



T50012 99 Phase Control Thyristor

400-1200V;175A rms

HIGH POWER THYRISTOR FOR PHASE CONTROL APPLICATIONS

Features:

- All diffused Structure
- Glass passivated chips
- Blocking capability up to 1200 volts

ELECTRICAL CHARACTERISTICS AND RATINGS

Blocking – Off State

Device Type	V _{RRM} (1)	V _{DRM} (1)	V _{RSM} (1)
T500 04 99	400	400	500
T500 06 99	600	600	700
T500 08 99	800	800	900
T500 10 99	1000	1000	1100
T500 12 99	1200	1200	1300

Notes:

All ratings are specified for T_j=25°C unless otherwise stated.

(1) All voltage ratings are specified for an applied 50Hz/60Hz sinusoidal waveform over the temperature range -40 to +125°C.

(2) 10 msec. Max. pulse width

(3) Maximum value for T_j=125°C.

(4) Minimum value for linear and exponential waveshape to 80rated V_{DRM}. Gate open.

T_j=125°C.

V_{RRM}=Repetitive peak reverse voltage

V_{DRM}=Repetitive peak off state voltage

V_{RSM}=Non repetitive peak reverse voltage(2)

Repetitive peak reverse	I _{RRM} /I _{DRM}	3mA
Leakage and off state leakage		10mA(3)
Critical rate of voltage rise(4)	dv/dt	100V/μ sec

T50099 Phase Control Thyristor**

ELECTRICAL CHARACTERISTICS AND RATINGS (con) T50099 Phase Control Thyristor**

Conducting-on state

Parameter	Symbol	Min.	Max.	Type.	Units	Conditions
Average value of on-state current	$I_{T(AV)}$		99		A	Sinewave, 180° conduction, $T_c=65^\circ\text{C}$
RMS value of on-state current	$I_{T(RMS)}$		175		A	Nominal value
Peak one cycle surge (non repetitive) current	I_{TSM}		2000		A	10 msec(50Hz), sinusoidal wave- shape, 180° conduction, $T_j=125^\circ\text{C}$
I square t	I^2t		20000		A^2s	10msec
Latching current	I_L		180		mA	$V_D=24\text{V}; R_L=12\text{ ohms}$
Holding current	I_H		500	60	mA	$V_D=24\text{V}; I=2.5\text{A}$
Peak on-state voltage	V_{TM}		1.6		V	$I_{TM}=350\text{A}; \text{Duty cycle} \leq 0.01\%$
Critical rate of rise of on-sate Current (6)	di/dt		50		$\text{A}/\mu\text{s}$	$V_D=1/2\text{DRM } I_G=1.0\text{A}$ $T_j=125^\circ\text{C}$

Gating

Parameter	Symbol	Min.	Max.	Type.	Units	Conditions
Peak gate power dissipation	P_{GM}		60		W	$T_p=40\mu\text{s}$
Average gate power dissipation	$P_{G(AV)}$		2		W	
Peak gate current	I_{GM}		3		A	
Gate current required to trigger all Units	I_{GT}		100		mA	$V_D=6\text{V}; R_L=3\text{ ohms}; T_j=+25^\circ\text{C}$
Gate current required to trigger all Units	V_{GT}		3.0		V	$V_D=6\text{V}; R_L=3\text{ ohms}; T_j=25^\circ\text{C}$

T50099 Phase Control Thyristor**

ELECTRICAL CHARACTERISTICS AND RATINGS (con) T50099 Phase Control Thyristor**

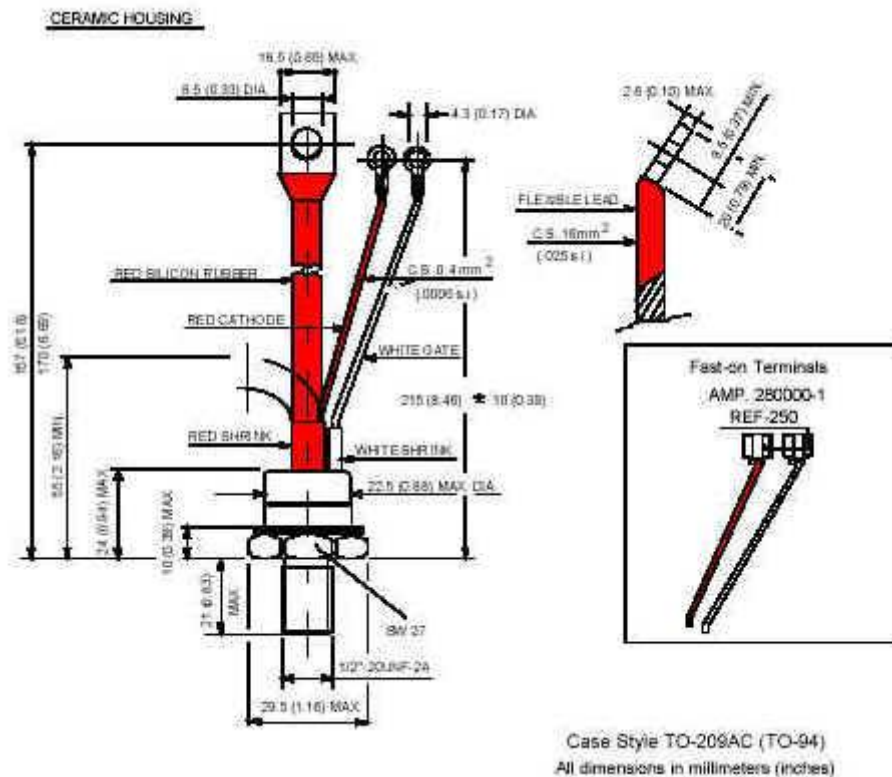
THERMAL AND MECHANICAL CHARACTERISTICS AND RATINGS

Parameter	Symbol	Min.	Max.	Type.	Units	Conditions
Operating temperature	T _j	-40	+125		°C	
Storage temperature	T _{stg}	-40	+150		°C	
Thermal resistance-junction to Case	R _{th(j-c)}		0.23		°C/W	Single sided cooled*180°sine wave
Thermal resistance-case to sink	R _{th(c-s)}		0.08		°C/W	Single sided cooled*
Mounting torque	T	14	17		Nm	
Weight	W			120	g	

*Mounting surfaces smooth,flat and greased

OUTLINE

T500**99 Phase Control Thyristor



Add:Room303 Weiheng Building No.20 B Area Lanyuan , Wangyue Rd, Yangzhou

Jiangsu Contact Person: John Chang, Sam Chou

Tel:+86-514-8736 0558,8778 2298,8778 2296

FAX:+86-514-8778 2297, 8736 7519

Marketing web site:

www.pst888.com