



Diodes type R61 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

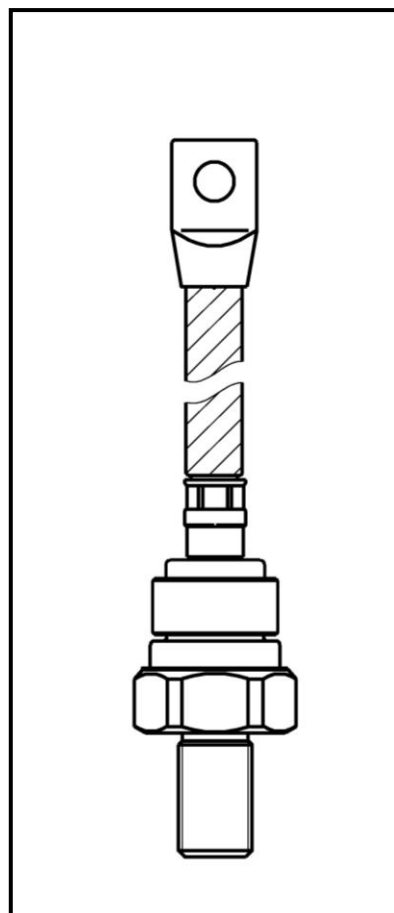
$U_{RRM}$	up to 1600 V
$I_{F(AV)}$	250 A
$I_{FSM}$	4500 A
$t_{rr}$	down to 2 $\mu$ s

### 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

- Free Wheeling Diode
- Resistance Welding
- Fast recovery rectifier applications



Outline type code: JEDEC DO-205AB

See package details for further information

Designed for use in high power industrial and commercial rectifying circuits where high currents are encountered and high reliability is essential.

# R61-250

## Diode



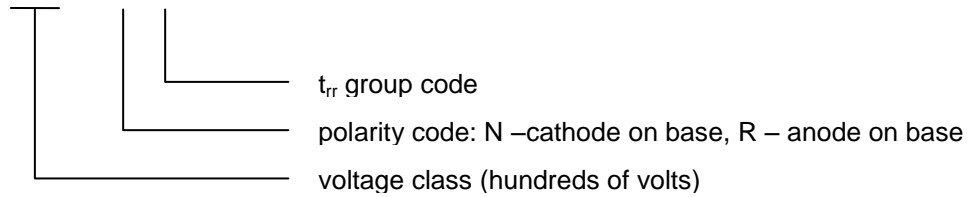
Zakłady Elektronowe  
**LAMINA S.A.**

KKR61250, October 2006 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.

**R61-250-**   -



### ELECTRICAL PARAMETERS

#### Voltage ratings

Voltage class	$U_{RRM}$	$U_{RSM}$	$I_{RRM}$
	V	V	mA
08	800	900	30
10	1000	1100	
12	1200	1300	
14	1400	1500	
16	1600	1700	

#### Recovery time codes

$t_{rr}$ code	3	4	5
$t_{rr}$ [ $\mu$ s]	3,2	2,5	2,0

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

# R61-250

## Diode

KKR61250, October 2006 version

### Electrical properties

Parameter	Unit	Test conditions	Value	
Average forward current @ case temperature	$I_{F(AV)}$	A	250	
	$T_c$	°C	85	
RMS forward current	$I_{F(RMS)}$	A	392	
Surge current	$I_{FSM}$	$T_j=T_{jmax}, U_R=0,8U_{RRM},$ $t_p=10ms$	4500	
		$T_j=T_{jmax}, U_R=0$ $t_p=10ms$	5000	
$I^2t$ – value	$I^2t$	$kA^2s$	$T_j=T_{jmax}, U_R=0,8U_{RRM},$ $t_p=10ms$	100
Forward voltage drop max.	$U_{FM}$	V	$T_j=25^\circ C, I_{FM}=800A$	1,35
Threshold voltage	$U_{F(T0)}$	V		0,83
Slope resistance	$r_F$	mΩ		0,62
Reverse recovery time	$t_{rr}$	μs	$T_j=25^\circ C, I_{FM}=800A$ $di_R/dt=25A/\mu s$	2,0
Typical recovered charge	$Q_r$	μC	$T_j=125^\circ C, I_{FM}=800A$ $di_R/dt=25A/\mu s$	65

