

Diode type D83 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

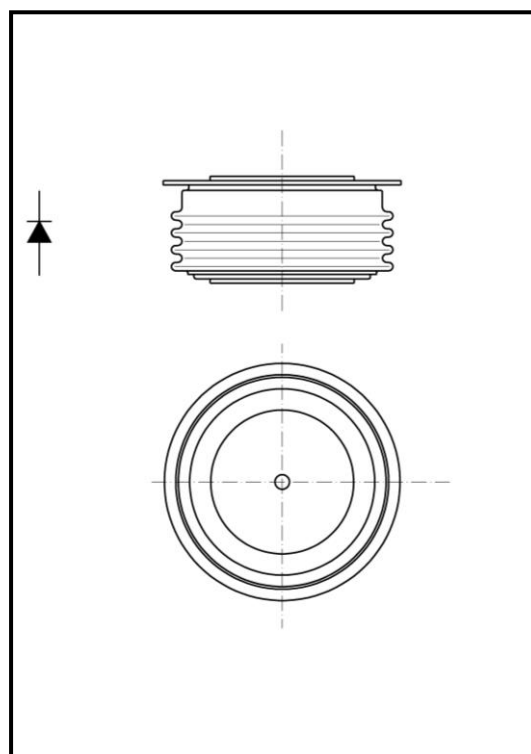
U_{RRM}	up to 3200 V
$I_{F(AV)}$	1200 A
I_{FSM}	14800 A

FEATURES

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



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

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

D83-1200-□□

_____ voltage class (hundreds of volts)

D83-1200

Diode



Zakłady Elektronowe
LAMINA S.A.

KKD831200, July 2005 version

ELECTRICAL PARAMETERS

Voltage ratings

Voltage class	U_{RRM}	U_{RSM}	I_{RRM}
	V	V	mA
16	1600	1700	50
18	1800	1900	
20	2000	2100	
22	2200	2300	
24	2400	2500	
26	2600	2700	
28	2800	2900	
30	3000	3100	
32	3200	3300	

Electrical properties

Parameter		Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV)}$	A		1200
	T_c	°C		100
RMS forward current	$I_{F(RMS)}$	A		1880
Surge current	I_{FSM}	A	$T_j=175^\circ\text{C}$, $U_R=0,8U_{RRM}$, $t_p=10\text{ms}$	14800
I^2t – value	I^2t	kA^2s		1090
Forward voltage drop max.	U_{FM}	V	$T_j=25^\circ\text{C}$, $I_{FM}=1500\text{A}$	1,35
Threshold voltage	$U_{F(T0)}$	V		0,82
Slope resistance	r_F	$\text{m}\Omega$		0,33
Reverse recovery charge	Q_r	μC	$T_j=25^\circ\text{C}$, $I_{FM}=1500\text{A}$, $di_R/dt=25\text{A}/\mu\text{s}$	3300

Thermal properties

Parameter		Unit	Test conditions	Value
Thermal resistance, junction to case	R_{thJC}	°C/W	two sided, DC	0,032
Thermal resistance, case to heatsink	R_{thCS}	°C/W	two sided	0,02
Operating junction temperature	$T_{jmin} \dots T_{jmax}$	°C		-40...+175
Storage temperature	T_{stg}	°C		-40...+175

