



Thyristors type T66 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

$U_{DRM}, U_{RRM}$	up to 1200 V
$I_{T(AV)}$	200 A
$I_{TSM}$	4200 A
$du/dt^*$	1000 V/ $\mu s$
$di/dt$	100 A/ $\mu s$

\* maximum (non standard) value

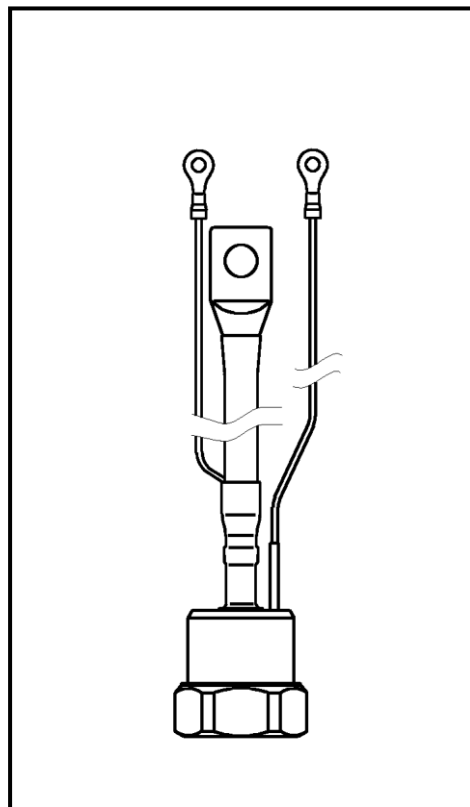
### FEATURES

- 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

### APPLICATION

- High Power Drives
- DC Motor Control
- High Voltage Power Supplies

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



**Outline**

See package details for further information

# T66-200

## Phase Control Thyristor



KKT66200, April 2004 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.

**T66-200-□□**



This is standard device, with no dynamic parameters specified and standard accessory set.  
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
	V/μs
0	no specified value
4	200
5	320
6	500
7	1000

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# T66-200

## Phase Control Thyristor

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### Electrical properties

Parameter	Unit	Test conditions	Value
Average on-state current	$I_{T(AV)}$	A	200
Case temperature	$T_c$	°C	90
RMS on-state current	$I_{T(RMS)}$	A	315
Surge current	$I_{TSM}$	A	$T_j=125^\circ\text{C}$ , $U_R=0,8U_{RRM}$ , $t_p=10\text{ms}$
$I^2t$ – value	$I^2t$	$\text{kA}^2\text{s}$	88,2
On-state voltage max.	$U_{TM}$	V	$T_j=25^\circ\text{C}$ , $I_{TM}=625\text{A}$
Threshold voltage	$U_{T(T0)}$	V	0,91
Slope resistance	$r_T$	$\text{m}\Omega$	1,40
Latching current	$I_L$	mA	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$
Holding current	$I_H$	mA	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$
Circuit commutated turn-off time (typical)	$t_q$	$\mu\text{s}$	$T_j=125^\circ\text{C}$ , $I_{TM}=150\text{A}$ , $di_R/dt=12,5\text{A}/\mu\text{s}$ , $du/dt=20\text{V}/\mu\text{s}$ , $U_D=0,67U_{DRM}$ , $U_{RM}=100\text{V}$
Turn-On time (typical)	$t_{on}$	$\mu\text{s}$	$I_{TM}=100\text{A}$ , $U_{DM}=100\text{V}$
Rate of rise of on-state current-repetitive	$di/dt$	$\text{A}/\mu\text{s}$	$T_j=125^\circ\text{C}$ , $I_{TM}=3I_{T(AV)}$ , $U_D=0,67U_{DRM}$ , $f=50\text{Hz}$ , $I_{GM}=1\text{A}$ , $di_G/dt=1\text{A}/\mu\text{s}$
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 - 1000
Gate current to trigger	$I_{GT}$	mA	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$
Gate voltage to trigger	$U_{GT}$	V	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$

### 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	0,10
Operating junction temperature	$T_{jmin} \dots T_{jmax}$	°C	0,075
Storage temperature	$T_{stg}$	°C	-40...+125