### Thermal properties

Parameter	Unit	Test conditions	Value	
Thermal resistance, junction to case	$R_{thJC}$	°C/W	DC	0,12
Thermal resistance, case to heatsink	$R_{thCS}$	°C/W		0,1
Operating junction temperature	$T_{jmin}...T_{jmax}$	°C		-40...+125
Storage temperature	$T_{stg}$	°C		-40...+150

### Mechanical properties

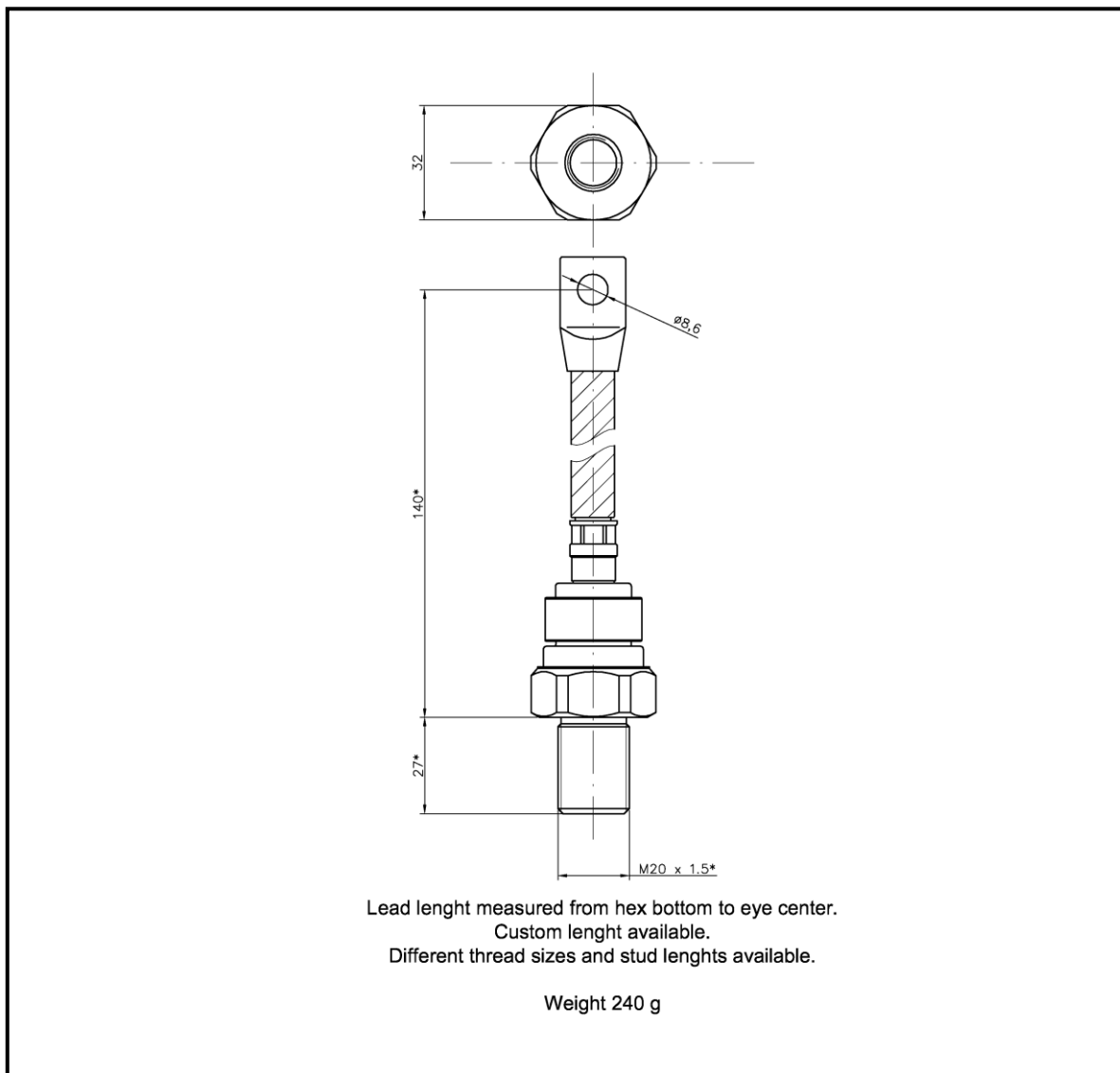
Parameter	Unit	Value	
Mounting torque	M	Nm	28 ... 32
Weight	m	g	240

