



Thyristors type T32 are designed for use in power electronic circuits and equipment under normal operating conditions.

### KEY PARAMETERS

$U_{DRM}, U_{RRM}$	up to 1400 V
$I_{T(AV)}$	25 A
$I_{TSM}$	350 A
$du/dt^*$	500 V/ $\mu$ s
$di/dt$	50 A/ $\mu$ s

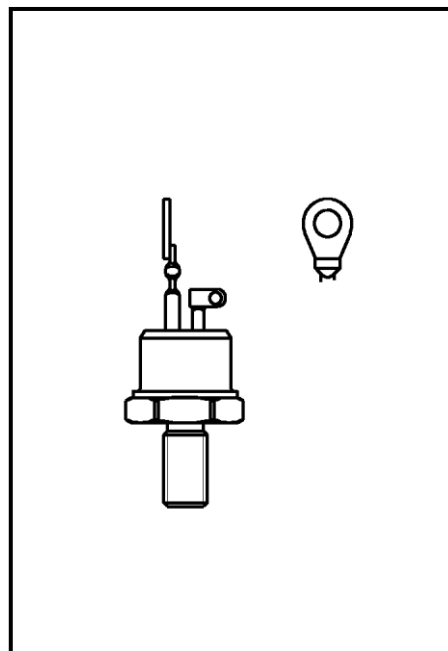
\* maximum (non standard) value

### FEATURES

- all diffused design
- high current capabilities
- low gate current
- low thermal impedance
- tested according to IEC standards
- compact size and small weight

### APPLICATION

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



Outline type code:

**TO-48**

See package details for further information

Designed for use in high power industrial and commercial power electronic circuits.

# T32-25

## Phase Control Thyristor



Zakłady Elektronowe  
**LAMINA S.A.**

KKT3225, July 2005 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.

**T32-25-□□**

└── voltage class (hundreds of volts)

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.

### ELECTRICAL PARAMETERS

#### Voltage ratings

Voltage class	$U_{DRM}, U_{RRM}$	$U_{RSM}$	$I_{DRM}, I_{RRM}$
	V	V	mA
04	400	500	7
06	600	700	
08	800	900	
10	1000	1100	
12	1200	1300	
14	1400	1500	

#### du/dt group codes

Group code	du/dt
	V/μs
0	no specified value
4	200
5	320
6	500

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

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### Electrical properties

Parameter		Unit	Test conditions	Value
Average on-state current	$I_{T(AV)}$	A		25
Case temperature	$T_c$	°C		80
Surge forward current	$I_{TSM}$	A	$T_j=125^\circ\text{C}$ , $U_R=0,8U_{RRM}$ , $t_p=10\text{ms}$	350
$I^2t$ – value	$I^2t$	$\text{A}^2\text{s}$		612
On-state voltage max.	$U_{TM}$	V	$T_j=25^\circ\text{C}$ , $I_{TM}=50\text{A}$	1,5
Threshold voltage	$U_{T(TO)}$	V		1,15
Slope resistance	$r_T$	$\text{m}\Omega$		7
Latching current	$I_l$	$\text{mA}$	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$	150
Holding current	$I_H$	$\text{mA}$	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$	80
Circuit commutated turn-off time (typical)	$t_q$	$\mu\text{s}$	$T_j=125^\circ\text{C}$ , $I_{TM}=50\text{A}$ , $di_R/dt=5\text{A}/\mu\text{s}$ , $du/dt=20\text{V}/\mu\text{s}$ , $U_D=0,67U_{DRM}$ , $U_{RM}=100\text{V}$	100
Turn-On time (typical)	$t_{on}$	$\mu\text{s}$	$I_{TM}=I_{T(AV)}$ , $U_{DM}=100\text{V}$	5
Rate of rise of on-state current-repetitive	$di/dt$	$\text{A}/\mu\text{s}$	$T_j=125^\circ\text{C}$ , $I_{TM}=3I_{T(AV)}$ , $U_D=0,67U_{DRM}$ , $f=50\text{Hz}$ , $I_{GM}=1\text{A}$ , $di_G/dt=1\text{A}/\mu\text{s}$	50
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	$I_{GT}$	$\text{mA}$	$T_j=25^\circ\text{C}$ , $U_D=12\text{V}$	75
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	1,0
Operating junction temperature	$T_{jmin} \dots T_{jmax}$	°C		-25...+125
Storage temperature	$T_{stg}$	°C		-25...+125