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D83-1200

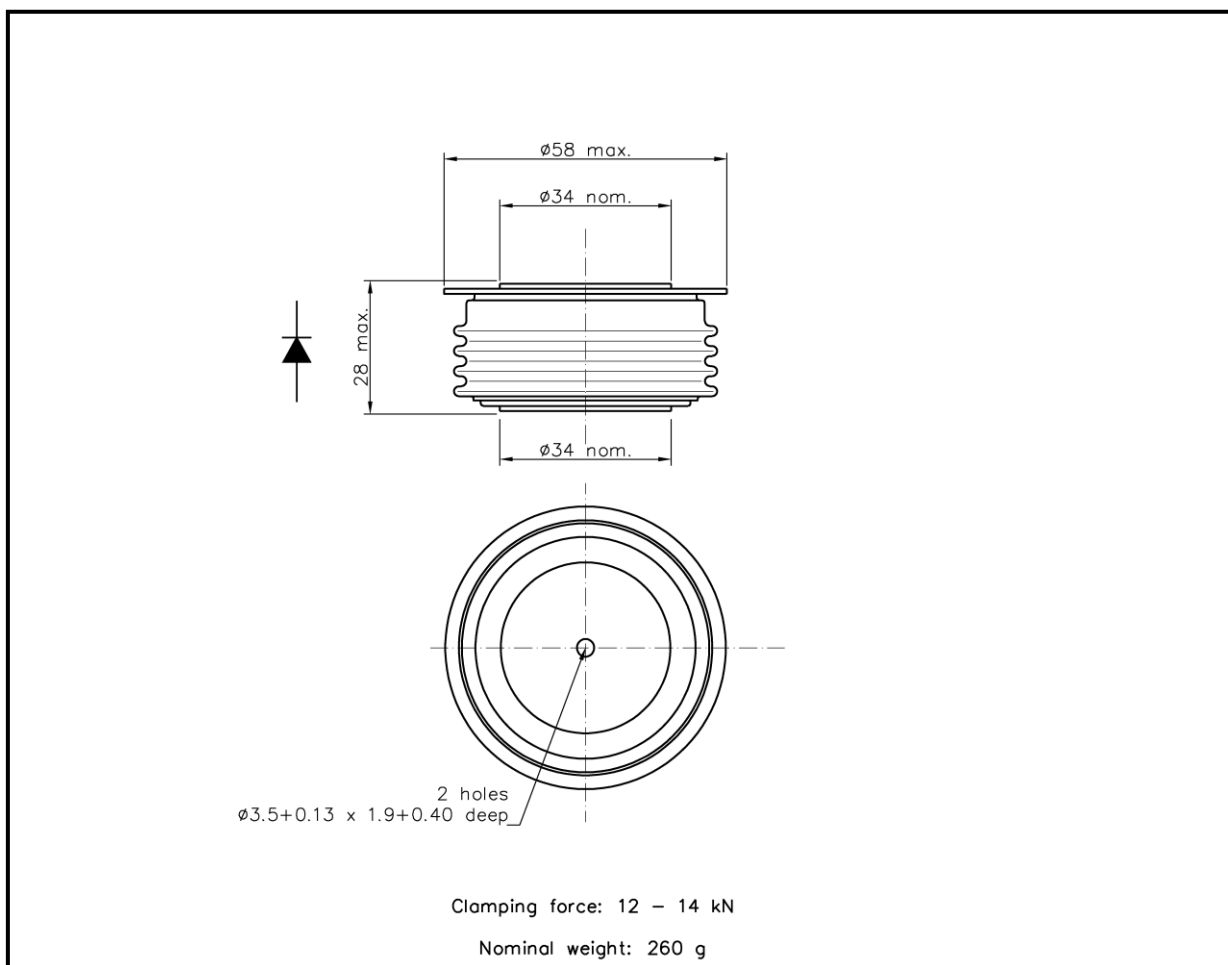
Diode

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Mechanical properties

Parameter		Unit	Value
Clamping force	F_M	kN	12,0 ... 14,0
Weight	m	g	260

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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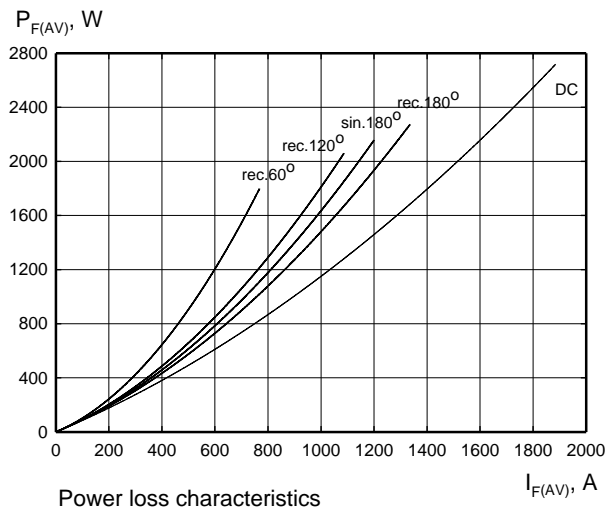
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Diode

