Zakłady Elektronowe
LAMINA S.A.

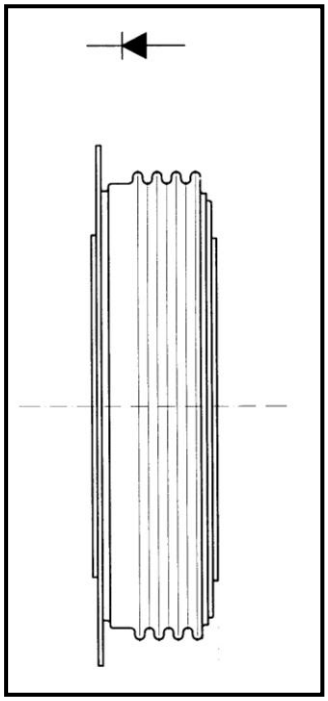
DB5-7200
Diode

KKDB5-7200, November 2008 version

Diode type DB5-7000 are of modern design with pressure contacts, high alumina ceramic insulator and cold-welding encapsulation. Designed for use in power rectifying circuits and equipment under normal operating conditions.

KEY PARAMETERS

U_{RRM}	**up to 1600 V**
$I_{F(AV)}$	**7200 A**
I_{FSM}	**75000 A**



Outline type code: JEDEC DO-200AE
See Package Details for further information

FEATURES

- all diffused design
- high current capabilities
- high surge current capabilities
- high rated voltages
- low thermal impedance
- tested according to IEC standards

APPLICATION

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

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

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.

DB5-7200-□□

voltage class (hundreds of volts)

Zakłady Elektronowe LAMINA *S.A.*
Puławska 34
PL-05-500 Piaseczno
POLAND

Tel.: +48-22-7572731
Tel.: +48-22-3989409
Fax.: +48-22-3989407
e-mail: sekretariat@lamina.com.pl
www.lamina.com.pl

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ELECTRICAL PARAMETERS

Voltage ratings

Voltage class	V_{RRM}	V_{RSM}	I_{RRM}
	V	V	mA
12	1200	1300	100
14	1400	1500	
16	1600	1700	

Electrical properties

Parameter		Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV))}$	A		7200
	T_c	°C		85
RMS forward current	$I_{F(RMS)}$	A		11300
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	75000
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	28000
Forward voltage drop max.	U_{FM}	V	T_j=190°C, I_{FM}=4000A	0,90
Treshold voltage	$U_{F(T0)}$	V	T_j=190°C; 0,15Ifm - πIfm	0,704
Slope resistance	r_F	mΩ	T_j=190°C; 0,15Ifm - πIfm	0,0479
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

Mechanical properties

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

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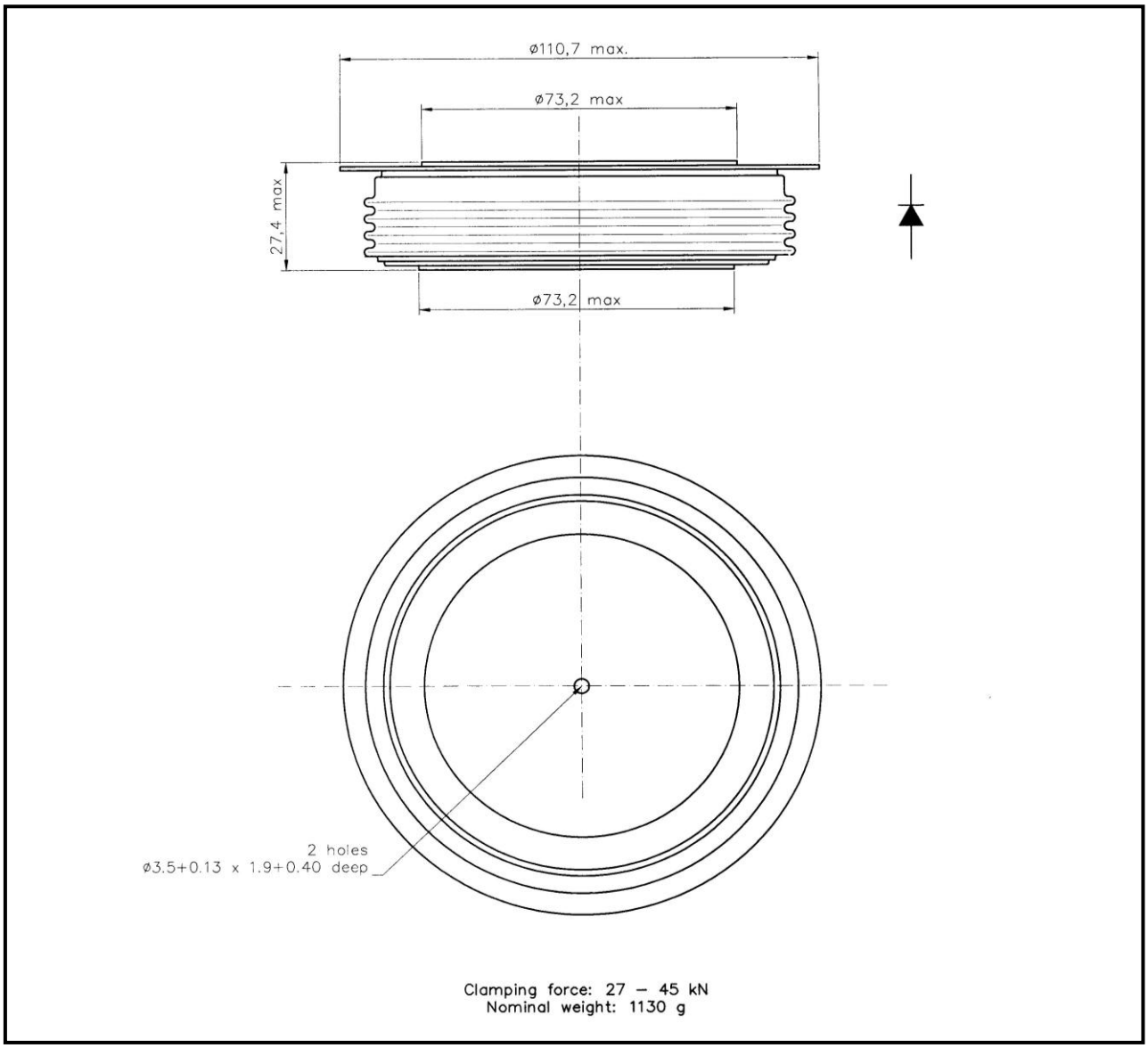

For further package information, please contact Sales & Marketing Department. All dimensions in mm, unless stated otherwise.
Do not scale.

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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. High efficiency water cooled copper heatsinks are also available.

DEVICE CLAMPS

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

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.

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