

Prospective Data  
**Pulse Thyristor**  
 Type Y2002KC250

**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)	20	kA
$I^2t$	Load limit integral, (note 2)	$50 \times 10^3$	$A^2s$
$I_{T(AV)M}$	Maximum average on-state current. $T_{sink}=85^\circ C$ , (note 3)	347	A
$(di/dt)_{cr}$	Critical rate of rise of on-state current (non-repetitive), (Note 4)	5000	$A/\mu s$
$V_{RGM}$	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,  $180^\circ$  half-sinewave.

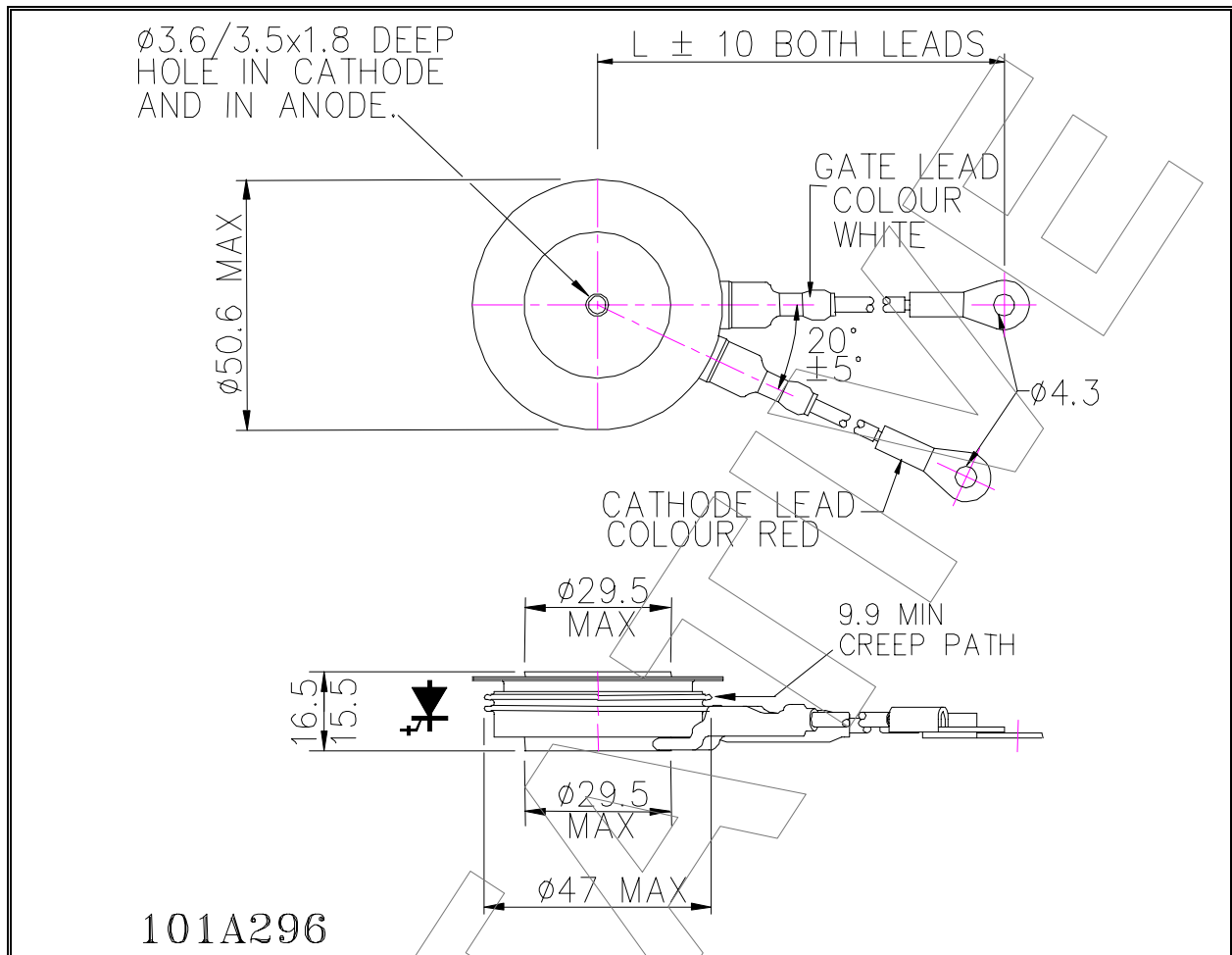
**Characteristics**

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
V <sub>TM</sub>	Maximum peak on-state voltage	-	-	10	I <sub>G</sub> =4A, I <sub>TM</sub> =4000A	V
V <sub>T0</sub>	Threshold voltage	-	-	1.216		V
r <sub>T</sub>	Slope resistance	-	-	2.196		mΩ
(dv/dt) <sub>cr</sub>	Critical rate of rise of off-state voltage	1000	-	-	V <sub>D</sub> =67% V <sub>DRM</sub> , Linear ramp, V <sub>GK</sub> =-2V	V/μs
I <sub>DRM</sub>	Peak off-state current	-	-	100	Rated V <sub>DRM</sub>	mA
I <sub>RRM</sub>	Peak reverse current	-	-	100	Rated V <sub>RRM</sub>	mA
I <sub>L</sub>	Latching current	-	10	-	T <sub>j</sub> =25°C	A
I <sub>H</sub>	Holding current	-	10	-		A
I <sub>GT</sub>	Nominal gate trigger current	-	-	50	di <sub>G</sub> /dt=100A/μs, T <sub>j</sub> =25°C	A
t <sub>gd</sub>	Gate controlled turn-on delay time	-	0.9	-	V <sub>D</sub> =1500V, I <sub>TM</sub> =10kA, di/dt=2500A/μs, I <sub>FG</sub> =50A, di <sub>G</sub> /dt=100A/μs, T <sub>j</sub> =25°C.	μs
t <sub>gt</sub>	Turn-on time	-	1.0	-		
R <sub>thJK</sub>	Thermal resistance, junction to heatsink	-	-	0.065	Double side cooled	K/W
		-	-	0.090	Anode side cooled	K/W
		-	-	0.240	Cathode side cooled	K/W
F	Mounting force	4.5	-	9.0		kN
W <sub>t</sub>	Weight	-	120	-		g

Notes:-

- 1) Unless otherwise indicated T<sub>j</sub>=125°C.

**Outline Drawing & Ordering Information**



**ORDERING INFORMATION**

(Please quote 10 digit code as below)

<b>Y2002</b>	<b>KC</b>	<b>◆◆</b>	<b>0</b>
Fixed Type Code	Fixed Outline Code	Fixed Voltage Code V <sub>DRM</sub> /100 25	Fixed code

Typical order code: Y2002KC250 – 2500V V<sub>DRM</sub>, 16.5mm clamp height capsule.

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