



Thyristors type F62 are of modern design with internal spring loaded contacts and pressure welded glass-to-metal seal. Designed for use in power electronic circuits and equipment under normal operating conditions.

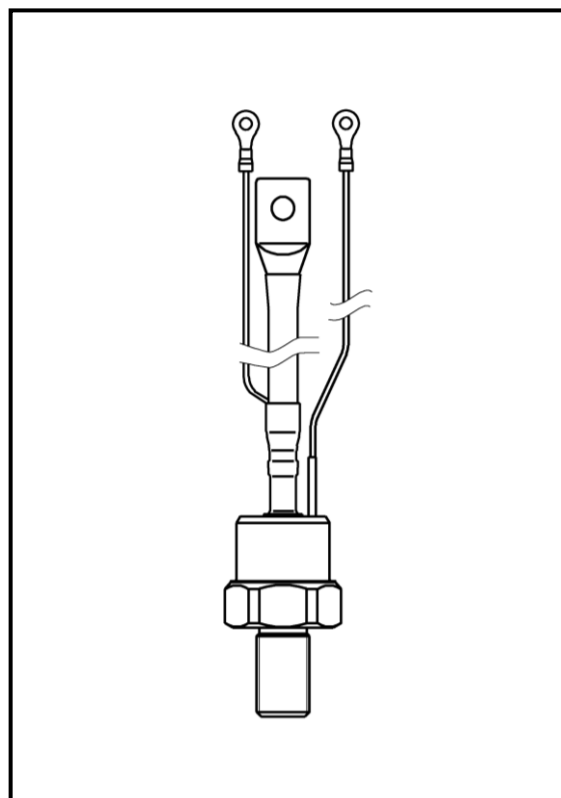
### KEY PARAMETERS

<b><math>U_{DRM}, U_{RRM}</math></b>	<b>up to 1200 V</b>
<b><math>I_{T(AV)}</math></b>	<b>150 A</b>
<b><math>I_{TSM}</math></b>	<b>4000 A</b>
<b><math>du/dt^*</math></b>	<b>500 V/<math>\mu</math>s</b>
<b><math>di/dt</math></b>	<b>100 A/<math>\mu</math>s</b>

\* maximum (non standard) value

### FEATURES

- all diffused design
- high current capabilities
- high surge current capabilities
- high rates voltages
- high  $du/dt$
- low gate current
- dynamic gate
- low thermal impedance
- tested according to IEC standards
- compact size and small weight



**Outline type code: JEDEC TO-209AB  
(TO-93)**

See package details for further information

### APPLICATION

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

# F62-150

## Fast Switching Thyristor



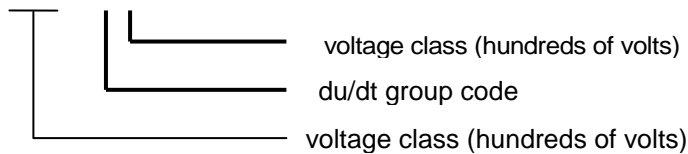
Zakłady Elektronowe  
**LAMINA S.A.**

KKF62150, March 2007 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.

**F62-150-□□-□□**



Please refer to **Electrical Parameters** if specific dynamic demands have to be met.  
Those information, as well as any other concerning non-standard accessories e.g. stud thread, custom leads length or lead terminal connector type should be included in the order.

### ELECTRICAL PARAMETERS

#### Voltage ratings

Voltage class	$U_{DRM}, U_{RRM}$	$U_{DSM}, U_{RSM}$	$I_{DRM}, I_{RRM}$
	V	V	mA
04	400	500	22
06	600	700	
08	800	900	
10	1000	1100	
12	1200	1300	

#### du/dt group codes

Group code	du/dt	$t_q$
	V/μs	μs
0	no specified value	no specified value
4	200	32
5	320	25
6	500	20
7	-	16

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

# F62-150

## Fast Switching Thyristor



Zakłady Elektronowe  
**LAMINA S.A.**

KKF62150, March 2007 version

### Electrical properties

Parameter		Unit	Test conditions	Value
Average on-state current	$I_{T(AV)}$	A		150
Case temperature	$T_c$	°C		85
RMS on-state current	$I_{T(RMS)}$	A		235
Surge current	$I_{TSM}$	A	$T_j=125^\circ\text{C}$ , $U_R=0,8U_{RRM}$ , $t_p=10\text{ms}$	4000
$I^2t$ – value	$I^2t$	$\text{kA}^2\text{s}$		80
On-state voltage max.	$U_{TM}$	V	$T_j=25^\circ\text{C}$ , $I_{TM}=625\text{A}$	1,9
Latching current	$I_l$	mA	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$	800
Holding current	$I_H$	mA	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$	160
Circuit commutated turn-off time (typical)	$t_q$	$\mu\text{s}$	$T_j=125^\circ\text{C}$ , $I_{TM}=150\text{A}$ , $di_R/dt=12,5\text{A}/\mu\text{s}$ , $du/dt=20\text{V}/\mu\text{s}$ , $U_D=0,67U_{DRM}$ , $U_{RM}=100\text{V}$	12,5 for voltage class up to 08 16 for voltage class 10 and 12
Turn-On time (typical)	$t_{on}$	$\mu\text{s}$	$I_{TM}=100\text{A}$ , $U_{DM}=100\text{V}$	8
Rate of rise of on-state current-repetitive	$di/dt$	$\text{A}/\mu\text{s}$	$T_j=125^\circ\text{C}$ , $I_{TM}=3I_{T(AV)}$ , $U_D=0,67U_{DRM}$ , $f=50\text{Hz}$ , $I_{GM}=1\text{A}$ , $di_G/dt=1\text{A}/\mu\text{s}$	100
Critical rate of raise of off-state voltage	$du/dt$	$\text{V}/\mu\text{s}$	$T_j=125^\circ\text{C}$ , $U_D=0,67U_{DRM}$	200 - 500
Gate current to trigger	$I_{GT}$	mA	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$	150
Gate voltage to trigger	$U_{GT}$	V	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$	3

