

Prospective Data
Pulse Thyristor
 Type Y5002NC250

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_{RRM}	Repetitive peak reverse voltage, (note 1)	2000	V
V_{RSM}	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^2t	Load limit integral, (note 2)	312.5×10^3	A^2s
$I_{T(AV)M}$	Maximum average on-state current. $T_{sink}=85^\circ C$, (note 3)	700	A
$(di/dt)_{cr}$	Critical rate of rise of on-state current (non-repetitive), (Note 4)	11	$kA/\mu s$
V_{RGM}	Peak reverse gate voltage	18	V
$T_{j op}$	Operating temperature range	-40 to +125	$^\circ C$
T_{stg}	Storage temperature range	-40 to +150	$^\circ C$

Notes:-

- 1) $V_{GK}=-2V$
- 2) $T_j=125^\circ C$, half-sinewave, $t_{p(max)}=250\mu s$
- 3) Double side cooled, single phase; 50Hz, 180° half-sinewave.

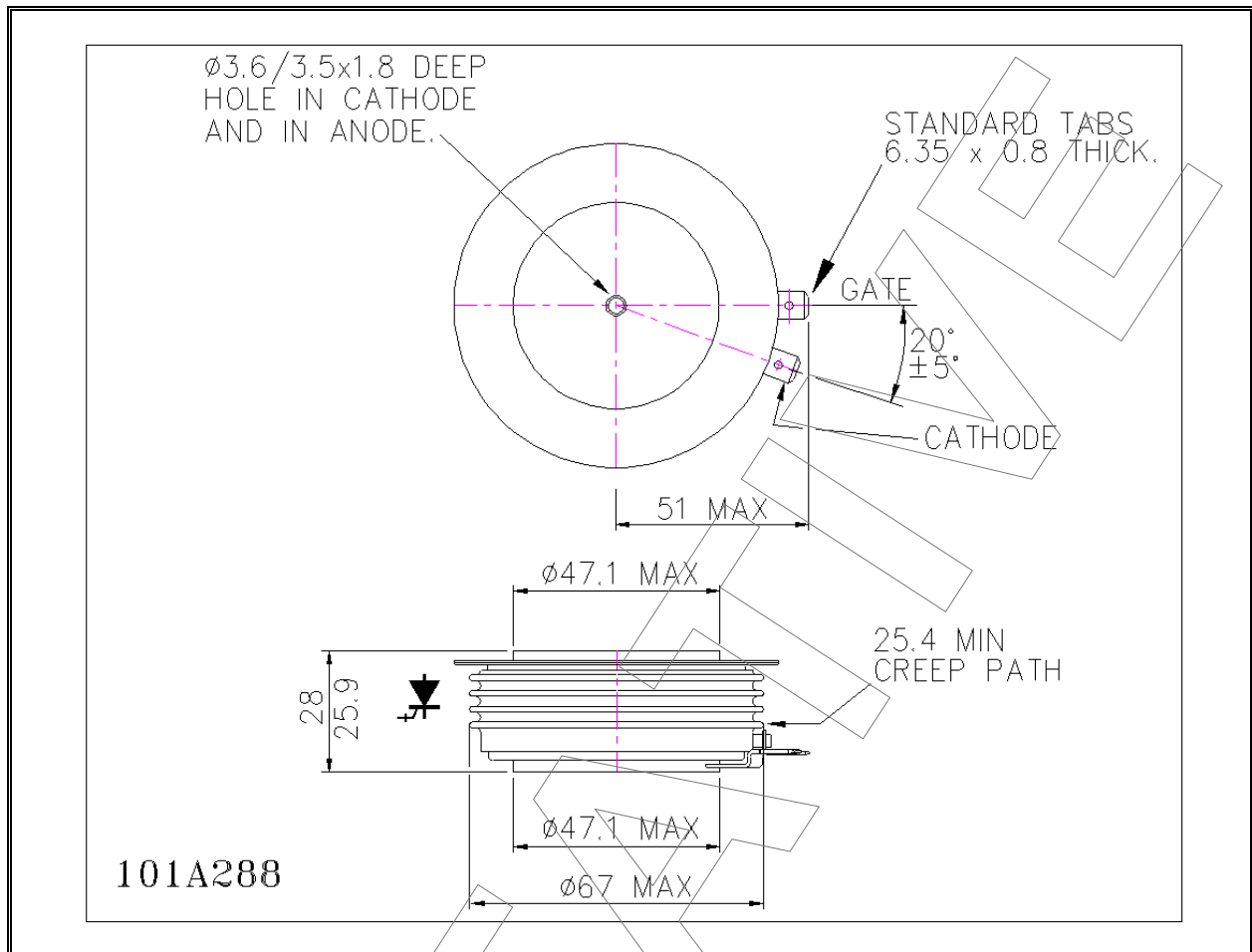
Characteristics

	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		mΩ
(dv/dt) _{cr}	Critical rate of rise of off-state voltage	1000	-	-	V _D =67% V _{DRM} , Linear ramp, V _{GK} =-2V	V/μs
I _{DRM}	Peak off-state current	-	-	100	Rated V _{DRM}	mA
I _{RPM}	Peak reverse current	-	-	100	Rated V _{RPM}	mA
I _L	Latching current	-	10	-	T _j =25°C	A
I _H	Holding current	-	10	-		A
I _{GT}	Nominal gate trigger current	-	-	80	di _G /dt=100A/μs, T _j =25°C	A
t _{gd}	Gate controlled turn-on delay time	-	0.9	-	V _D =1500V, I _{TM} =25kA, di/dt=5500A/μs,	μs
t _{gt}	Turn-on time	-	1.0	-	I _{FG} =50A, di _G /dt=100A/μs, T _j =25°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°C.

Outline Drawing & Ordering Information



ORDERING INFORMATION

(Please quote 10 digit code as below)

Y5002	NC	◆◆	0
Fixed Type Code	Fixed Outline Code	Fixed Voltage Code V _{DRM} /100 25	Fixed code

Typical order code: Y5002NC250 – 2500V V_{DRM}, 28mm clamp height capsule.

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