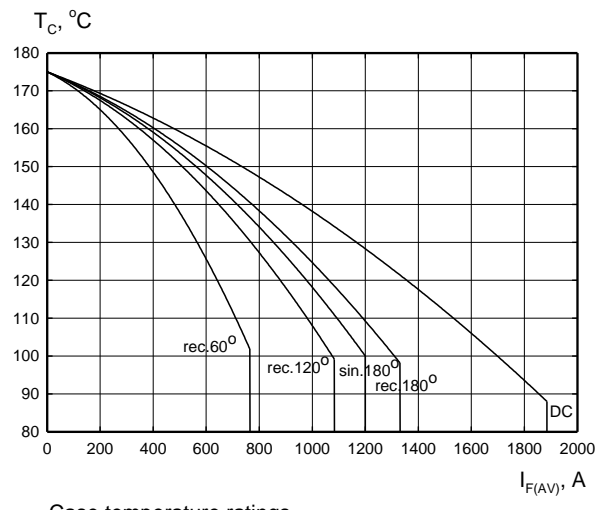


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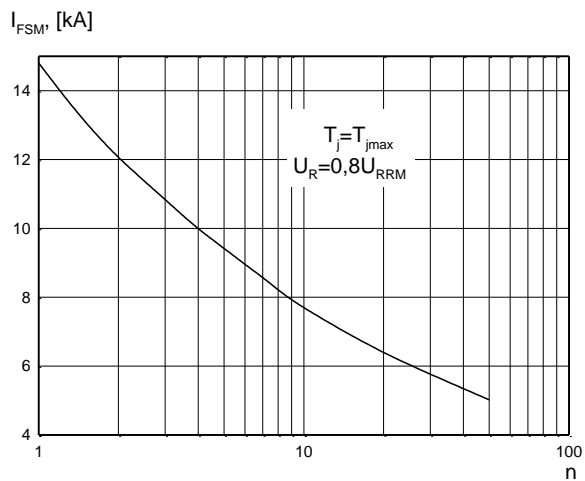
CHARACTERISTICS



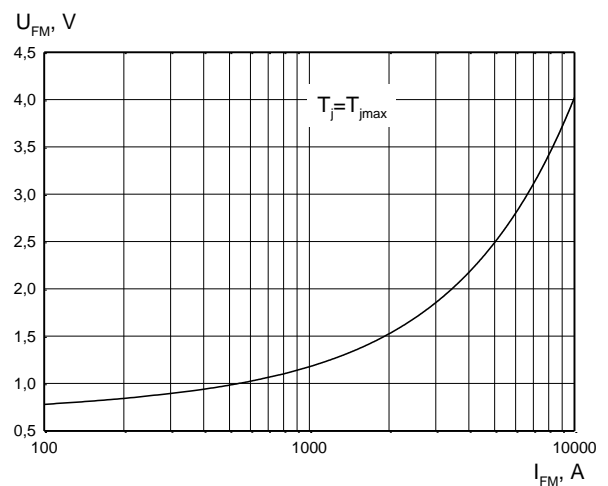
Power loss characteristics



Case temperature ratings



Non-repetitive surge current rating



Forward characteristic

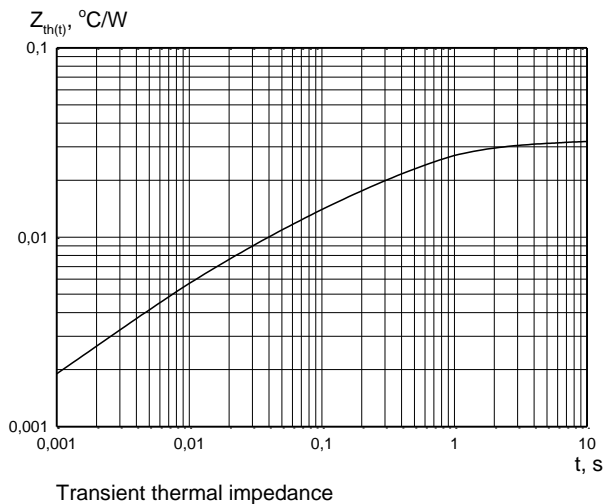
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HEATSINKS

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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