

Diodes type D51 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

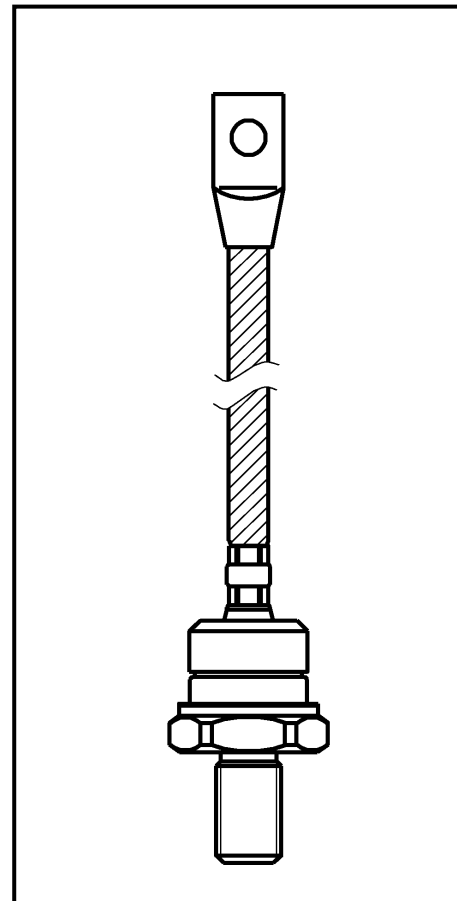
U_{RRM}	up to 2000 V
$I_{F(AV)}$	100 A
I_{FSM}	2100 A

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



Outline type code: JEDEC DO-205AC

See package details for further information

Designed for use in high power industrial, commercial and military power electronic circuits and equipment where high currents are encountered and high reliability is essential.

D51-100

Diode

LAMINA S.I.

KKD51100, February 2003 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.

D51-100-□□

└── voltage class (hundreds of volts)

ELECTRICAL PARAMETERS

Voltage ratings

Voltage class	U_{RRM}	U_{RSM}	I_{RRM}
	V	V	mA
18	1800	1900	20
20	2000	2100	

Electrical properties

Parameter	Unit	Test conditions	Value
Average forward current @ case temperature	$I_{F(AV)}$	A	100
	T_c	°C	125
RMS forward current	$I_{F(RMS)}$	A	157
Surge current	I_{FSM}	A	$T_j = T_{jmax}$, $U_R = 0,8U_{RRM}$, $t_p = 10ms$
I^2t – value	I^2t	kA^2s	22
Forward voltage drop max.	U_{FM}	V	$T_j = 25^\circ C$, $I_{FM} = 470A$
Threshold voltage	$U_{F(T0)}$	V	1,20
Slope resistance	r_F	mΩ	2,37

Thermal properties

Parameter	Unit	Test conditions	Value
Thermal resistance, junction to case	R_{thJC}	°C/W	DC
Thermal resistance, case to heatsink	R_{thCS}	°C/W	0,25
Operating junction temperature	$T_{jmin} \dots T_{jmax}$	°C	0,12
Storage temperature	T_{stg}	°C	-40...+175
			-40...+190

