

KS800A-E

BI-DIRECTIONAL THYRISTOR



Features

Two anti-parallel thyristors on one Si-wafer
Hermetic metal cases with ceramic insulators
Capsule packages for double sides cooling

Application

High power industrial and power
transmission DC and AC motor control
AC controllers

$I_{T(RMS)}$	800 A
V_{DRM}/V_{RRM}	500~1800 V
I_{TSM}	6.8KA
I^2t	231 KA ² S

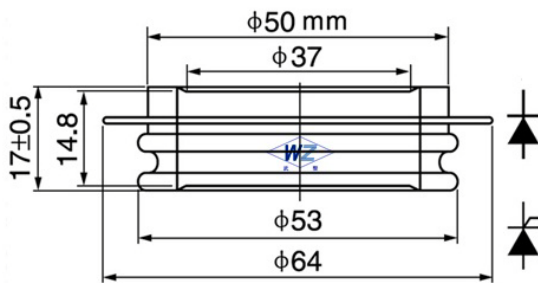
Symb.		parameter	Test Conditions	$T_{J(c)}$	Value	Unit
Current Ratings	$I_{T(RMS)}$	RMS current	180° half sine wave 50Hz Double side cooled $T_{hs}=85^{\circ}C$	125	800	A
	$I_{T(RMS)}$	RMS current	180° half sine wave 50Hz Double side cooled $T_{hs}=55^{\circ}C$	125	1160	A
	I_{TSM}	Surge on-state current	10ms half sine wave	125	6.8	KA
	I^2t	I^2t for fusing coordination	$V_R=0.6V_{RRM}$	125	231	KA ² S
Characteristics	V_{DRM}	Repetitive peak off-state voltage	V_{DRM} & V_{RRM} tp=10ms	125	500-1800	V
	V_{RRM}	Repetitive peak reverse voltage	V_{DSM} & $V_{RSM}=V_{DRM}$ & $V_{RRM}+100V$			
	I_{DRM} I_{RRM}	Repetitive peak current	$V_{DM}=V_{DRM}$ $V_{RM}=V_{RRM}$	125	Max.50	mA
	V_{TO}	Threshold voltage		125	Max.1.00	V
	V_{TM}	Peak on-state voltage	$I_{TM}=1200A, F=18KN$	25	Max.2.4	V
	r_T	On-state slop resistance		125	Max.0.85	mΩ
Dynamic Parameters	I_H	Holding current	$V_A=12V, I_A=1A$	25	20-400	ma
	dv/dt	Critical rate of rise of off-state voltage	$V_{DM}=67\%V_{DRM}$	125	Max.50	V/μs
Gate Parameters	di/dt	Critical rate of rise of on-state current	$V_{DM}=67\%V_{DRM}$ to 600A, Gate pulse $t_r \leq 0.5\mu s$ $I_{GM}=1.5A$	125	Max.50	A/μs
	I_{GT}	Gate trigger current	$V_A=12V, I_A=1A$	25	20-350	mA
V_{GT}	Gate trigger voltage	25		0.8-3.5	V	

Thermal & Mechanical Data

Symb.	parameter	Test Conditions	Value	Unit
$R_{th(j-h)}$	Thermal resistance Junction to heat sink	At 180° sine, double side cooled Clamping force 18KN	Max0.032.	°C/W
F_m	Mounting force		15-20	KN
T_{stg}	Stored temperature		-40--+140	°C
W_t	Weight		360	g

Dimensions:

C4



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