



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

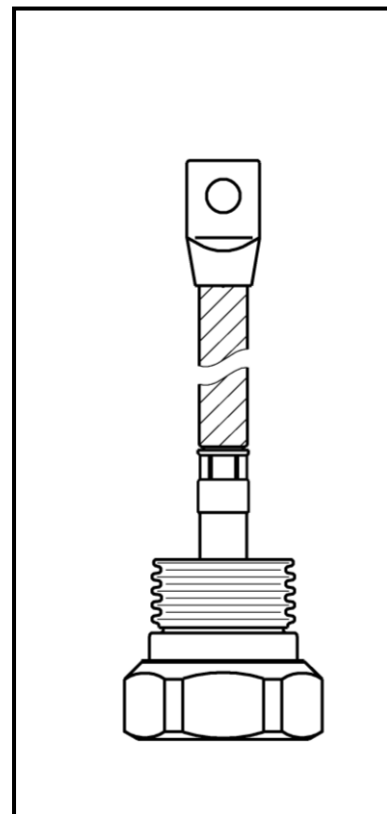
U_{RRM}	up to 2200 V
$I_{F(AV)}$	500 A
I_{FSM}	10000 A

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.

D74-500

Diode

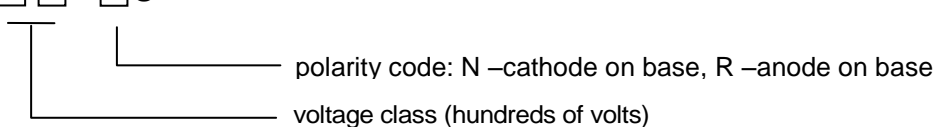


KKD74500, October 2006 version

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.

D74-500-□□-□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	1600	
16	1600	1800	
18	1800	2000	
20	2000	2200	
22	2200	2400	

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D74-500

Diode

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Electrical properties

Parameter		Unit	Test conditions	Value			
Average forward current @ case temperature	$I_{F(AV)}$	A		500			
	T_c	°C		<table border="1"> <tr> <td>$U_{RRM} \leq 1200V$</td> <td>125</td> </tr> <tr> <td>$U_{RRM} > 1200V$</td> <td>110</td> </tr> </table>	$U_{RRM} \leq 1200V$	125	$U_{RRM} > 1200V$
$U_{RRM} \leq 1200V$	125						
$U_{RRM} > 1200V$	110						
RMS forward current	$I_{F(RMS)}$	A		785			
Surge current	I_{FSM}	A	$T_j = T_{jmax}$, $U_R = 0,8U_{RRM}$, $t_p = 10ms$	10000			
I^2t – value	I^2t	kA^2s	$T_j = T_{jmax}$, $U_R = 0,8U_{RRM}$, $t_p = 10ms$	500			
Forward voltage drop max.	U_{FM}	V	$T_j = 25^\circ C$, $I_{FM} = 1500A$	1,30			
Threshold voltage	$U_{F(T0)}$	V		0,62			
Slope resistance	r_F	$m\Omega$		0,45			

Termal 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		<table border="1"> <tr> <td>$U_{RRM} \leq 1200V$</td> <td>-40...+190</td> </tr> <tr> <td>$U_{RRM} > 1200V$</td> <td>-40...+175</td> </tr> </table>	$U_{RRM} \leq 1200V$	-40...+190	$U_{RRM} > 1200V$	-40...+175
$U_{RRM} \leq 1200V$	-40...+190							
$U_{RRM} > 1200V$	-40...+175							
Storage temperature	T_{stg}	°C		-40...+175				

