Zakłady Elektronowe
LAMINA S.A.

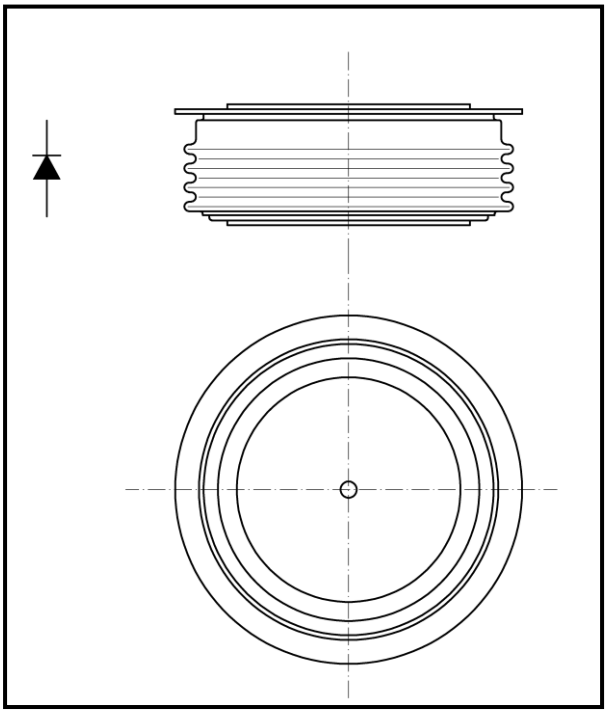
KKR951500, March 2006 version

R95-1500
Fast Recovery Diode

Diode type R95 are of modern design with pressure contacts, high alumina ceramic insulator and cold-welded encapsulation. Designed for use in power rectifying circuits and equipment under normal operating conditions.

KEY PARAMETERS

U_{RRM}	**up to 1800 V**
$I_{F(AV)}$	**1500 A**
I_{FSM}	**19000 A**
t_{rr}	**down to 2µs**



Outline type code: JEDEC DO-200AC
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
- compact size and small weight
- fast reverse recovery
- low Q_r values

APPLICATION

- Battery Chargers
- Free Wheeling Diode
- Inverters and choppers
- Uninterruptible power supplies
- Fast Recovery Rectifier applications

Designed for use in high power industrial and commercial electronic circuits and equipment where high currents are encoutered, high reliability is essential and short reverse recovery times, as well as low recovery charge values are required. Low forward voltages let minimize energy loss.

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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.

R95-1500-□□-□

- t_{rr} group code
- voltage class (hundreds of volts)

ELECTRICAL PARAMETERS

Voltage ratings

Voltage class	U_{RRM}	U_{RSM}	I_{RRM}
	V	V	mA
16	1600	1700	100
18	1800	1900	

Recovery time codes

t_{rr} group code	3	4	5
t_{rr} [µs]	3.2	2.5	2

Electrical properties

Parameter		Unit	Test conditions	Value	
Average forward current @ case temperature	$I_{F(AV)}$	A		1500	2000
	T_c	°C		94	65
RMS forward current	$I_{F(RMS)}$	A		3141	
Surge current	I_{FSM}	A	T_j=150°C, U_R=0,8U_{RRM}, t_p=10ms	19000	
I^2t – value	I^2t	kA^2s		1800	
Forward voltage drop max.	U_{FM}	V	T_j=25°C, I_{FM}=1500A	1,35	
Threshold voltage	$U_{F(TO)}$	V	Tj=150°C	0,98	
Slope resistance	r_F	mΩ	Tj=150°C	0.193	
Reverse recovery time	t_{rr}	µs	T_j=25°C, I_{FM}=1500A, di_R/dt=25A/ µs	2,0	

