



Diodes type D74 are of modern design with internal spring loaded contacts, high alumina ceramic insulator and pressure welded encapsulation. Designed for use in power electronic circuits and equipment under normal operating conditions.

### KEY PARAMETERS

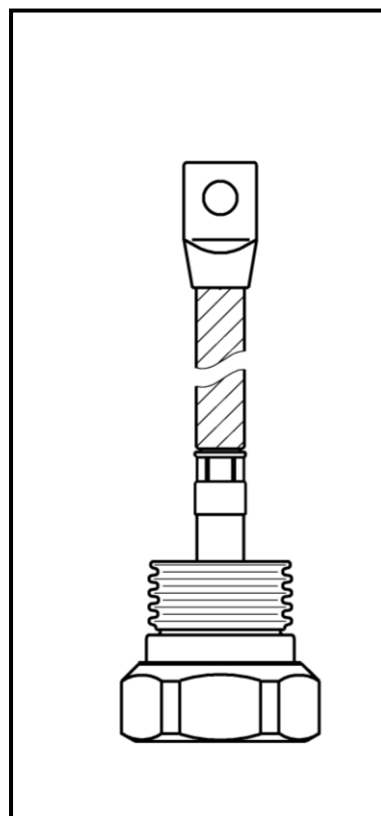
$U_{RRM}$	up to 3200 V
$I_{F(AV)}$	450 A
$I_{FSM}$	7700 A

### FEATURES

- all diffused design
- high current capabilities
- high surge current capabilities
- high rates 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



See package details for further information

Designed for use in high power industrial and commercial power electronic circuits and equipment where high currents are encountered and high reliability is essential.

# D74-450

## Diode

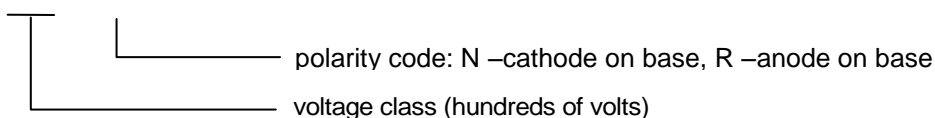


KKD74450, October 2006 version

### 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.

**D74-450-**   -  **0**



### 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	

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# D74-450

## Diode

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### Electrical properties

Parameter	Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV)}$	A	450
	$T_c$	°C	$U_{RRM} \leq 1200V$ 125 $U_{RRM} > 1200V$ 110
RMS forward current	$I_{F(RMS)}$	A	710
Surge current	$I_{FSM}$	A	$T_j = T_{jmax}$ , $U_R = 0,8U_{RRM}$ , $t_p = 10ms$
$I^2t$ – value	$I^2t$	kA <sup>2</sup> s	300
Forward voltage drop max.	$U_{FM}$	V	$T_j = 25^\circ C$ , $I_{FM} = 1500A$
Threshold voltage	$U_{F(T0)}$	V	0,72
Slope resistance	$r_F$	mΩ	0,51

### Thermal properties

Parameter	Unit	Test conditions	Value
Thermal resistance, junction to case	$R_{thJC}$	°C/W	DC 0,10
Thermal resistance, case to heatsink	$R_{thCS}$	°C/W	0,04
Operating junction temperature	$T_{jmin} \dots T_{jmax}$	°C	$U_{RRM} \leq 1200V$ -40...+190 $U_{RRM} > 1200V$ -40...+175
Storage temperature	$T_{stg}$	°C	-40...+190