# R61-250

## Diode

KKR61250, October 2006 version

### Package details



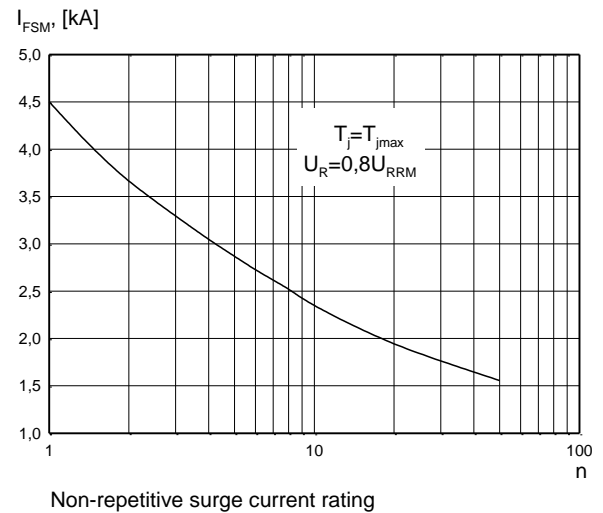
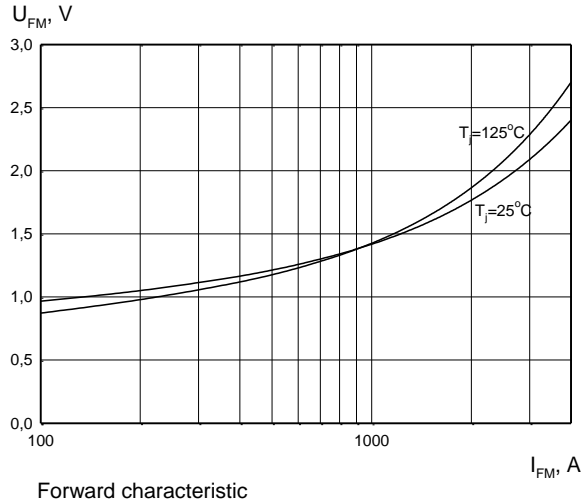
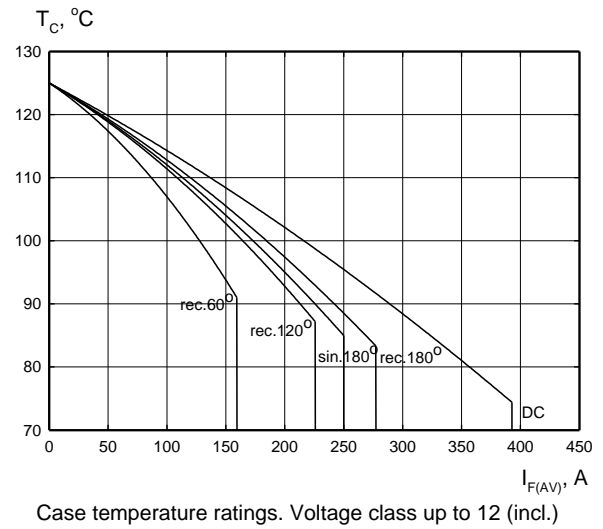
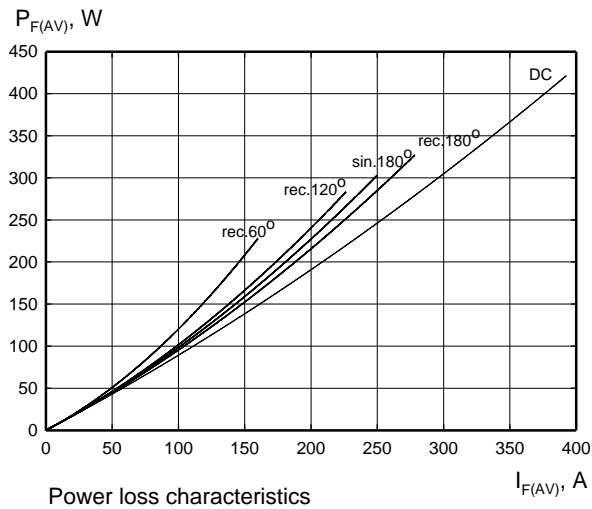
For further package information, please contact Sales & Marketing Department. All dimensions in mm, unless stated otherwise.  
Do not scale.

