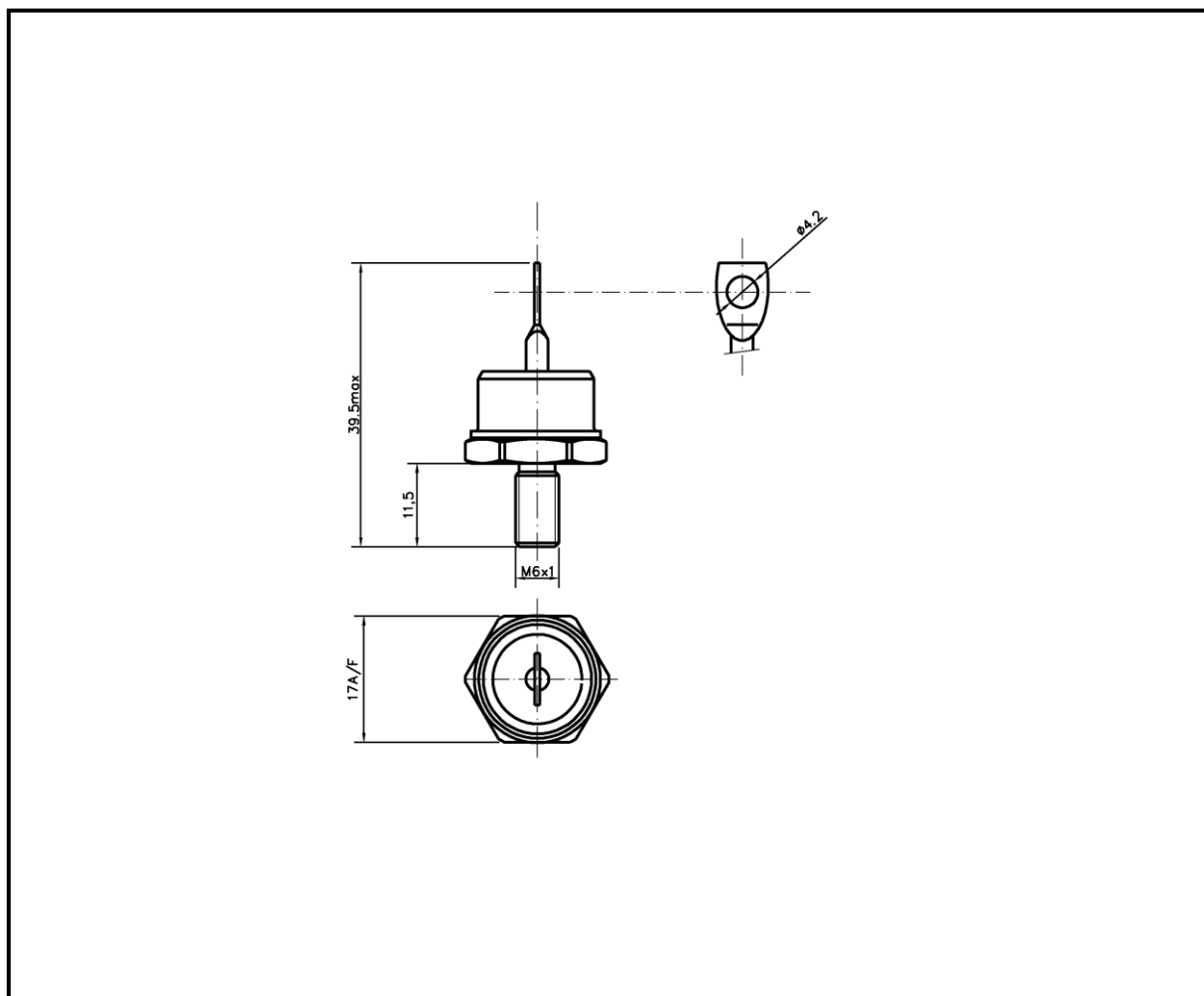
Parameter	Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV)}$	A	40
	$T_C$	°C	95
RMS forward current	$I_{F(RMS)}$	A	62,8
Surge current	$I_{FSM}$	A	600
$I^2t$ – value	$I^2t$	$kA^2s$	$T_J=T_{JMAX}$ 1,80
Forward voltage drop max.	$U_{FM}$	V	$T_J=25^\circ C, I_{FM}=100A$ 1,40
Threshold voltage	$U_{F(T0)}$	V	$T_J=T_{Jmax}$ 1,00
Slope resistance	$r_F$	mΩ	4,0

#### Thermal properties

Parameter	Unit	Test conditions	Value
Thermal resistance, junction to case	$R_{thJC}$	°C/W	two sided, DC 0,90
Operating junction temperature	$T_{jmin}...T_{jmax}$	°C	-25...+150
Storage temperature	$T_{stg}$	°C	-25...+150