### Mechanical properties

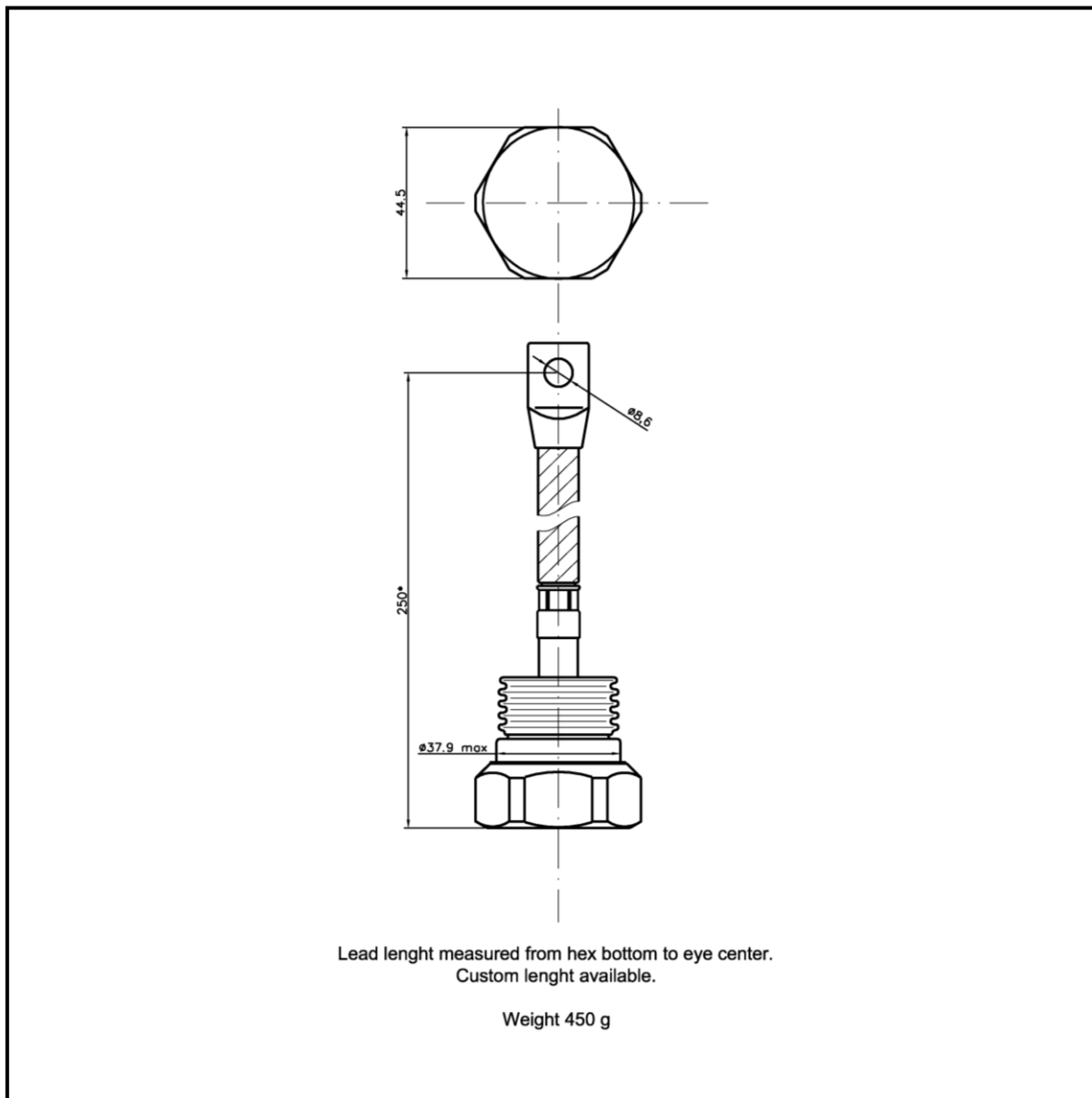
Parameter	Unit	Value
Mounting force	F	kN 5,5
Weight	m	g 450

