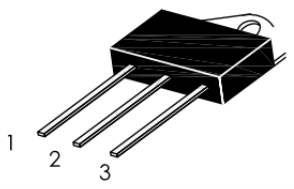
YZPST® Yangzhou Positioning Tech. Co., Ltd

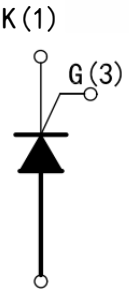
BTW69-1200 SCRs

DESCRIPTION:

High current density due to double mesa technology. series of silicon controlled rectifiers are specifically designed for high power switching and phase control applications. series are suitable for general purpose applications, a high gate sensitivity is required. provides a 2500V RMS isolation voltage from all three terminals to extemal heetsink.

TO-P3(insulated)





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MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	50	A
IGT	≤80	mA
V_{TM}	≤1.8	V

ABSOLUTE MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Storage junction temperature range		Tstg	-40 to +150	℃
Operrating junction temperature range		Tj	-40 to +125	℃
Repetitive Peak Off-state Voltage Tj=25℃ Repetit ve Peak Reverse Voltage Tj=25℃	BTW69-1200	VDRM VRRM	1200	V
RMS on-state current (all conduction angels)	TO-P3 Tc=80℃	$I_{T(RMS)}$	50	A
Average on-state current (half sine wave)	TO-P3 Tc=80℃	$I_{T(AV)}$	40	A
Non repetitive surge peak on-state current (half sine cycle,Tj=25℃)	f = 50 Hz t=10ms	I_{TSM}	520	A
	f = 60 Hz t=8.3ms		540	
I^2t Value for fusing	tp=10ms	I^2t	1350	A^2s
Repetitive rate of rise of on-state current after triggering I_{TM}=20A I_G=50mA dI_G/dt 50mA/ms		dI_T/dt	150	A/μs
Peak gate current	tp=20us,Tj=125℃	I_{GM}	1.5	A
Peak gate power	tp=20us,Tj=125℃	P_{GM}	10	W
Average gate power dissipation	Tj=125℃	$P_{G(AV)}$	2	W

Tel: +86-514-87782298, 87782296 FAX:+86-514-87782297, 87367519
E-mail :positioning@china.com; WEBSITE: http://www.pst888.com

ELECTRICAL CHARACTERISTICS(Tj=25℃ unless otherwise specified)

Symbol	Test Condition		BTW69-1200	Unit
			MAX.	
I_{GT}	V_D=12V R_L=33Ω		60	mA
V_{GT}		1.5		V
V_{GD}	V_D=V_{DRM} R_L=3.3KΩ Tj =125℃	0 2		V
I_L	I_G=1.2I_{GT}		100	mA
I_H	I_T =500mA		80	mA
dV/dt	V_D=67%V_{DRM} gate open Tj=125℃		1000	V/μs

STATIC CHARACTERISTICS

Symbol	Parameter		Value(MAX.)	Unit
V_{TM}	I_{TM}=80A,tp=380μs	Tj=25℃	1.8	V
I_{DRM} I_{RRM}	V_D=V_{DRM} V_R=V_{RRM}	Tj=25℃	10	μA
		Tj=125℃	8	mA

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
Rth(j-mb)	thermal resistance from junction to mounting base			℃/W
		TO-P3	0.65	
Rth(j-hs)	thermal resistance from junction to heatsink with heatsink compound			
		TO-P3	0.9	

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