



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
$I_{T(AV)}$	16 A
I_{TSM}	300 A
du/dt^*	500 V/ μ s
di/dt	50 A/ μ s

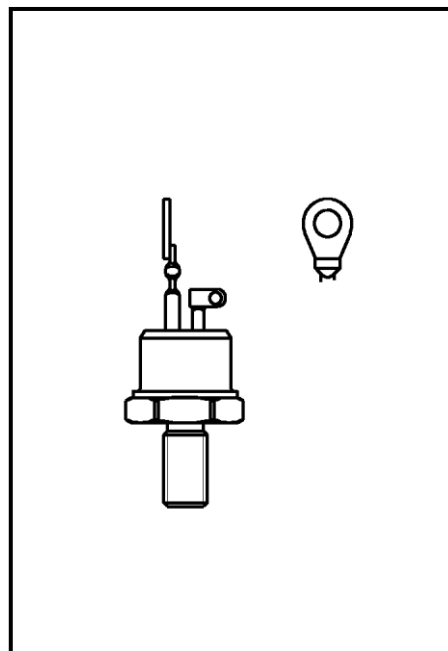
* maximum (non standard) value

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.

T32-16

Phase Control Thyristor



KKT3216, 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.

T32-16-□□

└─── 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		16
Case temperature	T_c	°C		90
Surge forward current	I_{TSM}	A	$T_j=125^\circ\text{C}$, $U_R=0,8U_{RRM}$, $t_p=10\text{ms}$	300
I^2t – value	I^2t	A^2s		450
On-state voltage max.	U_{TM}	V	$T_j=25^\circ\text{C}$, $I_{TM}=50\text{A}$	2,1
Threshold voltage	$U_{T(TO)}$	V		1,15
Slope resistance	r_T	$\text{m}\Omega$		19
Latching current	I_l	mA	$T_j=25^\circ\text{C}$, $U_D=12\text{V}$	150
Holding current	I_H	mA	$T_j=25^\circ\text{C}$, $U_D=12\text{V}$	80
Circuit commutated turn-off time (typical)	t_q	μs	$T_j=125^\circ\text{C}$, $I_{TM}=50\text{A}$, $di_R/dt=5\text{A}/\mu\text{s}$, $du/dt=20\text{V}/\mu\text{s}$, $U_D=0,67U_{DRM}$, $U_{RM}=100\text{V}$	100
Turn-On time (typical)	t_{on}	μs	$I_{TM}=I_{T(AV)}$, $U_{DM}=100\text{V}$	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}	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

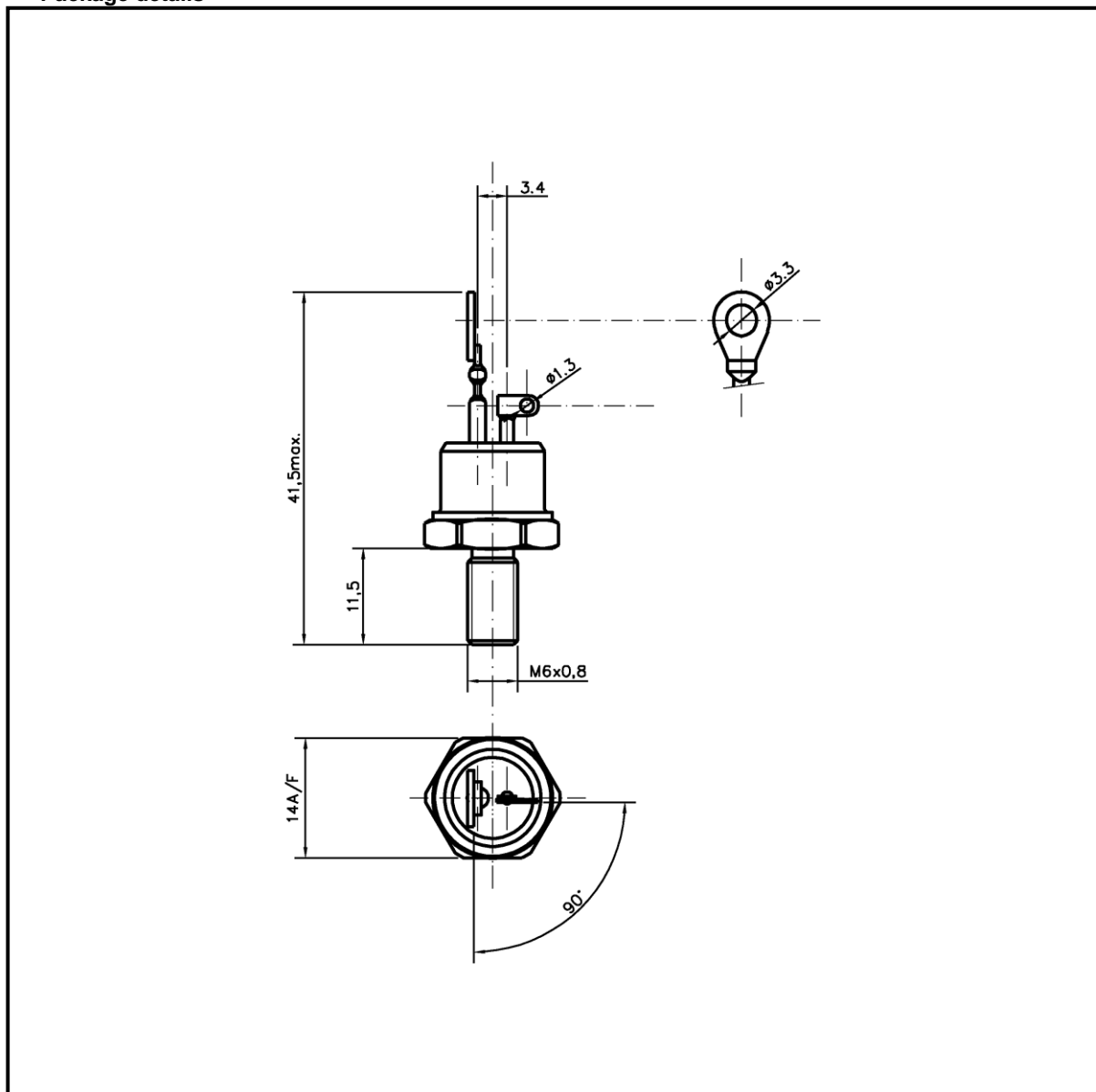
Parameter		Unit	Value
Mounting torque	M	Nm	2 ... 2,5
Weight	m	g	14

