

# Pulse Thyristor

## Type Y200CKC250

### Absolute Maximum Ratings

	<b>VOLTAGE RATINGS</b>	<b>MAXIMUM LIMITS</b>	<b>UNITS</b>
$V_{DRM}$	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

	<b>OTHER RATINGS</b>	<b>MAXIMUM LIMITS</b>	<b>UNITS</b>
$I_{TM}$	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)	245	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.

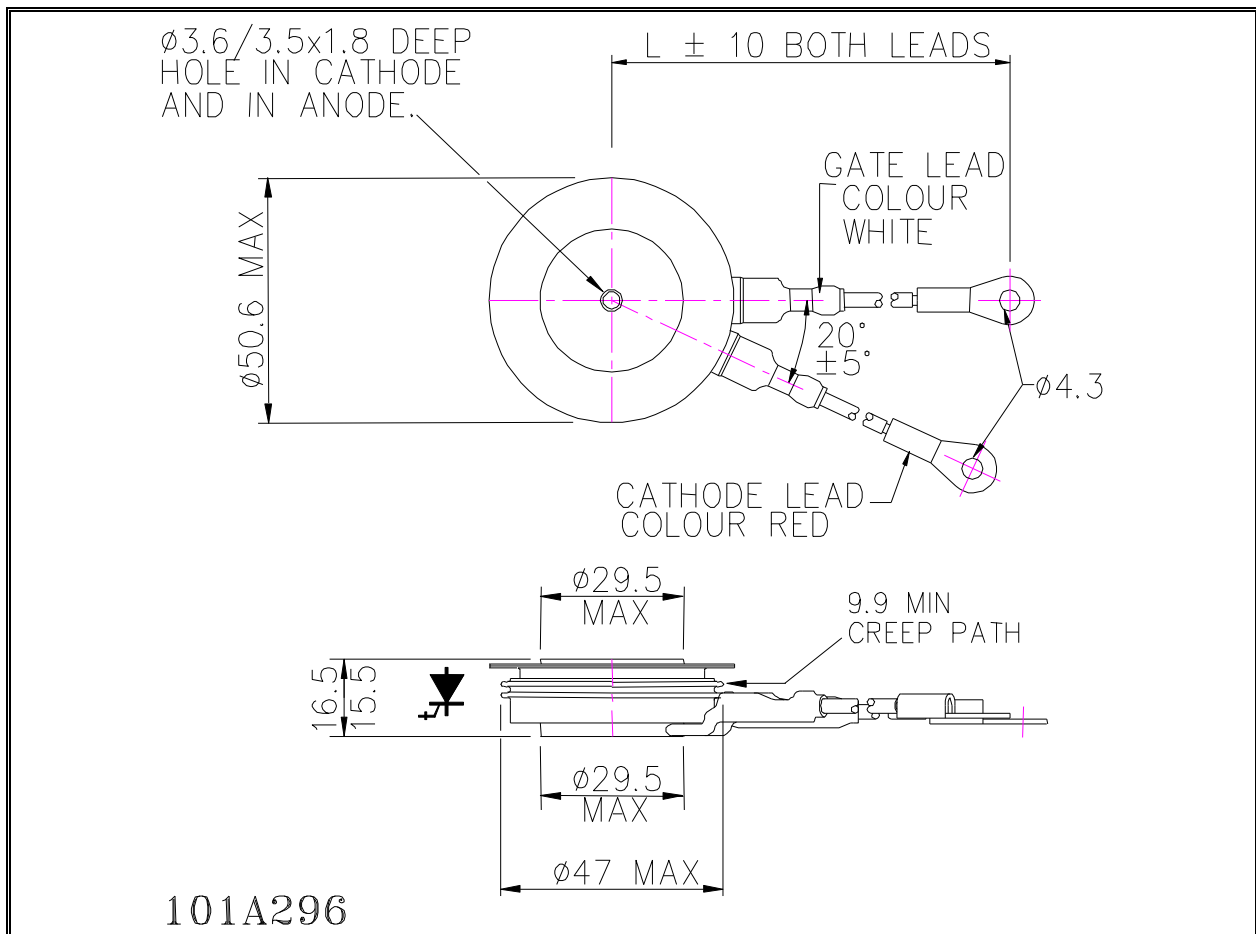
**Characteristics**

	PARAMETER	MIN.	TYP.	MAX.	TEST CONDITIONS (Note 1)	UNITS
$V_{TM}$	Maximum peak on-state voltage	-	-	10	$I_G=4A, I_{TM}=4000A$	V
$V_{T0}$	Threshold voltage	-	-	1.216		V
$r_T$	Slope resistance	-	-	2.196		m $\Omega$
$(dv/dt)_{cr}$	Critical rate of rise of off-state voltage	1000	-	-	$V_D=67\% V_{DRM}$ , Linear ramp, $V_{GK}=-2V$	V/ $\mu$ 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	-	$V_D=1500V, I_{TM}=10kA, di/dt=2500A/\mu s,$	$\mu$ 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	-	-	0.065	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
$W_t$	Weight	-	120	-		g

Notes:-

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

**Outline Drawing & Ordering Information**



**ORDERING INFORMATION**

(Please quote 10 digit code as below)

<b>Y200C</b>	<b>KC</b>	<b>◆◆</b>	<b>0</b>
Fixed Type Code	Fixed Outline Code	Fixed Voltage Code $V_{DRM}/100$ 25	Fixed code

Typical order code: Y200CKC250 – 2500V  $V_{DRM}$ , 16.5mm clamp height capsule.

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