Mechanical properties

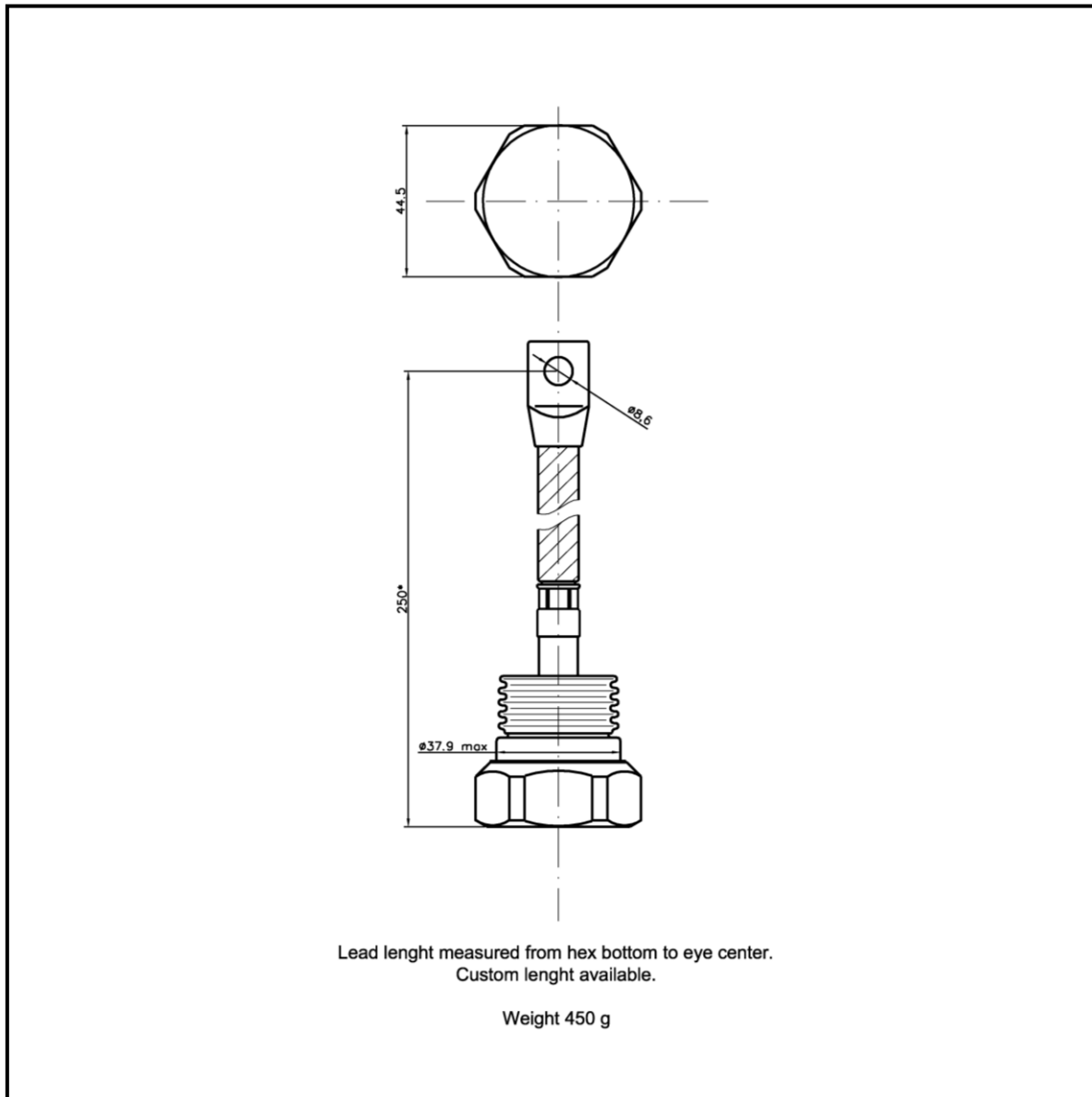
Parameter		Unit	Value
Mounting force	F	kN	5,5
Weight	m	g	450

D74-500

Diode

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Package details



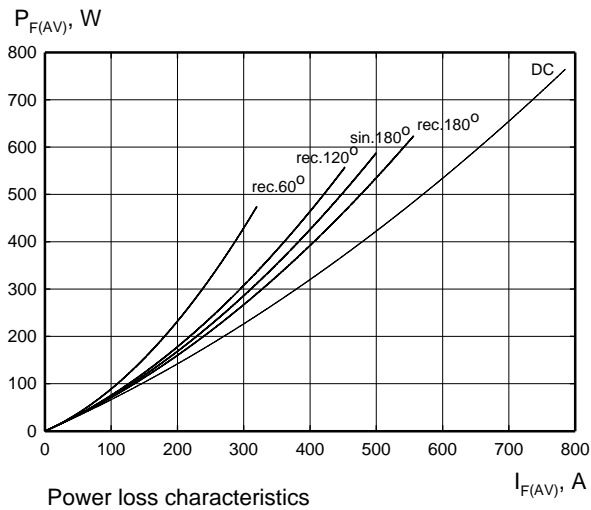
For further package information, please contact Sales & Marketing Department. All dimensions in mm, unless stated otherwise.
Do not scale

