

KG800A-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

$I_{T(AV)}$	800A
V_{DRM}/V_{RRM}	800-1400 V
t_q	10~14 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 $T_{hs}=55^{\circ}$ C	50Hz	115	800	A
				6KHz			
	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} $t_p=10ms$ 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.80	mA
	V_{TO}	Threshold voltage			115	Max.1.65	V
	V_{TM}	Peak on-state voltage	$I_{TM}=2400A$, $F=24KN$		25	Max.3.2	V
	r_T	On-state slop resistance			115	Max.0.36	m Ω
	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 $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$		115	Max.250	A/ μ s
	t_q	Circuit commutated turn-off time	$I_{TM}=800A$, $t_p=1000\mu s$, $V_R=50V$, $di/dt=-20A/\mu s$		115	10-14	μ s
	I_{rm}	Reserse recovery current	$I_{TM}=800A$, $t_p=1000\mu s$, $V_R=50V$		115	Typ.58	mA
	t_{rr}	Reverse recovery time	dv/dt=30V/ μ s, di/dt=-20A/ μ s		115	Typ.3.0	μ s

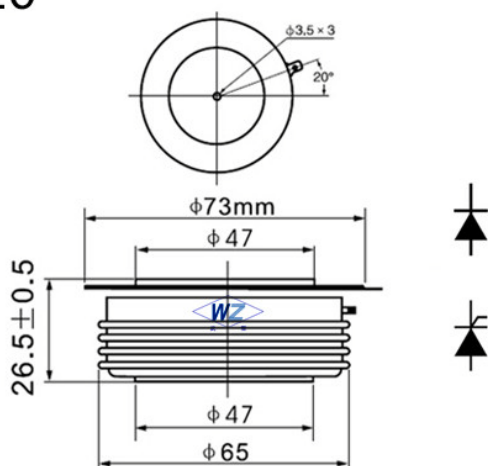
	Q_{rr}	Recovery charge		115	Typ.87 Max.100	μc
Gate Parameters	I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	30-250	mA
	V_{GT}	Gate trigger voltage		25	0.8-3.0	V
	V_{GD}	Non-trigger gate voltage	$V_{DM}=67\%V_{DRM}$	115	Min.0.3	V

Thermal & Mechanical Date

Symb.	parameter	Test Conditions	Value	Unit
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	Double side cooled, mounting force 24KN	0.024	$^{\circ}C/W$
F_m	Mounting force		19-26	KN
T_{stg}	Stored temperature		-40 Max.+140	$^{\circ}C$
W_t	Weight		Typ.470	g

Dimensions:

C20



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