### Mechanical properties

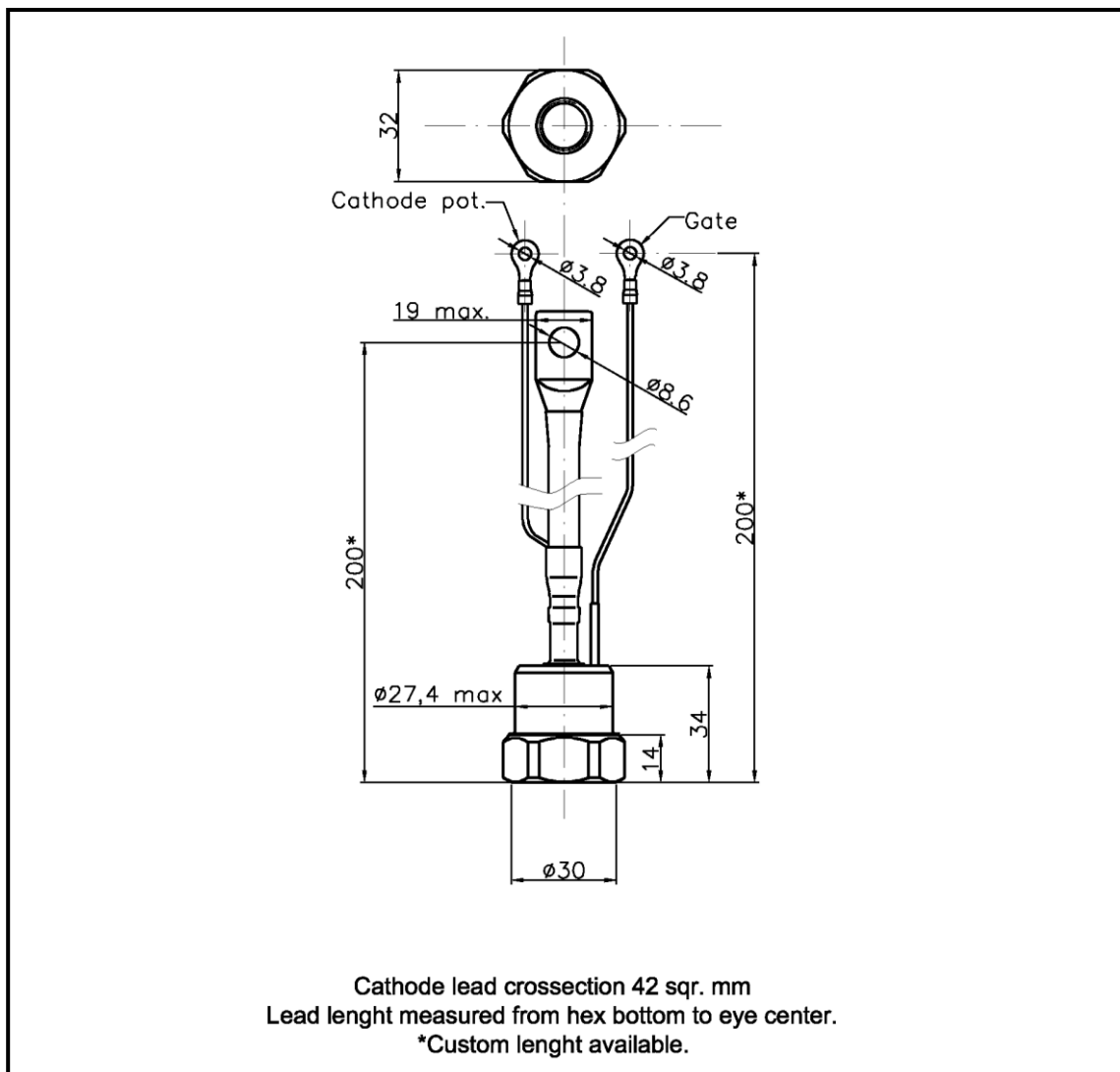
Parameter	Unit	Value
Mounting force	$F_m$	kN
Weight	m	g

