PRELIMINARY

Diode DB5-8000

KKDB5-8000, 02. 2012

KEY PARAMETERS

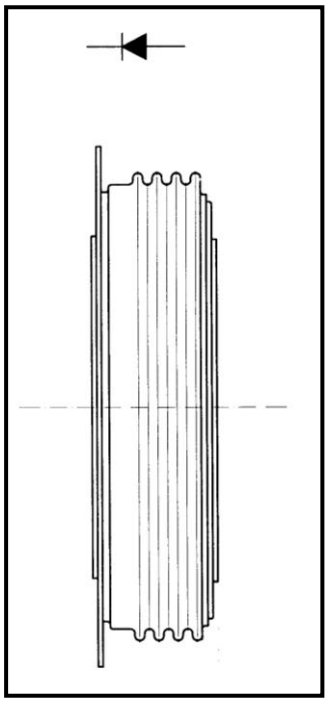
U_{RRM}	**up to 1200 V**
$I_{F(AV)}$	**8000 A**
I_{FSM}	**77200 A**

FEATURES

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

APPLICATION

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



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

Designed for use in high power industrial and commercial electronic circuits and equipment where high currents are encoutered and high reliability is essential. Low forward voltages let minimize energy loss.

ORDERING INFORMATION

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

DB5-8000- □□

Voltage class (hundreds of volts)

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www.lamina.com.pl

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ELECTRICAL PARAMETERS

Voltage class	V_{RRM}	V_{RSM}	I_{RRM}
	V	V	mA
08	800	900	100
10	1000	1100	
12	1200	1300	

Parameter		Unit	Test conditions	Value
Average forward current @ case temperature Tc = 60°C	$I_{F(AV)}$	A		8000
RMS forward current	$I_{F(RMS)}$	A		12560
Surge current	I_{FSM}	A	T_j=190°C, V_R=0,8V_{RRM}, t_p=10ms	68000
			T_j=190°C, V_R=0 , t_p=10ms	77200
I^2t – value	I^2t	kA^2s	T_j=190°C, V_R=0,8V_{RRM}, t_p=10ms	23100
			T_j=190°C, V_R=0, t_p=10ms	29800
Forward voltage drop max.	U_{FM}	V	T_j=190°C, I_{FM}=4000A	0,85
Treshold voltage	$U_{F(T0)}$	V	T_j=190°C; 0,167 x π x $I_{F(AV)}$ ÷ π x $I_{F(AV)}$	0,67
Slope resistance	r_F	mΩ	T_j=190°C; 0,167 x π x $I_{F(AV)}$ ÷ π x $I_{F(AV)}$	0,041
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	0,0095
Thermal resistance, case to heatsink	R_{thCS}	°C/W	two sided	0,002
Operating junction temperature	T_{jmin}...T_{jmax}	°C		-40...+190
Storage temperature	T_{stg}	°C		-40...+175