### Mechanical properties

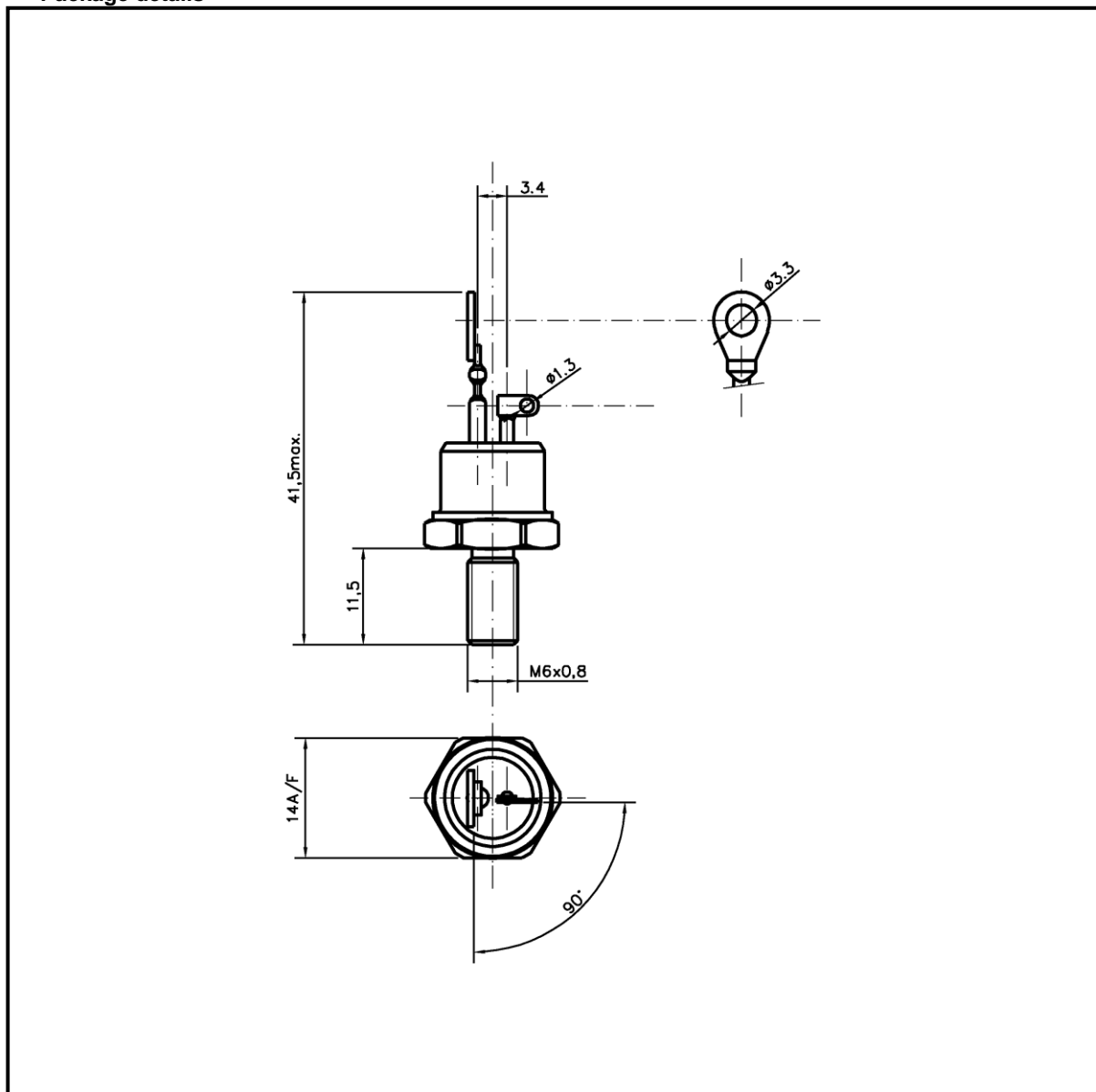
Parameter		Unit	Value
Mounting torque	M	Nm	2 ... 2,5
Weight	m	g	14