D74-500

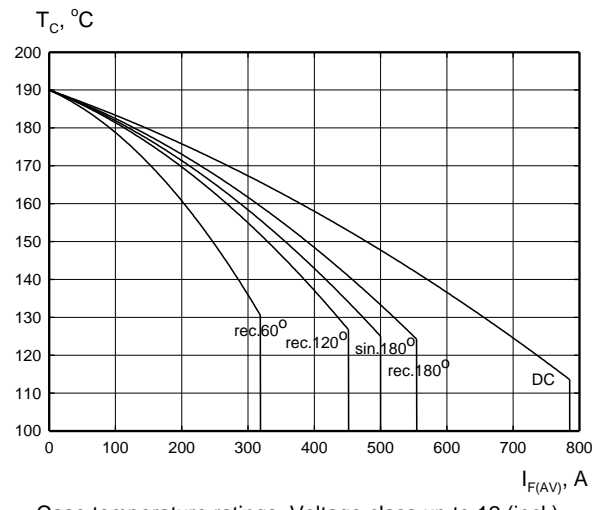
Diode

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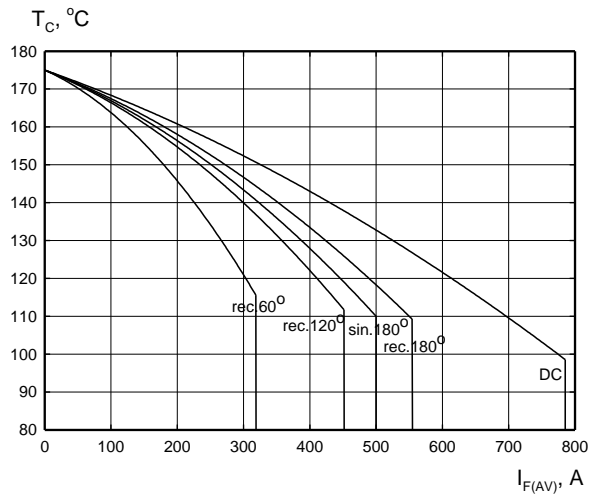
CHARACTERISTICS



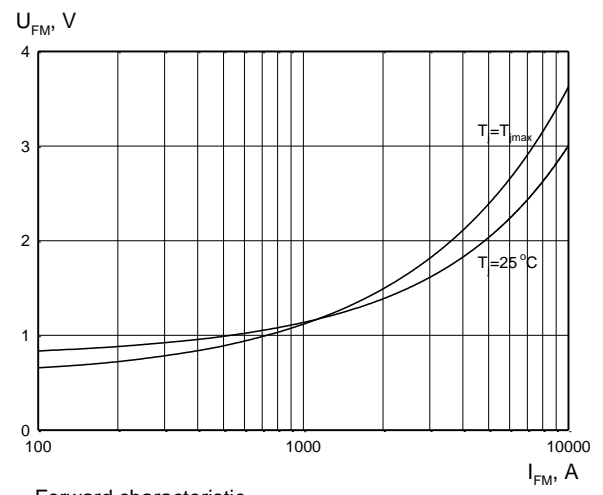
Power loss characteristics



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



Case temperature ratings. Voltage class > 12

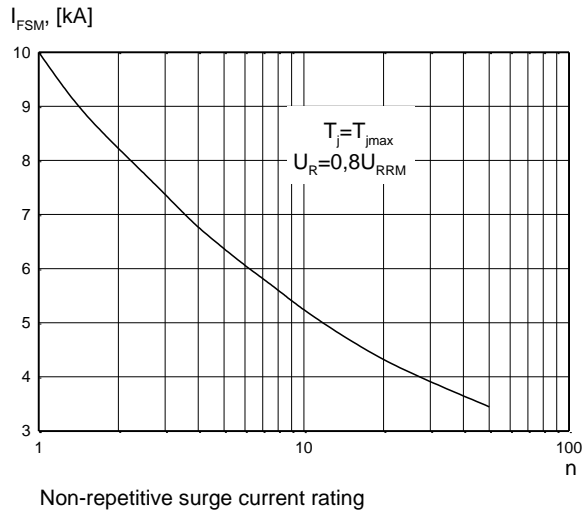


Forward characteristic

D74-500

Diode

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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.