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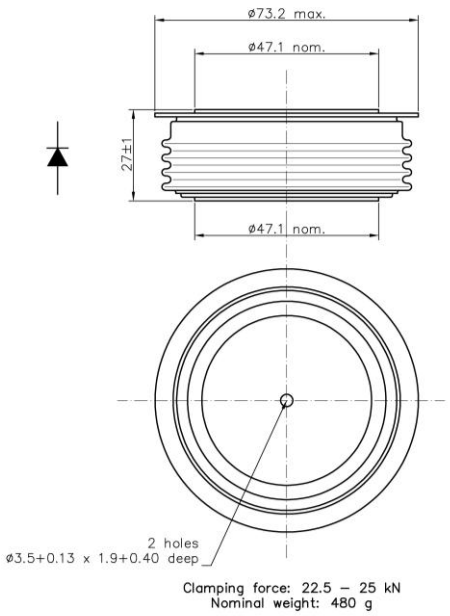
Termal properties

Parameter		Unit	Test conditions	Value
Thermal resistance, junction to case	R_{thJC}	°C/W	two sided, DC	0,020
Thermal resistance, case to heatsink	R_{thCS}	°C/W	two sided	0,005
Operating junction temperature	$T_{jmin}...T_{jmax}$	°C		-40...+150
Storage temperature	T_{stg}	°C		-40...+150

Mechanical properties

Parameter		Unit	Value
Clamping force	F_M	kN	22,5 ... 25,0
Weight	m	g	480

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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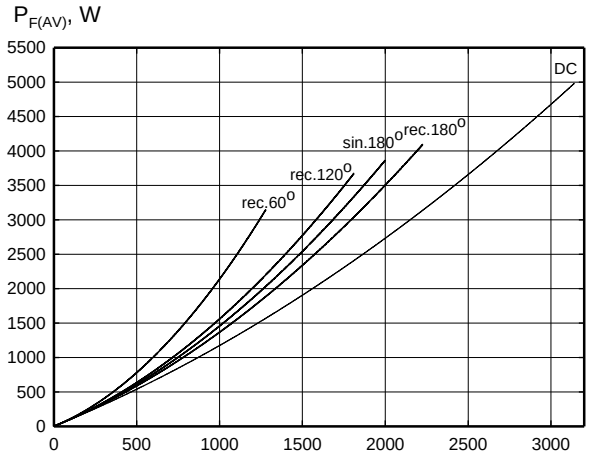
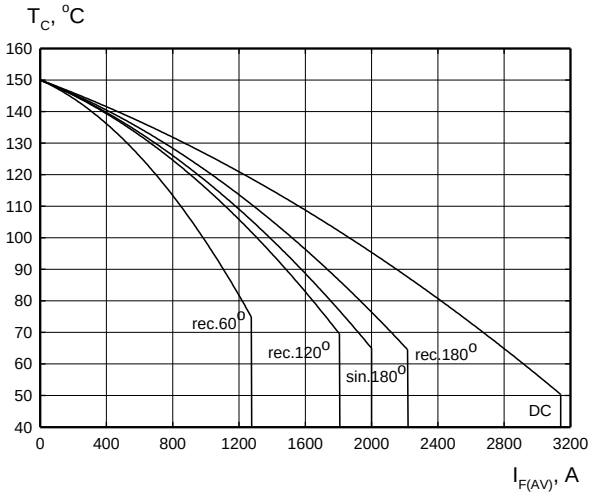
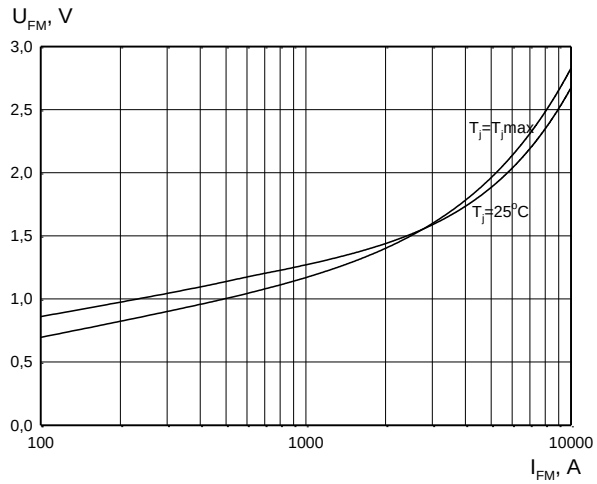
CHARACTERISTICS