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D51-100

Diode

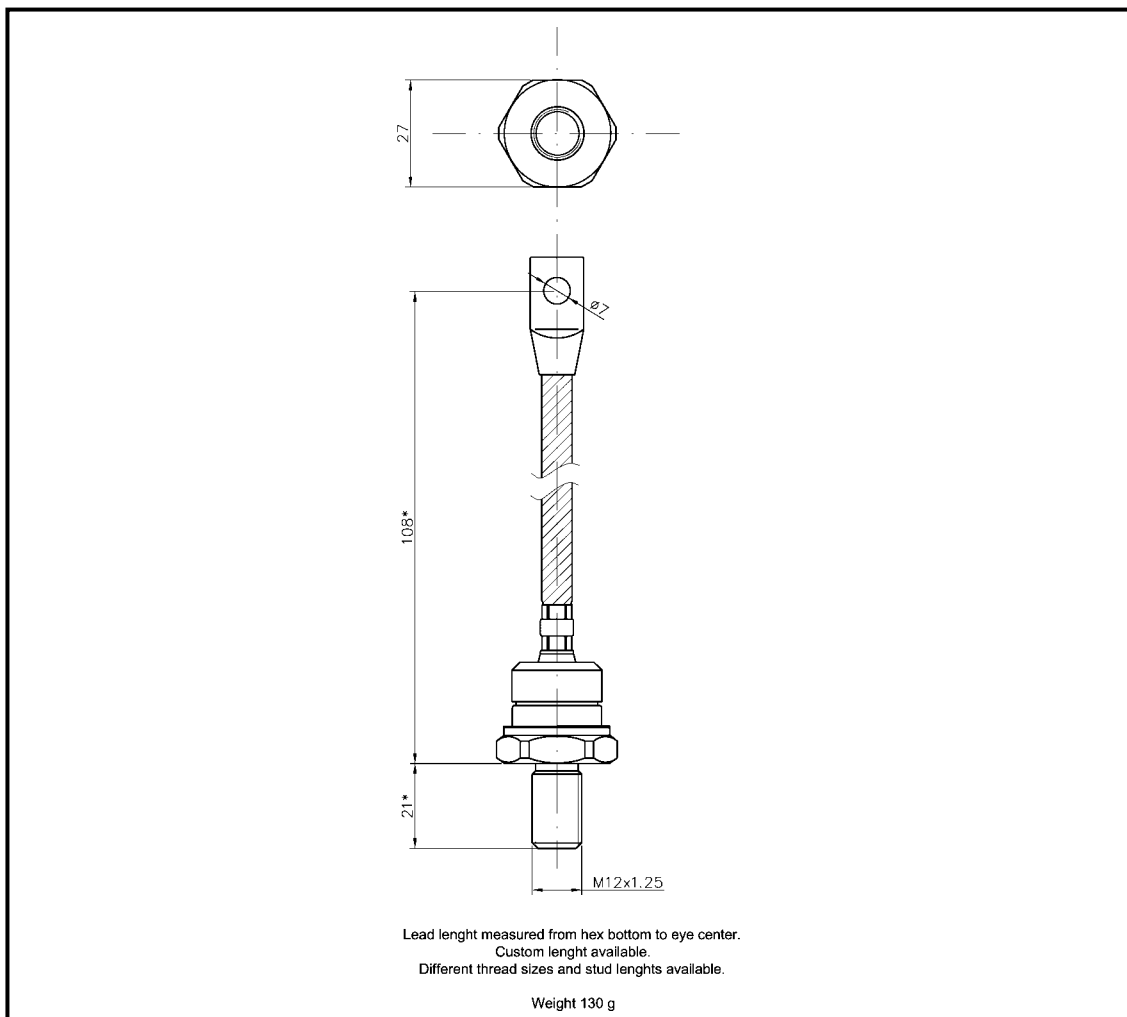
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Mechanical properties

