PRELIMINARY

DIODE DB3-3500

KKDB3-3500-55; 02.2012 version

KEY PARAMETERS

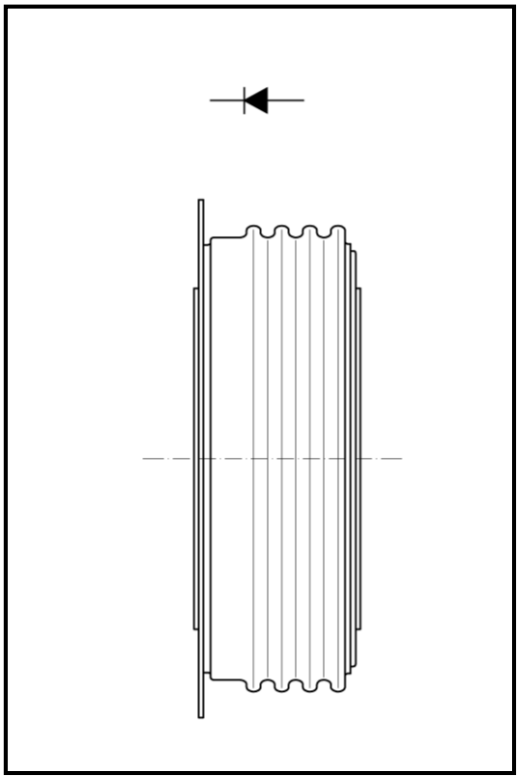
U_{RRM}	**up to 5500 V**
$I_{F(AV)}$	**3500 A**
I_{FSM}	**46000 A**

FEATURES

- high surge current capabilities
- high rated voltage
- low thermal impedance
- tested according to IEC standards

APPLICATION

- Traction systems
- Battery chargers
- Free Wheeling Diode
- Resistance Welding



Outline type code: JEDEC DO-200AE
See package details for further information

ORDERING INFORMATION

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

DB3-3500-□□

Voltage class (hundreds of volts)

LAMINA *S.A.*.
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www.lamina.com.pl

PRELIMINARY

DIODE DB3-3500

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ELECTRICAL PARAMETERS

Voltage class	U_{RRM}	U_{RSM}	I_{RRM}
	V	V	mA
45	4500	4600	100
50	5000	5100	
55	5500	5600	

Parameter		Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV)}$	A		3500
	T_c	°C		85
RMS forward current	$I_{F(RMS)}$	A		5500
Surge current	I_{FSM}	A	T_j=150°C, U_R=0,8U_{RRM}, t_p=10ms	46000
I^2t – value	I^2t	kA^2s		10580
Forward voltage drop max	U_{FM}	V	T_j=25°C, I_{FM}=4000A	1,15
Treshold voltage	$U_{F(T0)}$	V	T_j=150°C; 0,15x$\pi I_{F(AV)}$ ÷ $\pi I_{F(AV)}$	0,64
Slope resistance	r_F	mΩ	T_j=150°C; 0,15x$\pi I_{F(AV)}$ ÷ $\pi I_{F(AV)}$	0,096
Reverse recovery time	t_{rr}	µs	T_j=25°C, I_{FM}=2000A, di_R/dt=25A/µs	25

Termal properties

Parameter		Unit	Test conditions	Value
Thermal resistance, junction to case	R_{thJC}	°C/W	two sided, DC	0,0115
Thermal resistance, case to heatsink	R_{thCS}	°C/W	two sided	0,002
Operating junction temperature	T_{jmin}...T_{jmax}	°C		-40...+150
Storage temperature	T_{stg}	°C		-40...+160