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## Phase Control Thyristor

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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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Puławska 34  
PL-05-500 Piaseczno  
POLAND

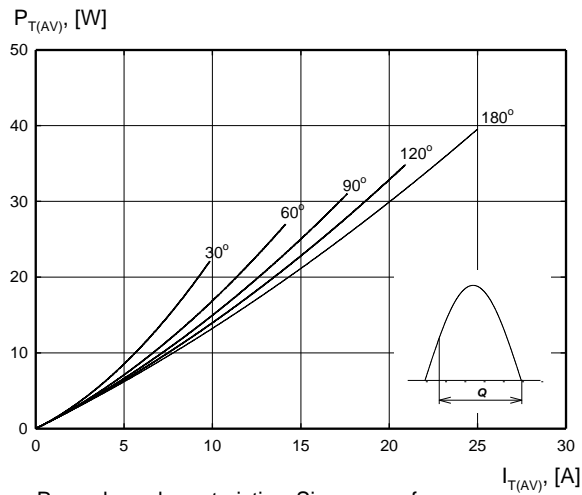
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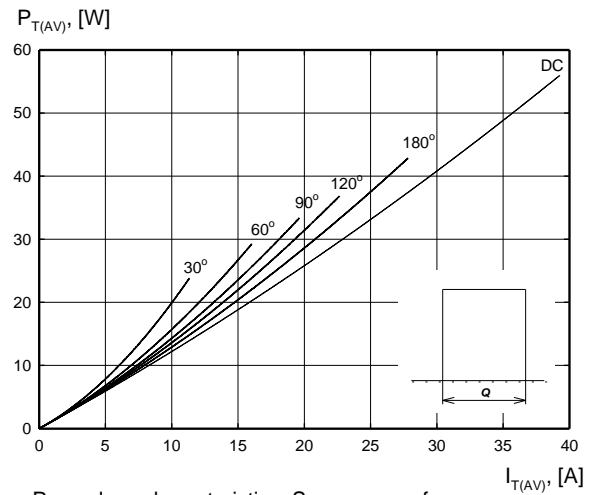
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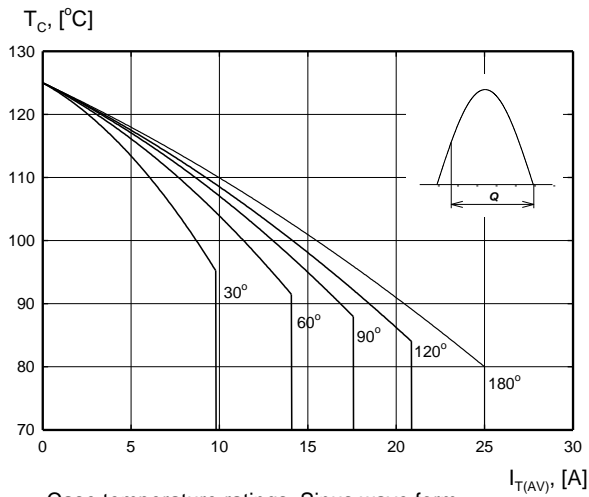
### CHARACTERISTICS



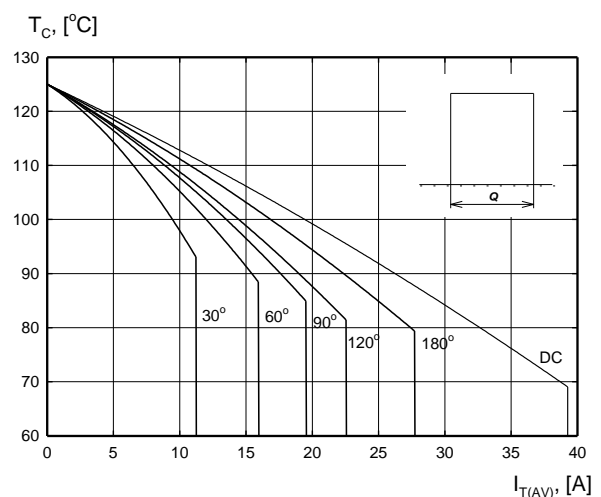
Power loss characteristics. Sinus wave form.



Power loss characteristics. Square wave form.



Case temperature ratings. Sinus wave form.



Case temperature ratings. Square wave form.

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