

Pulse Thyristor

Type Y500CNC250

Absolute Maximum Ratings

	VOLTAGE RATINGS	MAXIMUM LIMITS	UNITS
V _{DRM}	Repetitive peak off-state voltage, (note 1)	2500	V
V _{DSM}	Non-repetitive peak off-state voltage, (note 1)	2500	V
V _{R RM}	Repetitive peak reverse voltage, (note 1)	2000	V
V _{R SM}	Non-repetitive peak reverse voltage, (note 1)	2100	V
V _{DC}	Permanent dc voltage	1500	V

	OTHER RATINGS	MAXIMUM LIMITS	UNITS
I _{TM}	Maximum pulse current, (note 2)	50	kA
I ² t	Load limit integral, (note 2)	312.5×10 ³	A ² s
I _{T(AV)M}	Maximum average on-state current. T _{sink} =85°C, (note 3)	480	A
(di/dt) _{cr}	Critical rate of rise of on-state current (non-repetitive), (Note 4)	11	kA/μs
V _{RGM}	Peak reverse gate voltage	18	V
T _{J op}	Operating temperature range	-40 to +125	°C
T _{stg}	Storage temperature range	-40 to +150	°C

Notes:-

- 1) V_{GK}=-2V
- 2) T_J=125°C, half-sinewave, t_{p(max)}=250μs
- 3) Double side cooled, single phase; 50Hz, 180° half-sinewave.

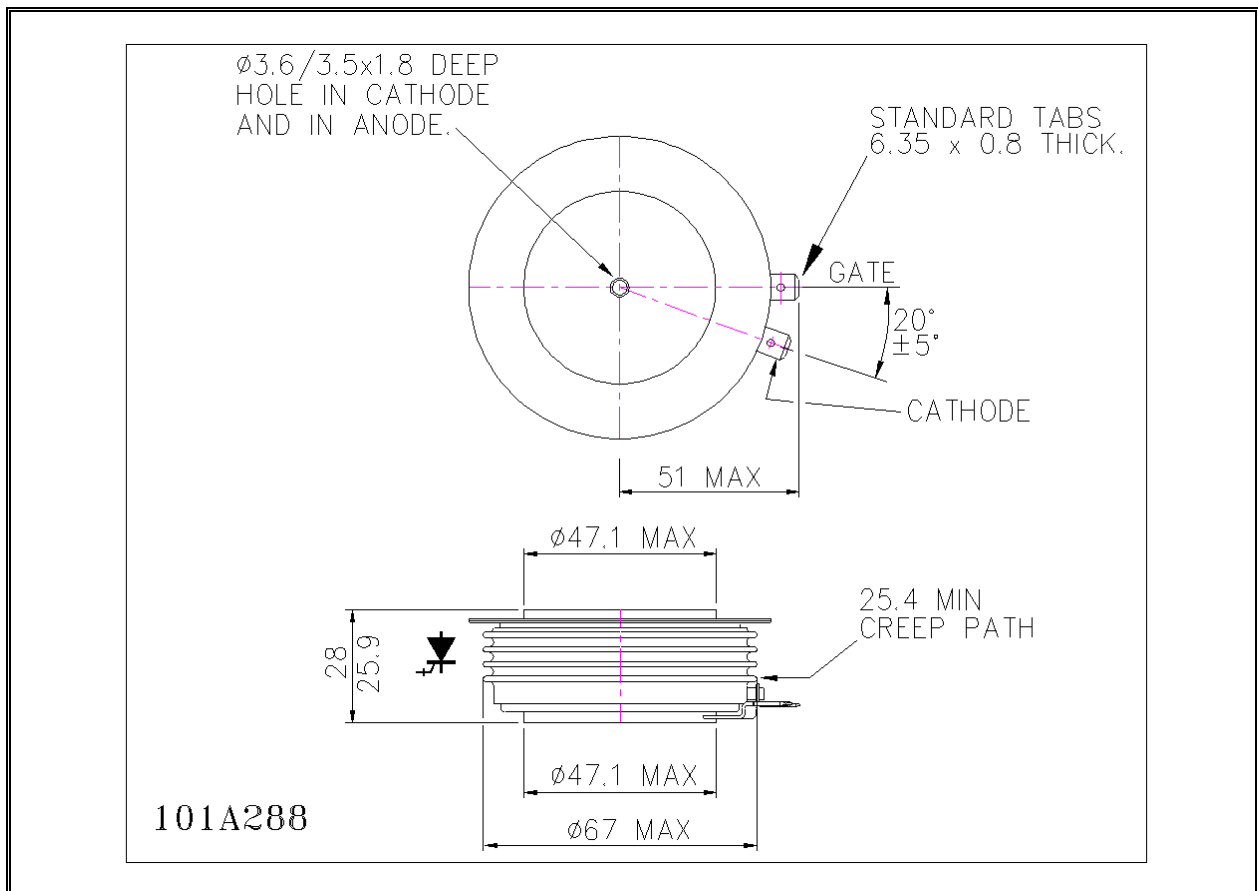
Characteristics

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V_{TM}	Maximum peak on-state voltage	-	-	10	$I_G=4A, I_{TM}=10000A$	V
V_{T0}	Threshold voltage	-	-	1.755		V
r_T	Slope resistance	-	-	1.122		m Ω
$(dv/dt)_{cr}$	Critical rate of rise of off-state voltage	1000	-	-	$V_D=67\% V_{DRM}$, Linear ramp, $V_{GK}=-2V$	V/ μ s
I_{DRM}	Peak off-state current	-	-	100	Rated V_{DRM}	mA
I_{RRM}	Peak reverse current	-	-	100	Rated V_{RRM}	mA
I_L	Latching current	-	10	-	$T_j=25^\circ C$	A
I_H	Holding current	-	10	-		A
I_{GT}	Nominal gate trigger current	-	-	50	$di_G/dt=100A/\mu s, T_j=25^\circ C$	A
t_{gd}	Gate controlled turn-on delay time	-	0.9	-	$V_D=1500V, I_{TM}=25kA, di/dt=5500A/\mu s,$	μ s
t_{gt}	Turn-on time	-	1.0	-	$I_{FG}=50A, di_G/dt=100A/\mu s, T_j=25^\circ C.$	
R_{thJK}	Thermal resistance, junction to heatsink	-	-	0.027	Double side cooled	K/W
		-	-	0.045	Anode side cooled	K/W
		-	-	0.07	Cathode side cooled	K/W
F	Mounting force	15	-	25		kN
W_t	Weight	-	480	-		g

Notes:-

 1) Unless otherwise indicated $T_j=125^\circ C$.

Outline Drawing & Ordering Information



ORDERING INFORMATION			
(Please quote 10 digit code as below)			
Y500C	NC	◆◆	0
Fixed Type Code	Fixed Outline Code	Fixed Voltage Code $V_{DRM}/100$ 25	Fixed code

Typical order code: Y500CNC250 – 2500V V_{DRM} , 28mm clamp height capsule.

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