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### Package details



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

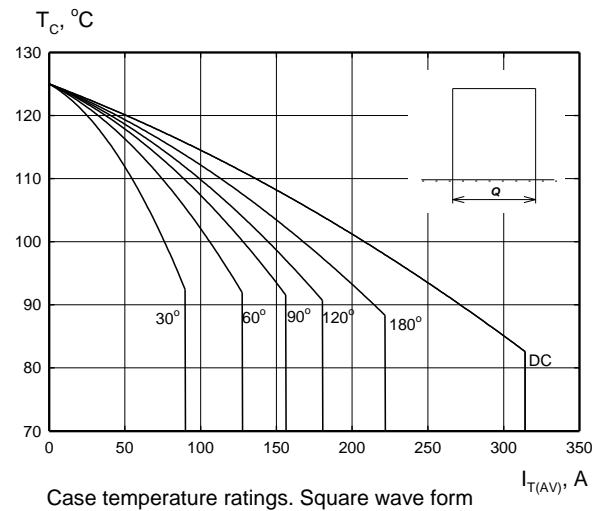
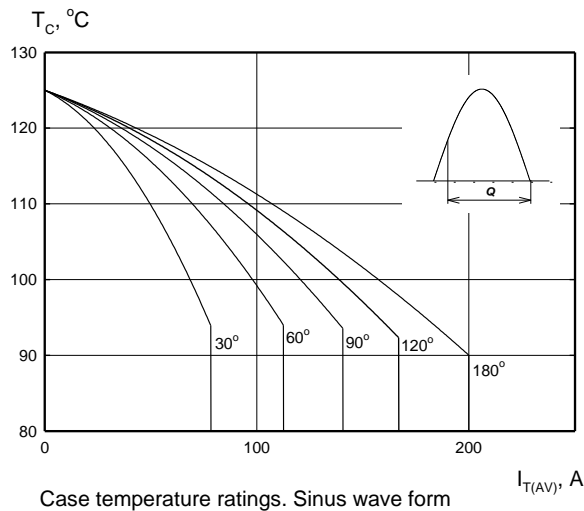
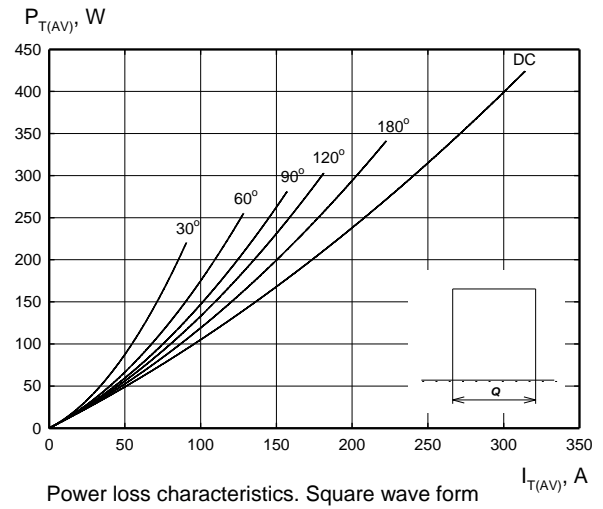
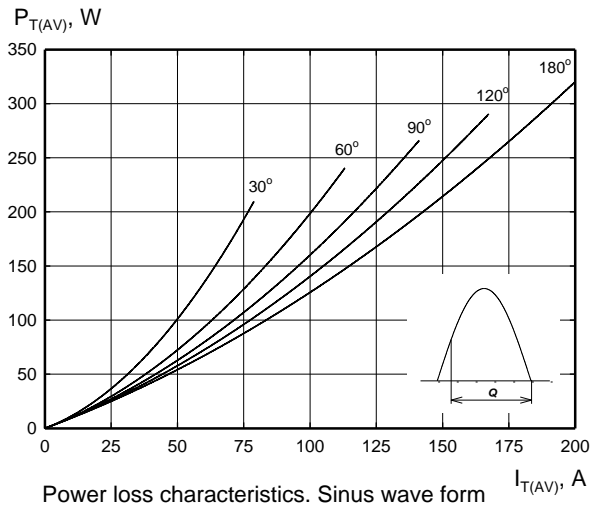
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## Phase Control Thyristor



