AS ENERGI

Fast Thyristor
KK 4000A 3500~4500V

Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

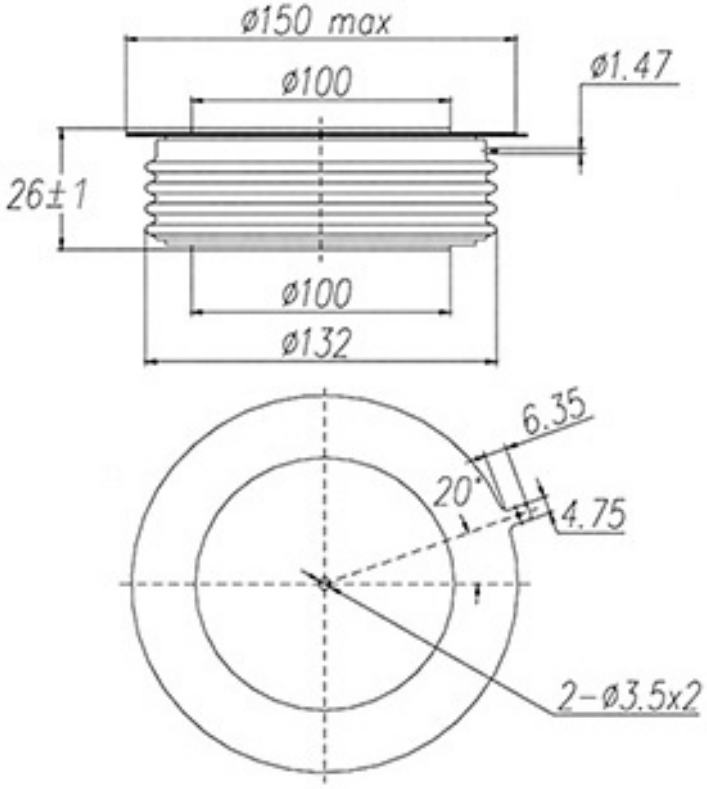
Typical Applications

- Inductive heating
- Electronic welders
- Self-commutated inverters

$I_{T(AV)}$	**4000A**
V_{DRM}/V_{RRM}	**3500~4500V**
t_q	**65 µs**
I_{TSM}	**42 kA**
I^2t	**7500 10^3A^2S**

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T_j(°C)	VALUE			UNIT
					Min	Type	Max	
$I_{T(AV)}$	Mean on-state current	180° half sine wave 50Hz Double side cooled,	T_C=55°C	125			4000	A
V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM}&V_{RRM} , tp=10ms V_{DSM}&V_{RSM}= V_{DRM}&V_{RRM}+100V		125	3500		4500	V
I_{DRM} I_{RRM}	Repetitive peak current							mA
I_{TSM}	Surge on-state current	10ms half sine wave V_R=0.6V_{RRM}		125			42	kA
I^2t	I^2T for fusing coordination						7500	A^2s*10^3
V_{TO}	Threshold voltage							V
r_T	On-state slop resistance							mΩ
V_{TM}	Peak on-state voltage	I_{TM}=2500A		125			2.0	V
dv/dt	Critical rate of rise of off-state voltage							V/µs
di/dt	Critical rate of rise of on-state current							A/µs
Q_{rr}	Recovery charge							µC
tq	Circuit commutated turn-off time	I_{TM}=1500A,tp=1000µs, V_R =50V dv/dt=30V/µs ,di/dt=-20A/µs		125		65		µs
I_{GT}	Gate trigger current							mA
V_{GT}	Gate trigger voltage							V
I_H	Holding current							mA
V_{GD}	Non-trigger gate voltage							V
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180^0 sine, double side cooled Clamping force 28kN					0.005	°C /W
$R_{th(c-h)}$	Thermal resistance case to heat sink						0.0015	
F_m	Mounting force					90		kN
T_{stg}	Stored temperature				-40		140	°C
W_t	Weight					2300		g
Outline								

OUTLINE



Dimensions in mm