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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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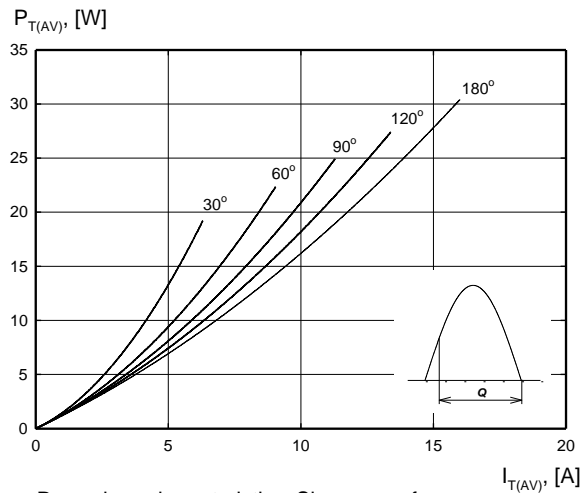
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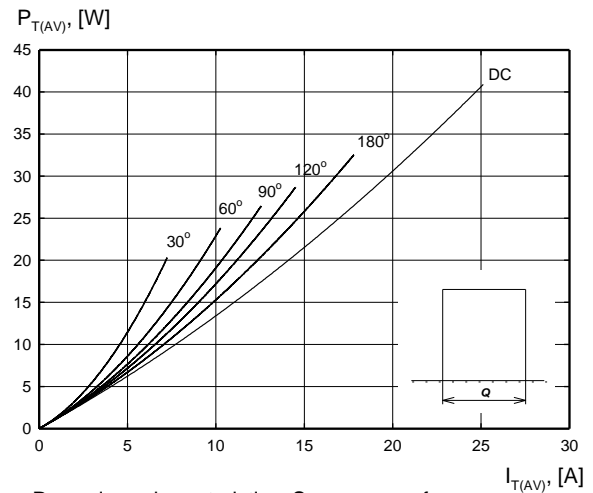
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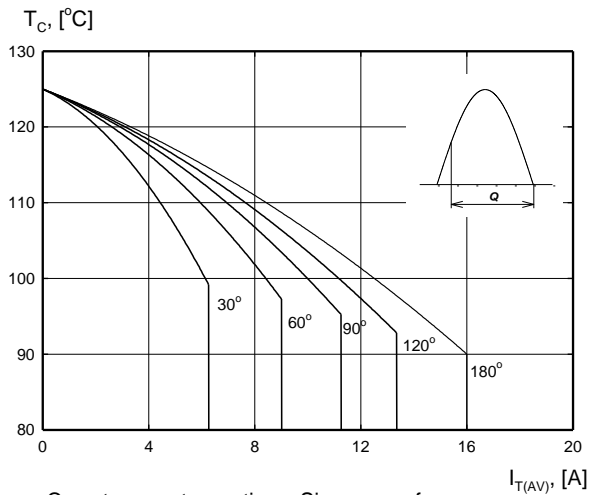
CHARACTERISTICS



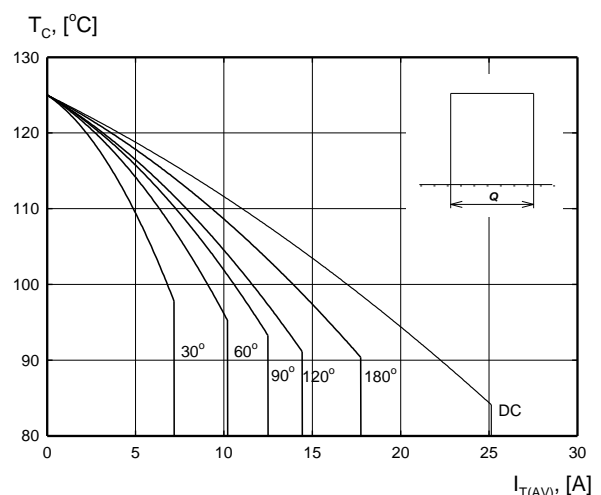
Power loss characteristics. Sinus wave form.