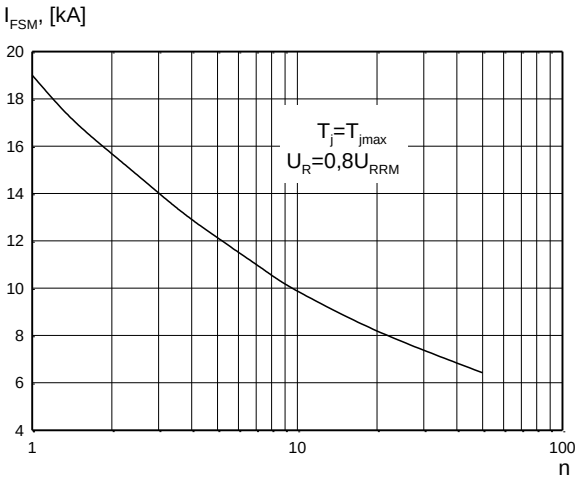
Power loss characteristics



Case temperature ratings



Forward characteristic



Non-repetitive surge current rating

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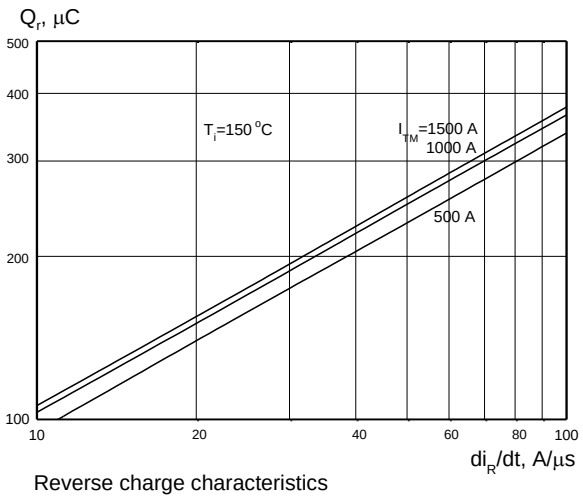
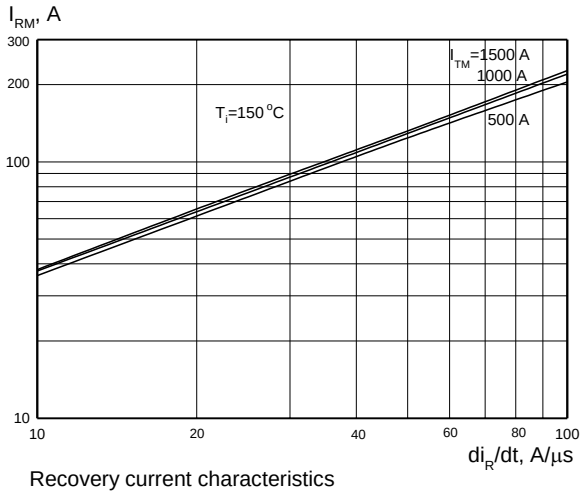
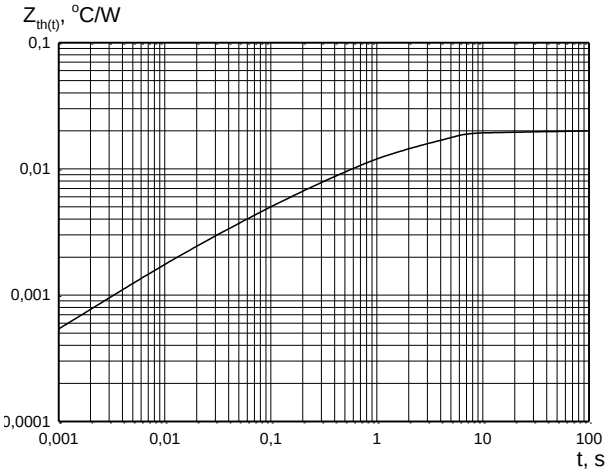


Reverse charge characteristics



Recovery current characteristics



Transient thermal impedance

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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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