# D74-450

## Diode

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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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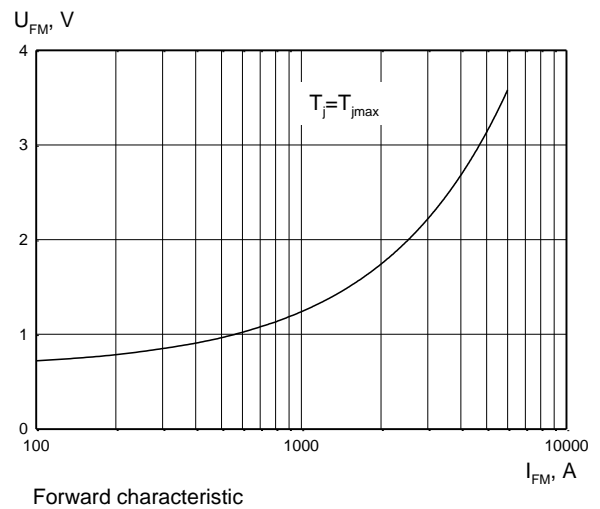
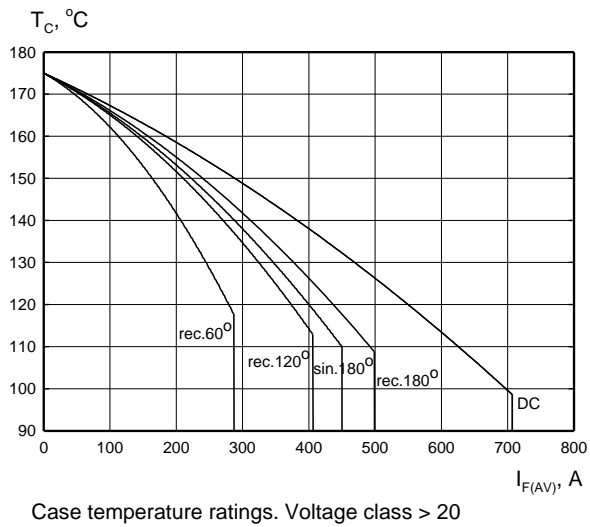
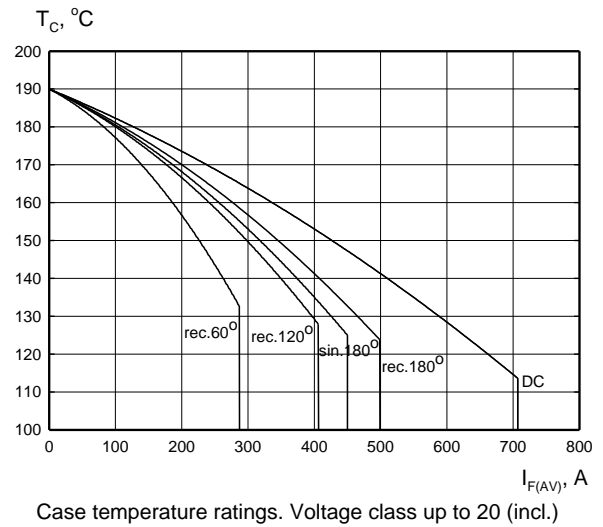
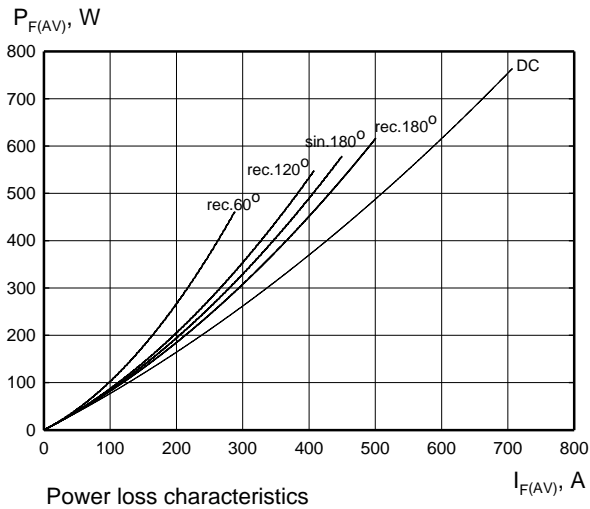
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# D74-450

## Diode

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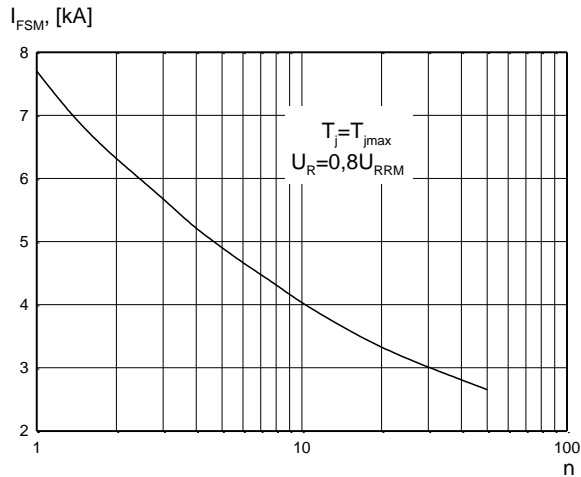
### CHARACTERISTICS



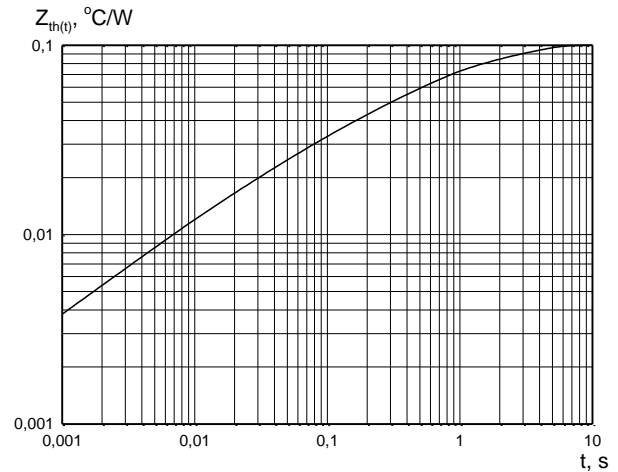
# D74-450

## Diode

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Non-repetitive surge current rating



Transient thermal impedance

## HEATSINKS

LAMINA S.I. 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

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