

KG800A-C

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

$I_{T(AV)}$	800A
V_{DRM}/V_{RRM}	800-1200 V
t_q	6~10 μ s
I_{TSM}	9.6KA

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	115	800 500	A
			180°half sine wave 50Hz Double side cooled Ths=55°C	10KHz			
	I_{TSM}	Surge on-state current	10ms half sine wave VR=0.6V _{RRM}		115	9.6	KA
	I^2t	I^2t for fusing coordination			115	461	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	800-1200	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.1.41	V
	V_{TM}	Peak on-state voltage	$I_{TM}=2400A$, 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 ≤0.5 μ s $I_{GM}=1.5A$		115	Max.250	A/ μ s
	t_q	Circuit commutated turn-off time	$I_{TM}=800A$, tp=1000 μ s, $V_R = 50V$, di/dt=-20A/ μ s		115	8-15	μ s
	I_{rm}	Reserse recovery current	TM=800A, tp=1000 μ s, $V_R=50V$ dv/dt=30V/ μ s , di/dt=-20A/ μ s		115	Typ.50	
	t_{rr}	Reverse recovery time			115	Typ.2.5	μ s

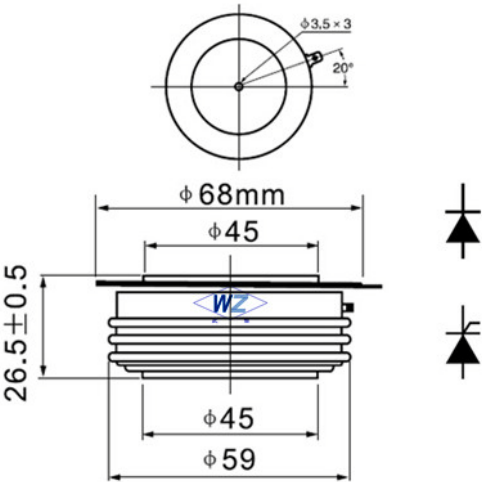
	Q_{rr}	Recovery charge		115	Typ.63 Max.80	μc
Gate Parameters	I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	30-250	mA
	V_{GT}	Gate trigger voltage		25	0.8-3.0	V
	V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$	115	Min.0.3	V

Thermal &Mechanical Date

	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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