

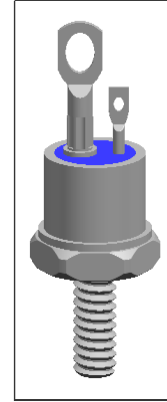
Silicon Medium Power Thyristor

 $V_{RRM} = 200\text{ V}$
 $I_{F(AV)} = 50\text{ A}$

Features

- 200 V V_{RRM}
- Superior surge capabilities
- Low thermal resistance
- Excellent dynamic characteristics
- Vacuum welding technology

DO-208AC Package



Maximum ratings, at $T_c = 94^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Conditions	51CT20	Unit
Repetitive peak reverse voltage	V_{RRM}		200	V
Non-repetitive peak voltage	V_{RSM}		300	V
Repetitive peak reverse current	I_{RRM}	$T_J = T_J \text{ max}$	15	mA
On-state voltage	V_{TM}	$I_{TM} = 500\text{ A(peak)}, T_J = 25^\circ\text{C}$	2.3	V
Average on-state current, Half Sine Wave	$I_{F(AV)}$	180° conduction	50	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 94^\circ\text{C}, t_p = 10\text{ ms}$	1200	A
RMS on-state current	$I_{T(RMS)}$		95	A
Holding current	I_H	$T_J = 25^\circ\text{C}$, Anode supply 22V, resistive load, Initial $I_T = 2\text{ A}$	200	mA
Gate current required	I_{GT}	$T_J = 25^\circ\text{C}$	100	mA
Peak gate current	I_{GM}		3	A
Gate voltage required to trigger	V_{GT}	$T_J = 25^\circ\text{C}$	3	V
Gate voltage not to trigger	V_{GD}	$T_J = T_J \text{ max}$	0.25	V

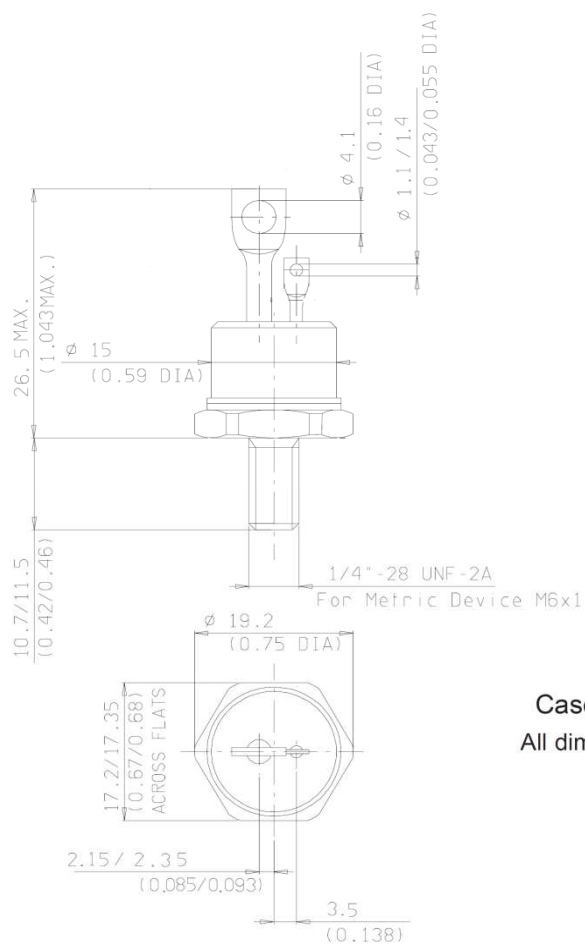
Thermal and Mechanical ratings

Parameter	Symbol	Conditions	51CT20	Unit
Thermal resistance, junction - case	R_{thJC}	DC operation	0.35	$^\circ\text{C/W}$
Mounting Torque	T	Unlubricated threads	2.3~3.4	Nm

Other characteristics

Typical critical commuted turn-off time	T_q	$T_J = T_J \text{ max}$	100	μS
Critical rate of rise of off-state	dv/dt	$T_J = T_J \text{ max}$ linear to 67% rated V_{DRM}	200	V/ μS

Case Dimensions:



Case Style TO-208AC (TO-65)
All dimensions in millimeters (inches)