



Thyristors type F32 are designed for use in power electronic circuits and equipment under normal operating conditions.

KEY PARAMETERS

U_{DRM}, U_{RRM}	up to 800 V
$I_{T(AV)}$	25 A
I_{TSM}	300 A
du/dt^*	500 V/μs
di/dt	50 A/μs

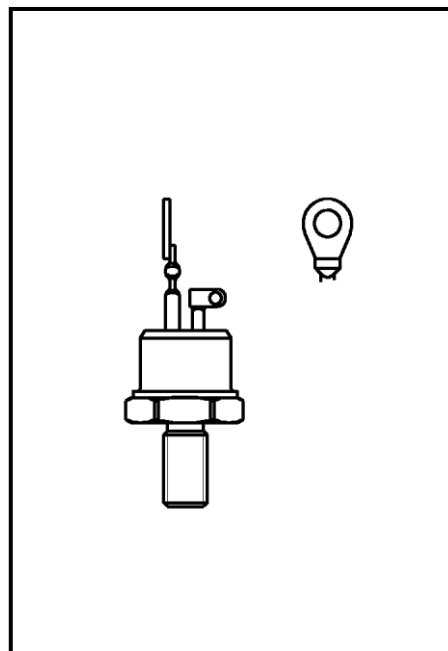
* maximum (non standard) value

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.

F32-25

Fast Switching Thyristor

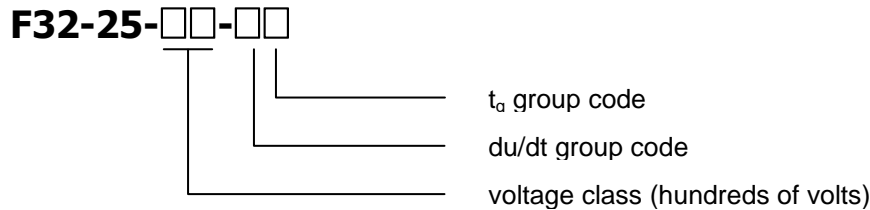


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KKF3225, September 2006 version

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.



Please refer to **Electrical Parameters**.
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_{RSM}		
			I_{DRM}, I_{RRM}	Max. T_c
	V	V	mA	°C
02	200	300	7	80
04	400	500		
06	600	700		
08	800	900		

du/dt and t_q group codes

Group code	du/dt	t_q
	V/ μ s	μ s
3	no specified value	40
4	200	32
5	320	25
6	500	20
7	N/A	16
8	N/A	12,5

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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
RMS on-state current	$I_{T(RMS)}$	A		39
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	$T_j=25^\circ\text{C}$, $I_{TM}=50\text{A}$	1,65
Threshold voltage	$U_{T(T0)}$	V		1,15
Slope resistance	r_T	$\text{m}\Omega$		10
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	$T_j=125^\circ\text{C}$, $I_{TM}=25\text{A}$, $di_R/dt=5\text{A}/\mu\text{s}$, $du/dt=20\text{V}/\mu\text{s}$, $U_D=0,67U_{DRM}$, $U_{RM}=100\text{V}$	12,5 - 40
Turn-On time (typical)	t_{on}	μs	$I_{TM}=I_{T(AV)}$, $U_{DM}=100\text{V}$	4
Rate of rise of on-state current-repetitive	di/dt	$\text{A}/\mu\text{s}$	$T_j=125^\circ\text{C}$, $I_{TM}=3I_{T(AV)}$, $U_D=0,67U_{DRM}$, $f=50\text{Hz}$	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	0,95
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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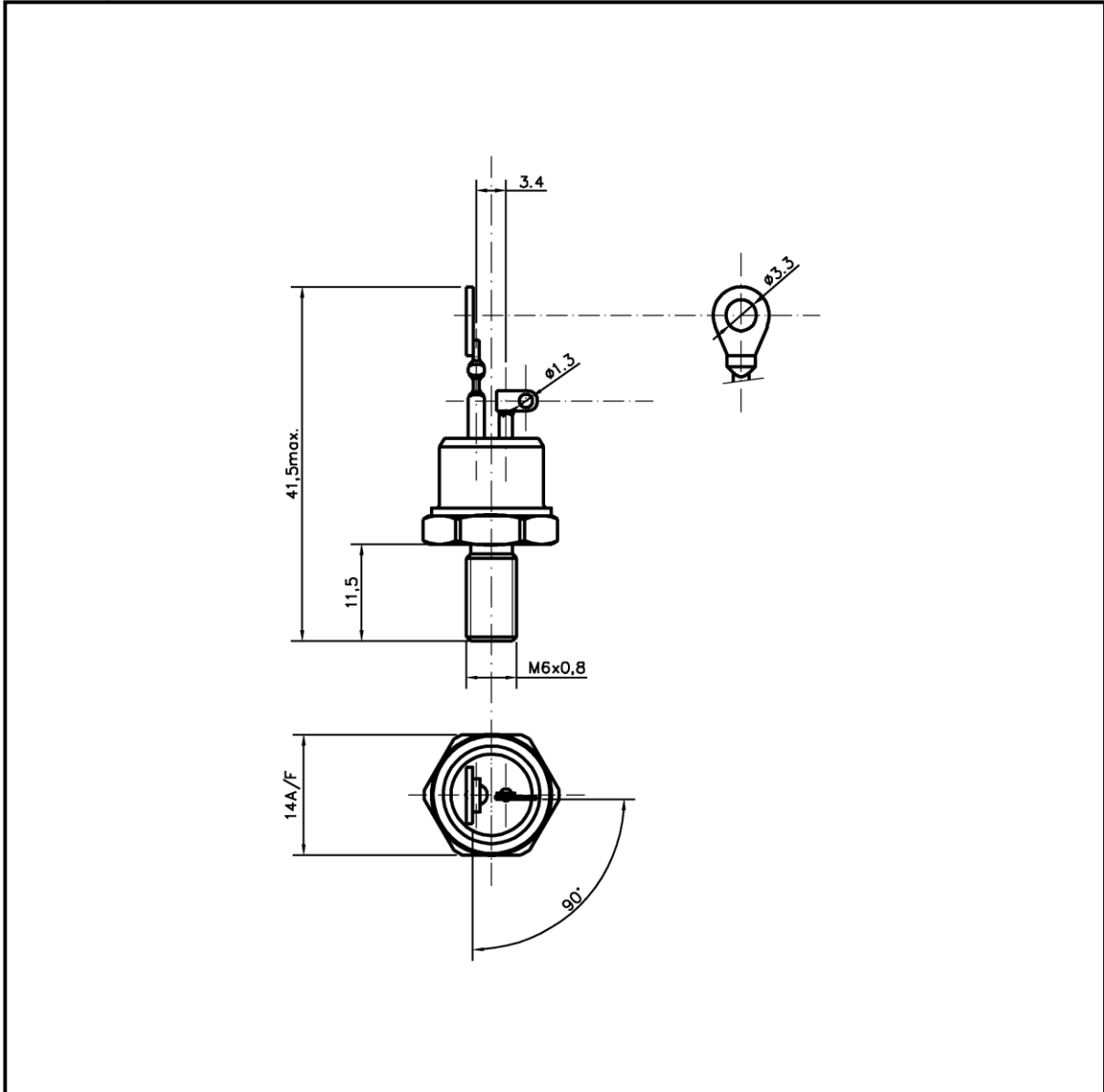
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Package details



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

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