### Thermal properties

Parameter		Unit	Test conditions	Value
Thermal resistance, junction to case	$R_{thJC}$	°C/W	DC	0,14
Thermal resistance, case to heatsink	$R_{thCS}$	°C/W		0,075
Operating junction temperature	$T_{jmin} \dots T_{jmax}$	°C		-40...+125
Storage temperature	$T_{stg}$	°C		-40...+125

### Mechanical properties

Parameter		Unit	Value
Mounting torque	M	Nm	28 ... 32
Weight	m	g	250

### Package details

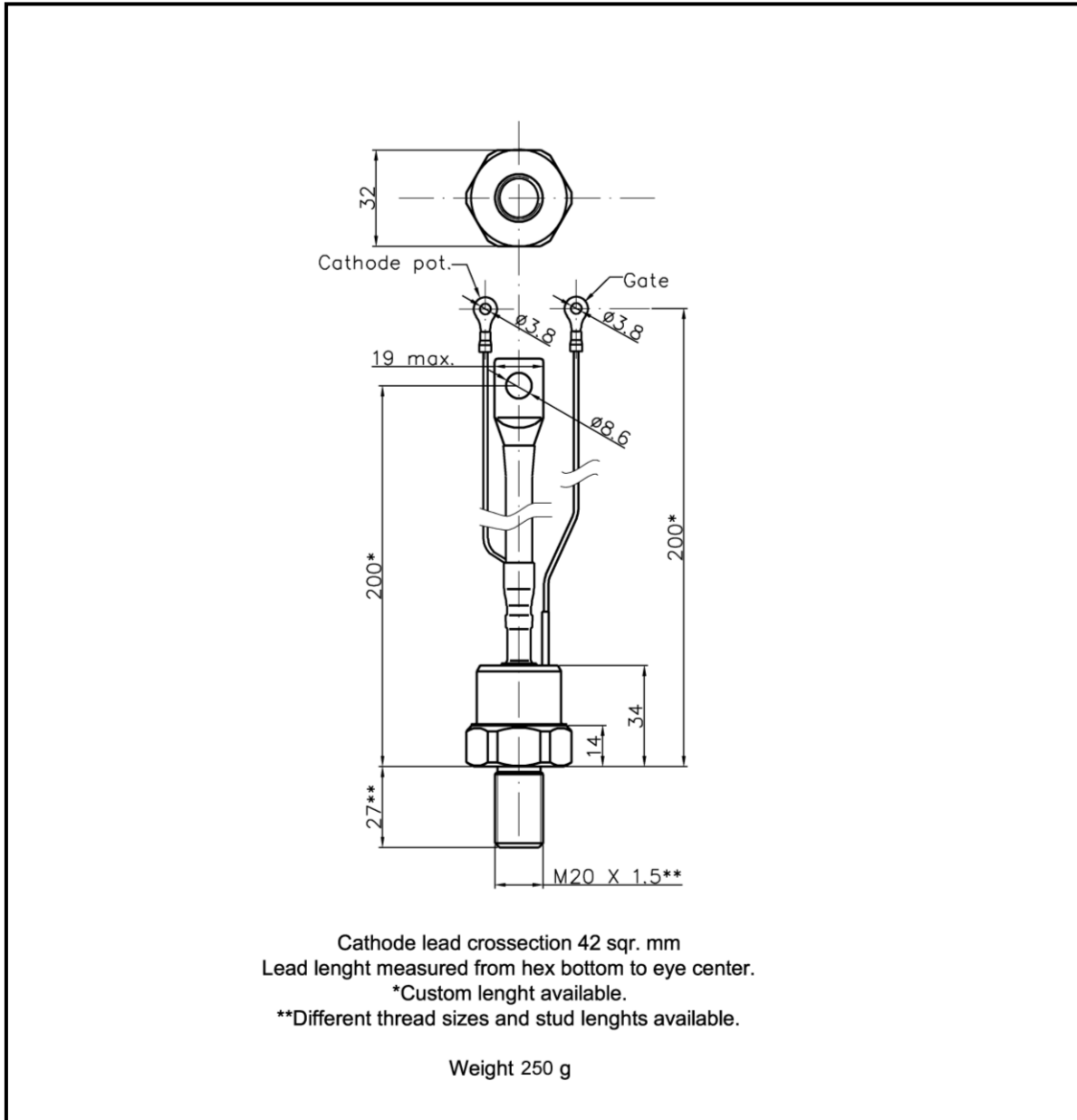
Zakłady Elektronowe LAMINA S.A.  
Puławska 34  
PL-05-500 Piaseczno  
POLAND

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

# F62-150

## Fast Switching Thyristor

KKF62150, March 2007 version



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

# F62-150

## Fast Switching Thyristor



KKF62150, March 2007 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. 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.

---

**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