

KG600A-D

HIGH FREQUENCY THYRISTOR

Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Short turn-off time and low switching losses
- Hermetic metal cases with ceramic insulators

Application

- Inductive heating
- Electronic welders
- Self-commutated inverters
- AC motor speed control
- General power switching applications

$I_{T(AV)}$	600A
V_{DRM}/V_{RRM}	800-1400 V
t_q	10~14 μ s
I_{TSM}	7.2KA

Symb.		parameter	Test Conditions	T_J ($^{\circ}$ C)	Value	Unit
Current Ratings	$I_{T(AV)}$	average on-state current	180°half sine wave 50Hz Double side cooled Ths=55°C	50Hz 6KHz	115	600 A
	I_{TSM}	Surge on-state current	10ms half sine wave VR=0.6V _{RRM}	115	7.2	KA
	I^2t	I^2t for fusing coordination		115	260	KA ² S
Characteristics	V_{DRM} V_{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	V_{DRM} & V_{RRM} tp=10ms V_{DSM} & $V_{RSM}=V_{DRM}$ & $V_{RRM}+100V$	115	800-.1400	V
	I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM}=V_{DRM}$ $V_{RM}=V_{RRM}$	115	Max.60	mA
	V_{TO}	Threshold voltage		115	Max.1.61	V
	V_{TM}	Peak on-state voltage	$I_{TM}=1800A, F=21KN$	25	Max.3.2	V
	r_T	On-state slop resistance		115	Max.0.45	mΩ
	I_H	Holding current	$V_A=12V, I_A=1A$	25	20-400	mA
Dynamic Parameters	dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	115	Max.200	V/ μ s
	di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 1000A, Gate pulse tr $\leq 0.5\mu$ s $I_{GM}=1.5A$	115	Max.250	A/ μ s
	t_q	Circuit commutated turn-off time	$I_{TM}=800A, tp=1000\mu$ s, $V_R=50V, di/dt=-20A/\mu$ s	115	10-14	μ s
	I_{rm}	Reserse recovery current	$TM=800A, tp=1000\mu$ s, $V_R=50V$ dv/dt=30V/ μ s ,di/dt=-20A/ μ s	115	Typ.53	A
	t_{rr}	Reverse recovery time		115	Typ.3.0	μ s
	Q_{rr}	Recovery charge		115	Typ.83 Max.100	μ c

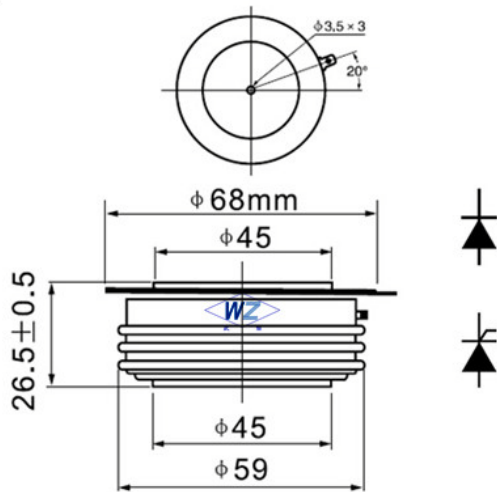
Gate Parameters	I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	30-250	mA
	V_{GT}	Gate trigger voltage		25	0.8-3.0	V
	V_{GD}	Non-trigger gate voltage	$V_{DM}=67\% V_{DRM}$	115	Min.0.3	V

Thermal & Mechanical Data

Symb.	parameter	Test Conditions	Value	Unit
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	Double side cooled, mounting force 21KN	0.030	°C/W
F_m	Mounting force		18-25	KN
T_{stg}	Stored temperature		-40-+140	°C
W_t	Weight		400	g

Dimensions:

C19



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