KKT66200, April 2004 version

### CHARACTERISTICS



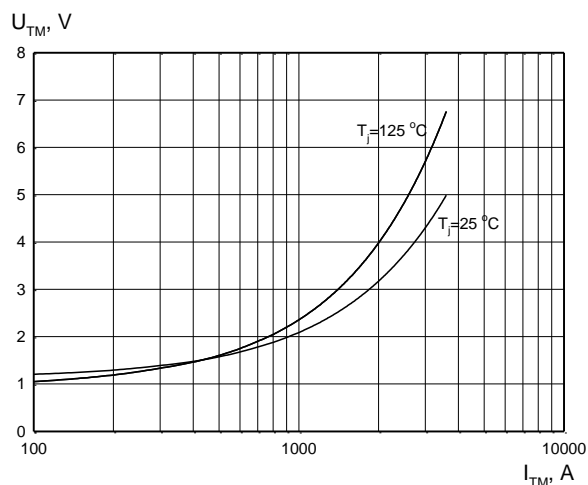
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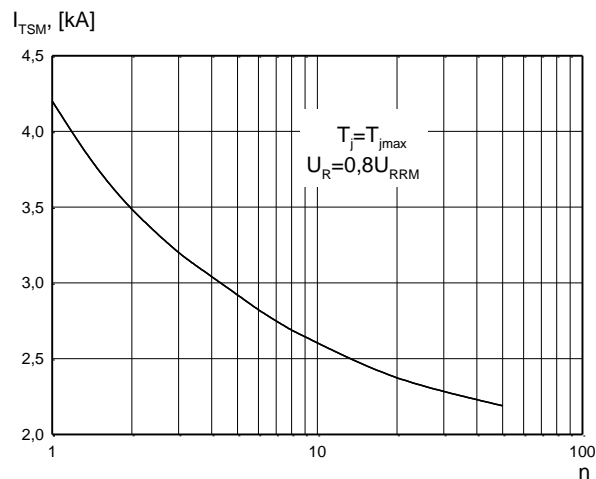
# T66-200

## Phase Control Thyristor

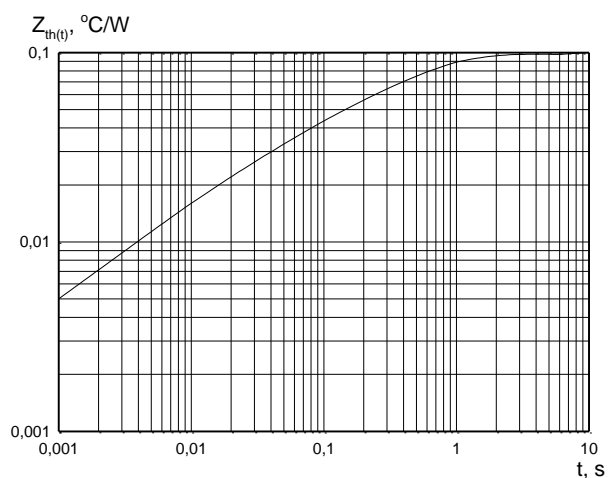
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On-state characteristic



Non-repetitive surge current rating



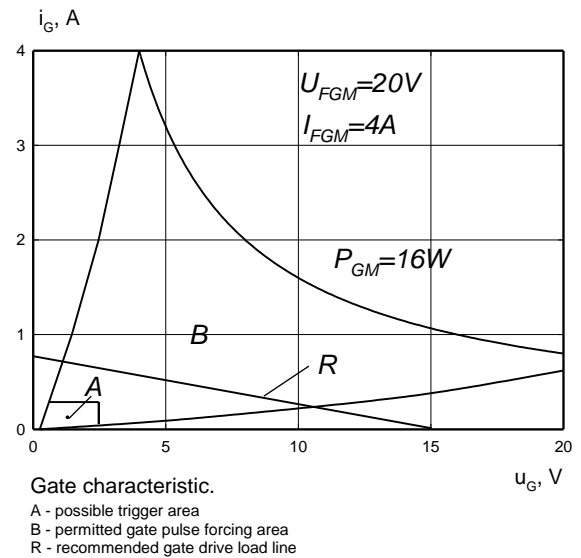
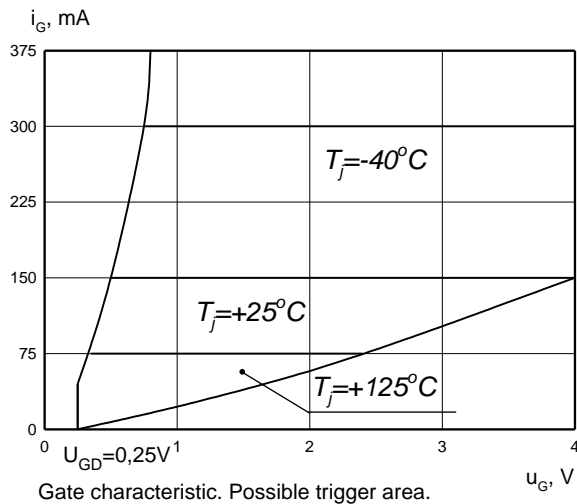
Transient thermal impedance

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### Gate characteristics



### 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.