Power loss characteristics. Square wave form.



Case temperature ratings. Sinus wave form.



Case temperature ratings. Square wave form.

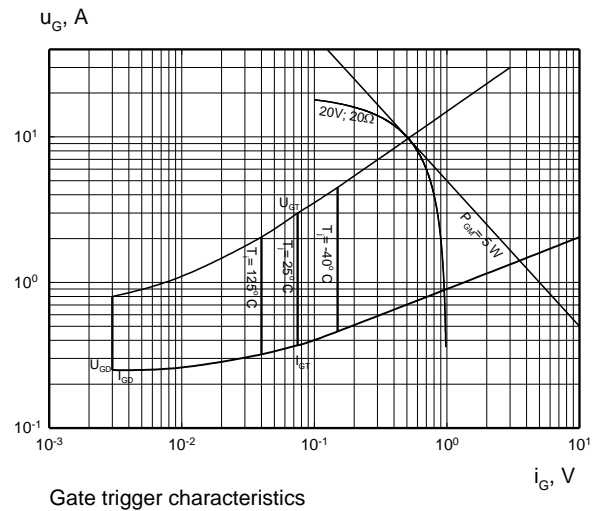
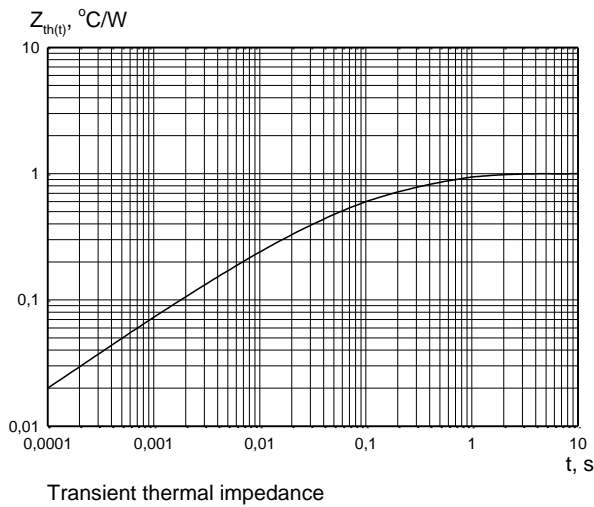
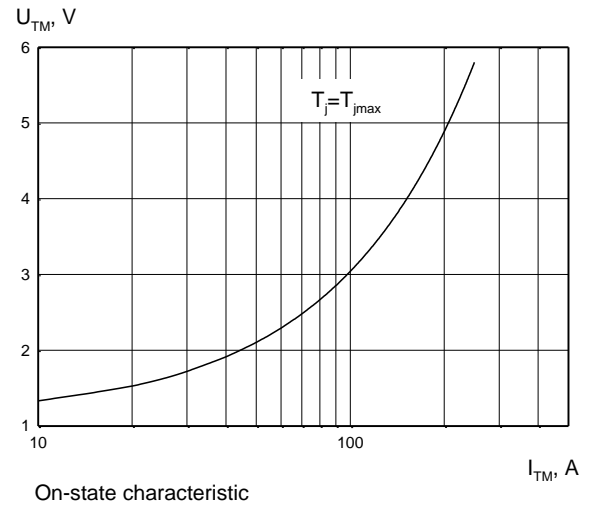
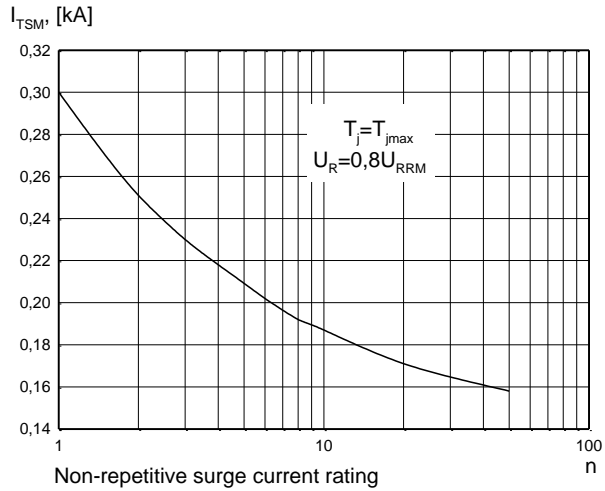
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