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DIODE DB3-3500

Mechanical properties

Parameter		Unit	Value
Clamping force	F_M	kN	27... 45
Weight	m	g	1130

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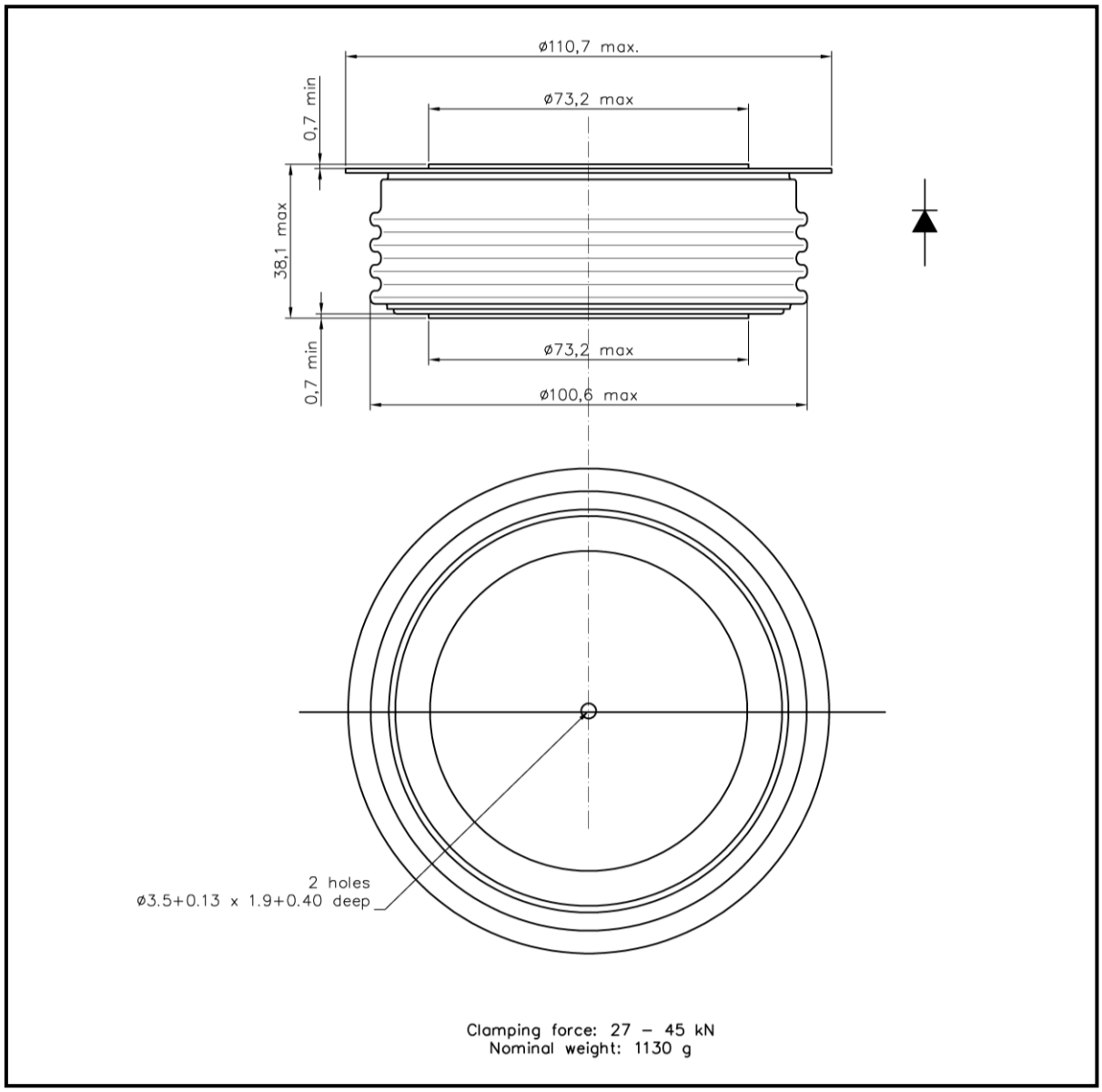
Package details