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Mechanical properties

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

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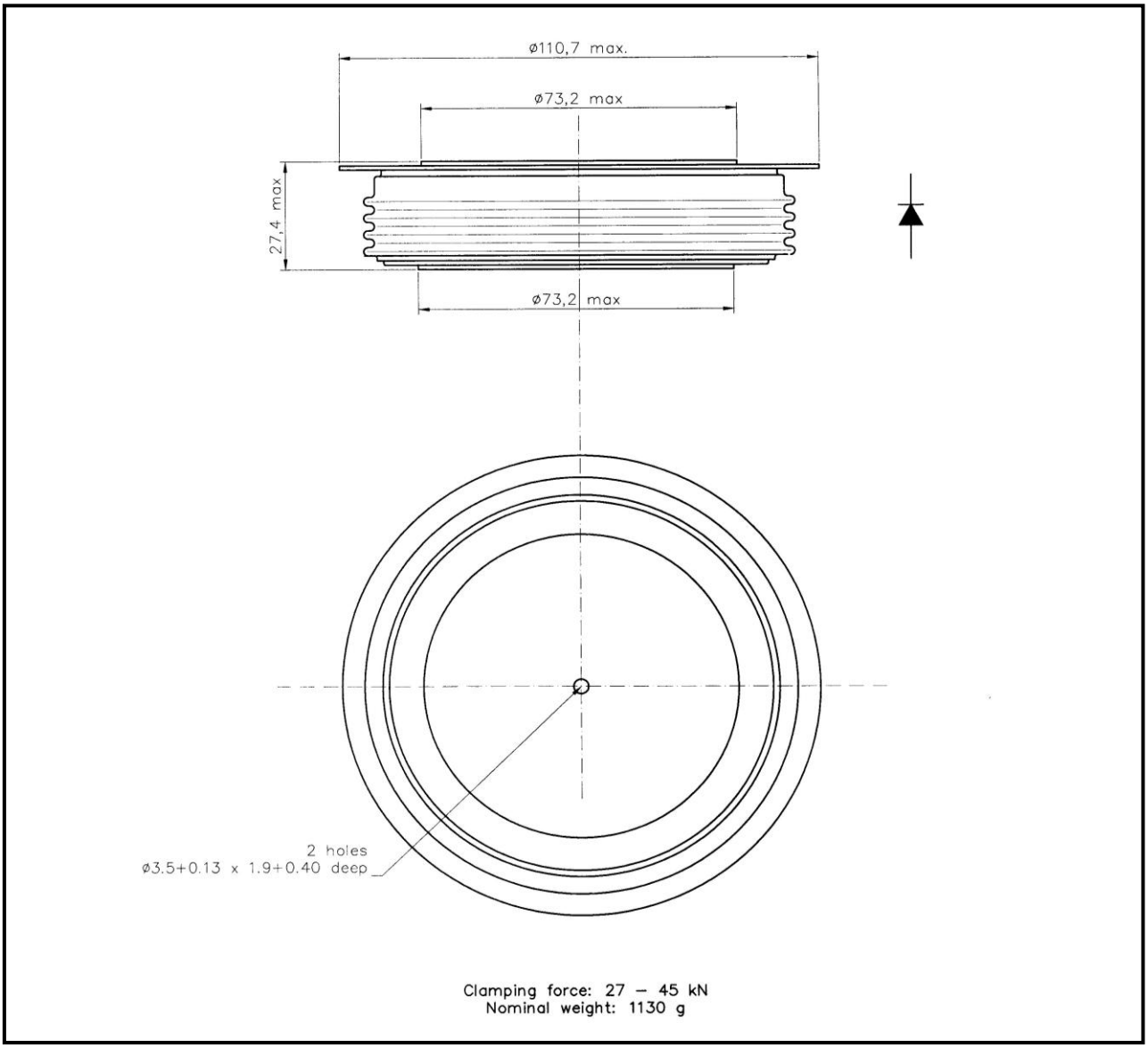
Package details