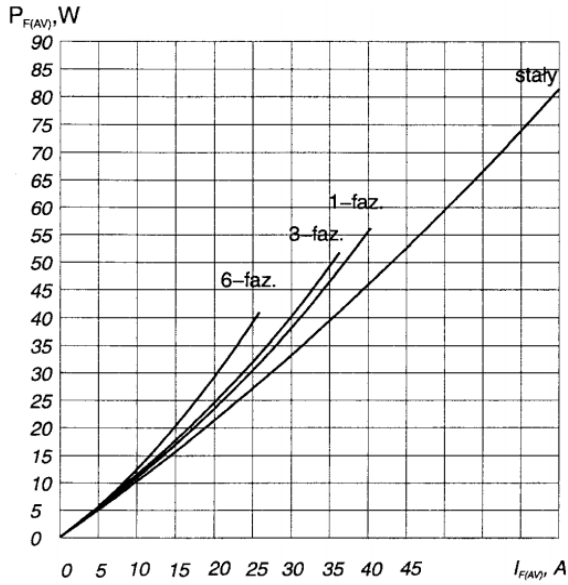
#### Mechanical properties

Parameter	Unit	Value
Mounting torque	$F_M$	Nm 2,0 – 2,5
Weight	m	g 18

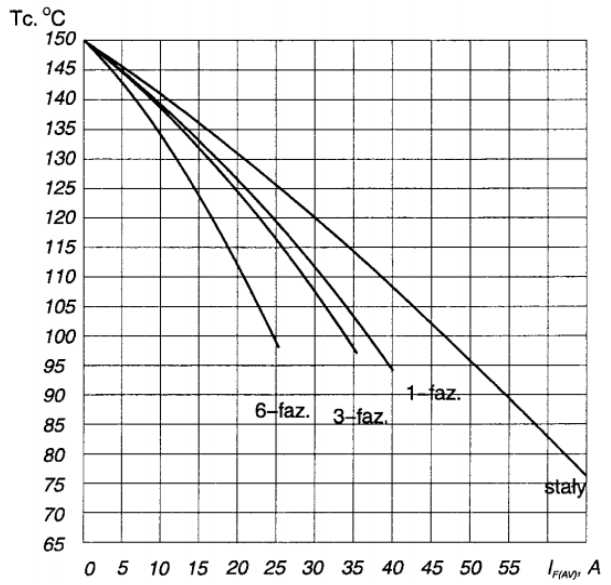


For further package information, please contact Sales & Marketing Department. All dimensions in mm, unless stated otherwise.  
Do not scale.

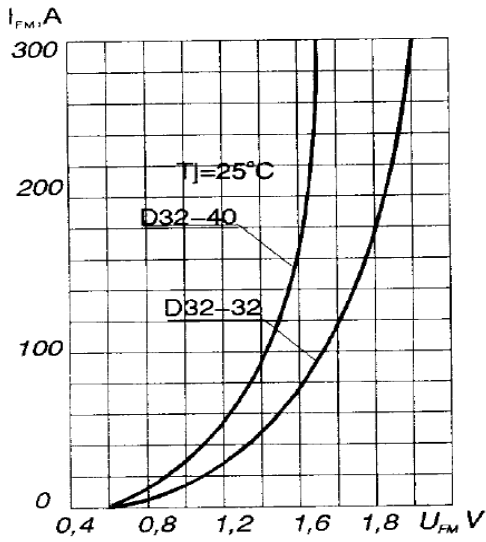
**CHARACTERISTICS**



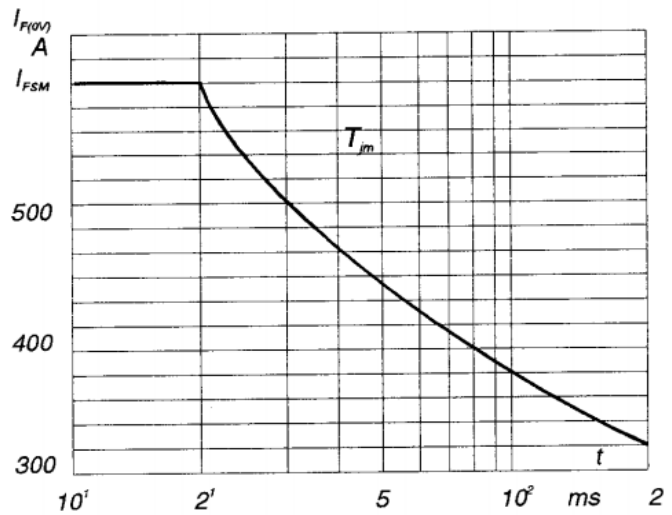
Maximum power dissipation vs. forward current. Sinusoidal waveform.



Maximum case temperature vs. forward current. Sinusoidal waveform



Forward characteristic.



Maximum overload characteristic.