# R61-250

## Diode

KKR61250, October 2006 version

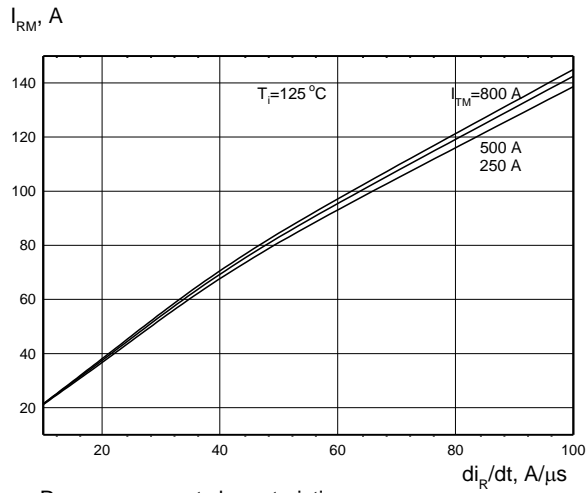
### CHARACTERISTICS



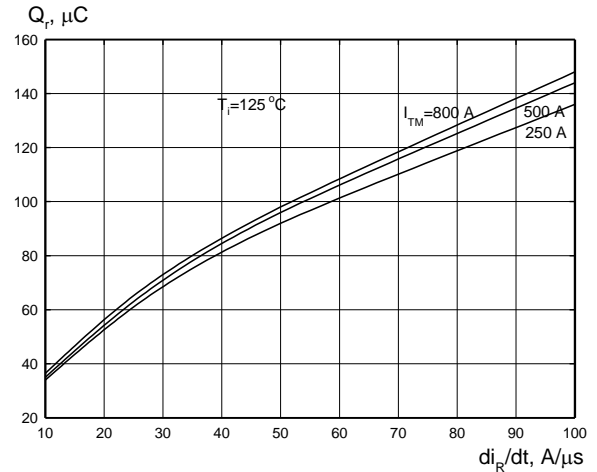
# R61-250

## Diode

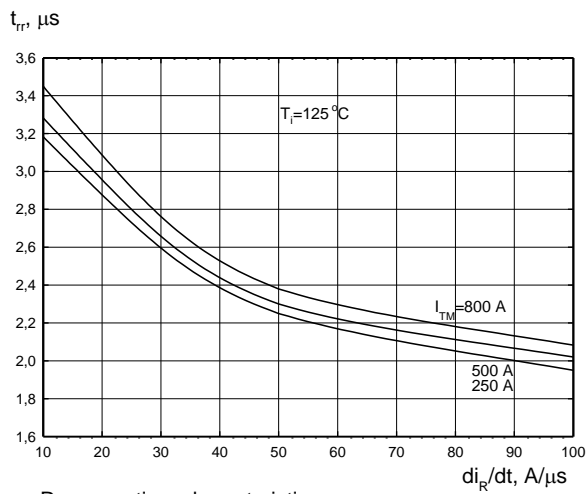
KKR61250, October 2006 version



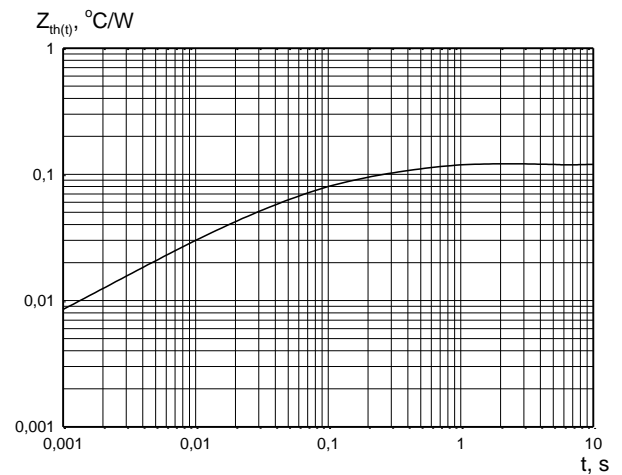
Recovery current characteristics



Reverse charge characteristics



Recovery time characteristics



Transient thermal impedance

# R61-250

## Diode



KKR61250, October 2006 version

---

### 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.

### 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.