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

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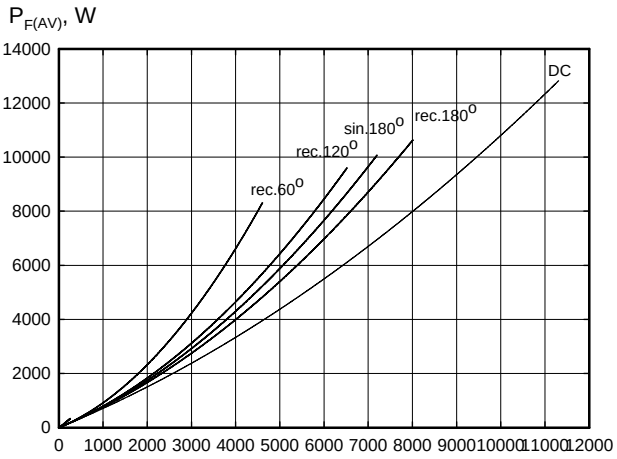
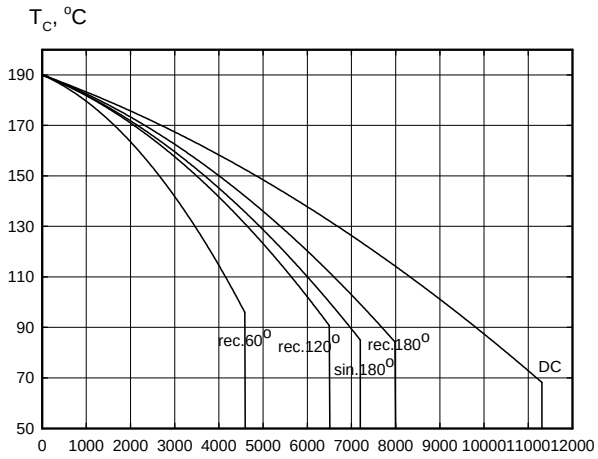
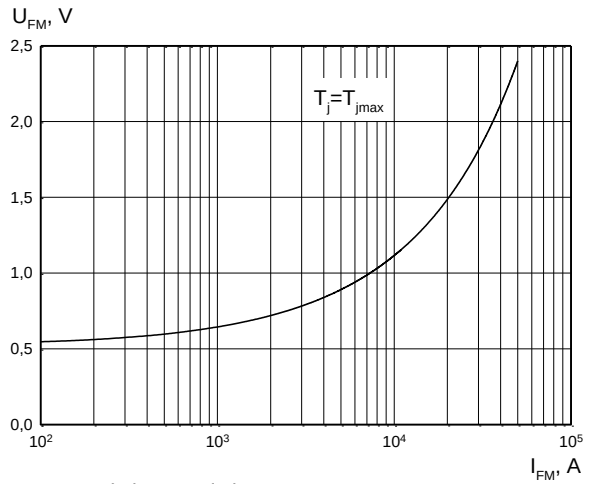
CHARACTERISTICS



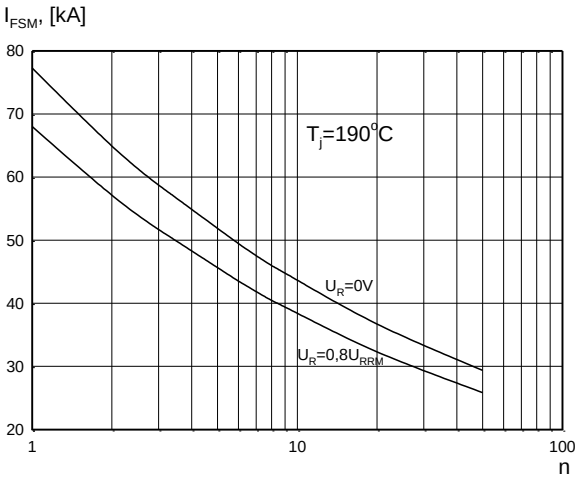
Power loss characteristics



Case temperature ratings



Forward characteristic



Non-repetitive surge current rating

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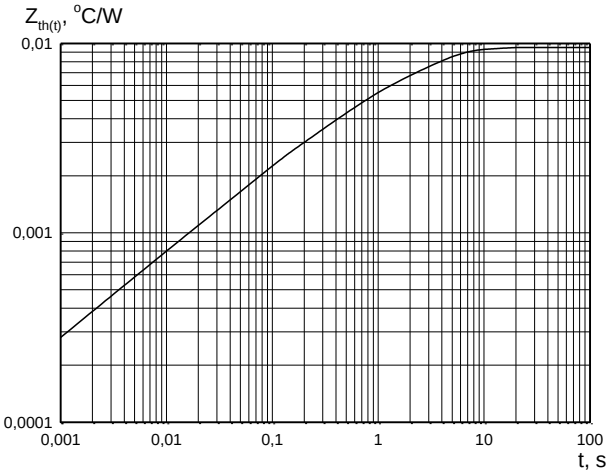

Transient thermal impedance

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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