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

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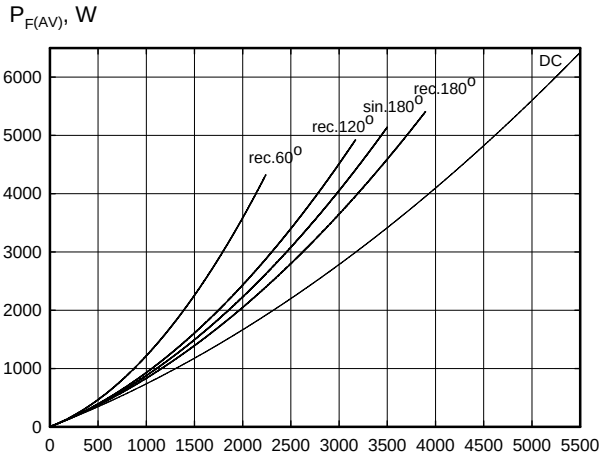
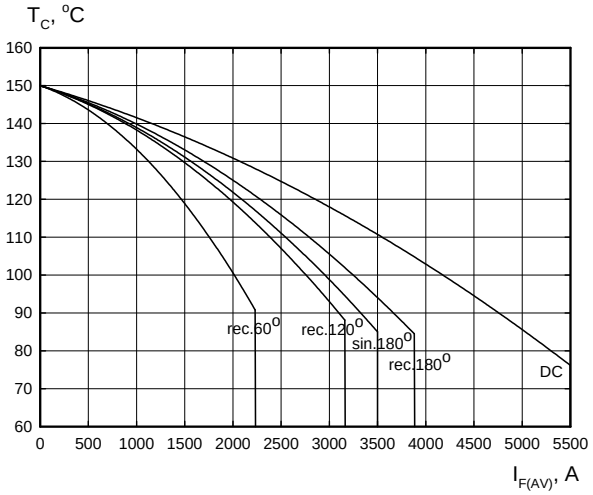
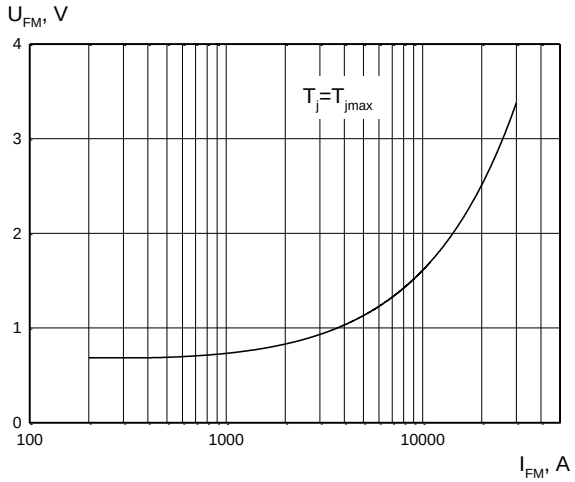
CHARACTERISTICS



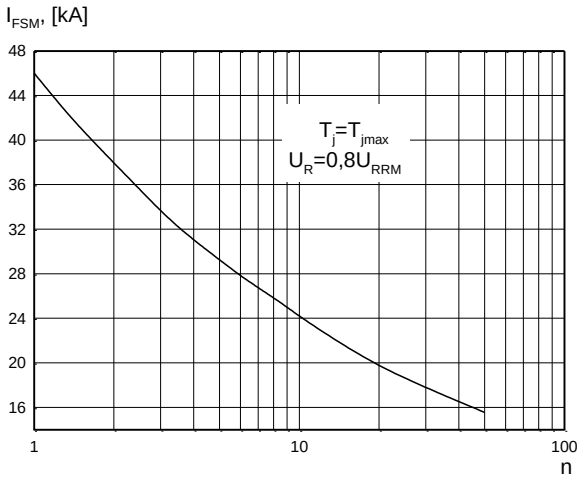
Power loss characteristics



Case temperature ratings



Forward characteristic



Non-repetitive surge current rating

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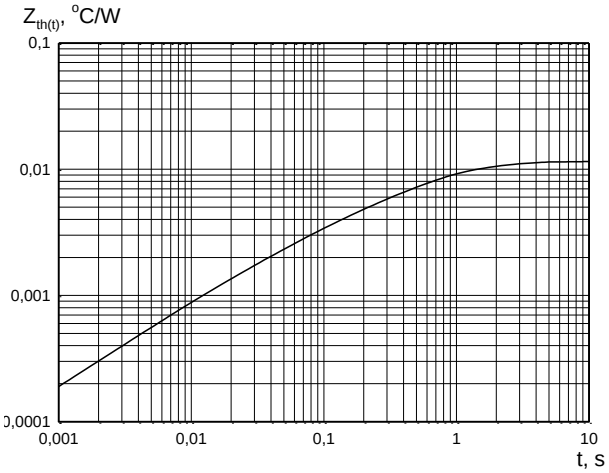

Transient thermal impedance

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. High efficiency water cooled copper heatsinks are also available.

DEVICE CLAMPS

Disc devices require the correct clamping force to ensure their best operation. LAMINA offers a wide selection of clamps to suit all of our manufactured devices.

POWER ASSEMBLY CAPABILITY

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

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