Parameter		Unit	Value
Mounting torque	M	Nm	14 ... 17
Weight	m	g	130

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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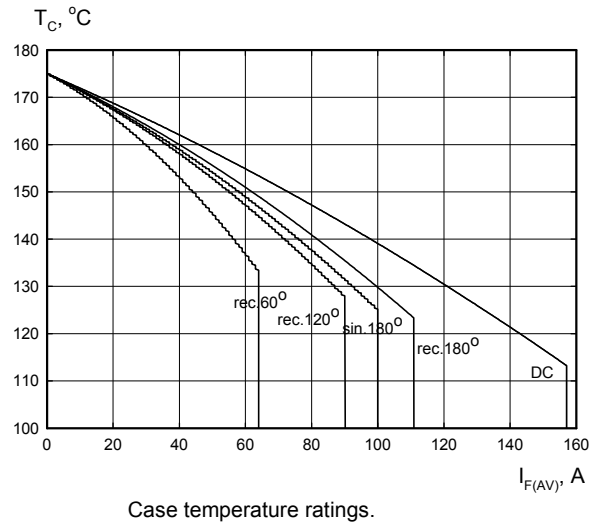
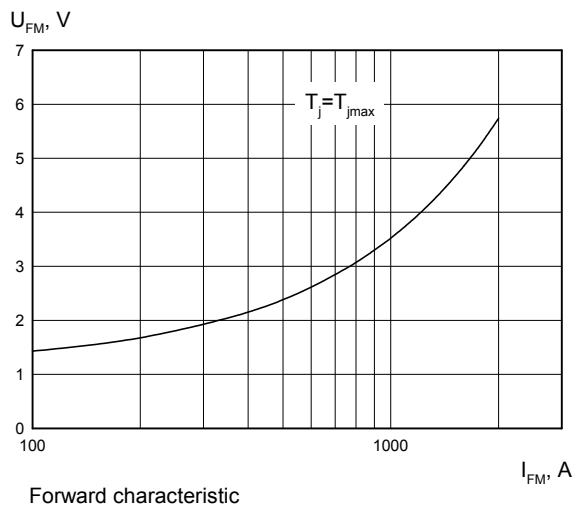
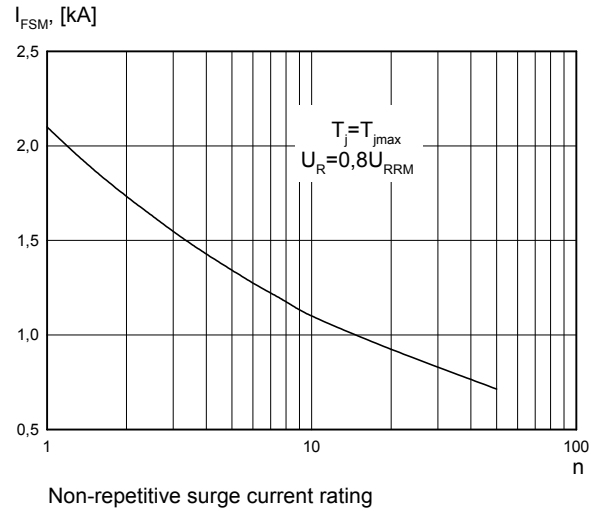
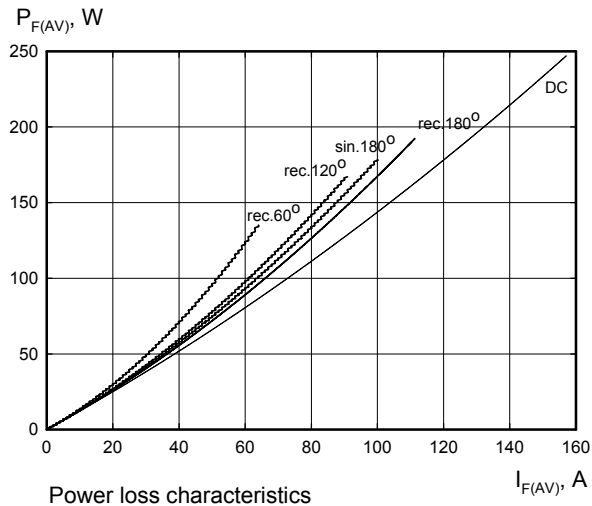
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CHARACTERISTICS

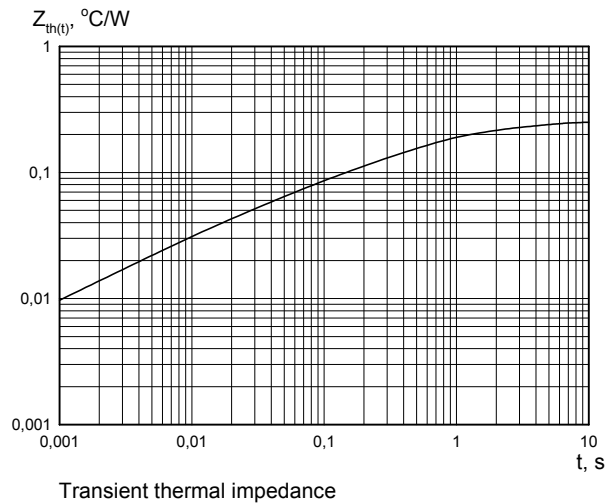


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HEATSINKS

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.

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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