

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)	50×10^3	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° half-sinewave.

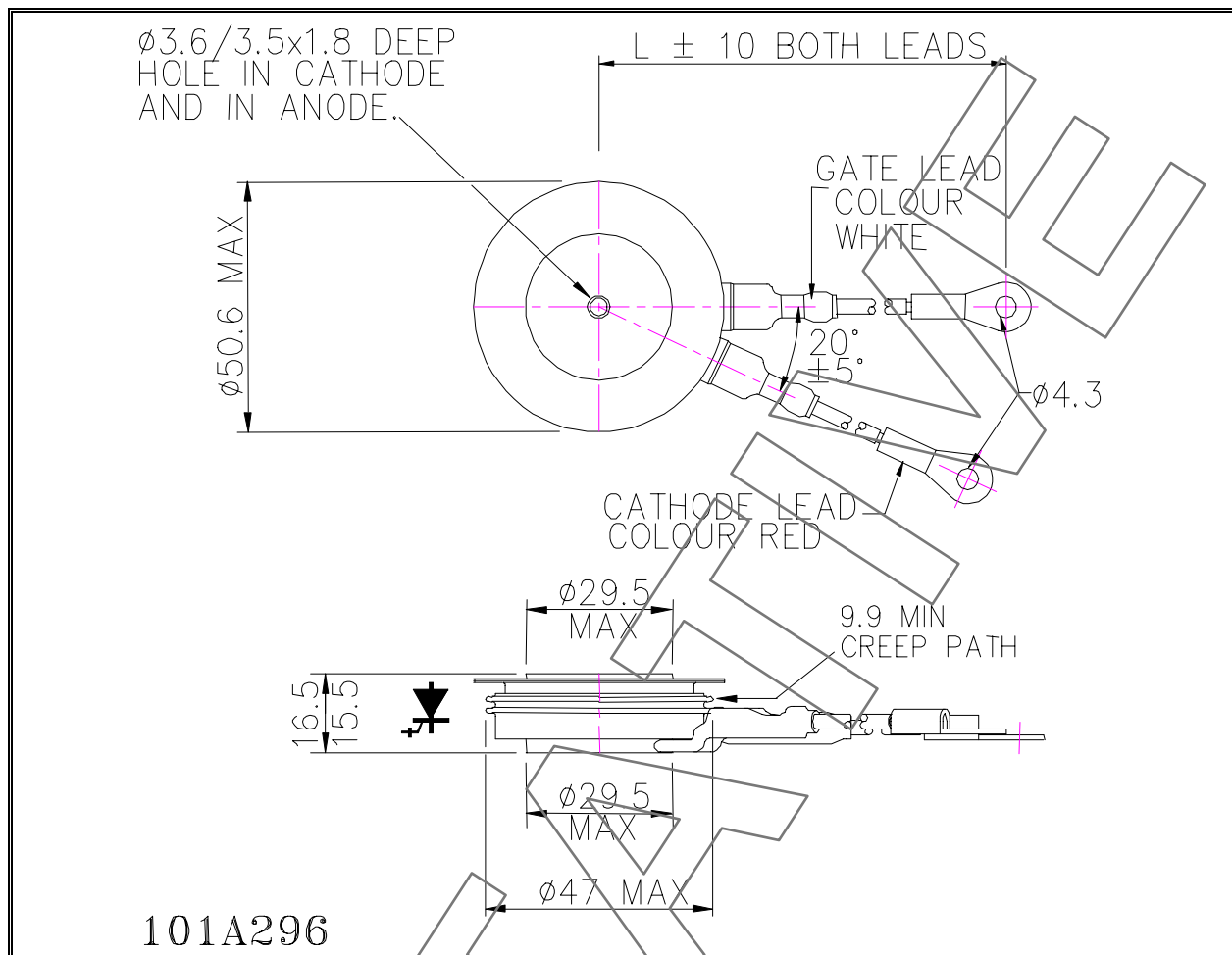
Characteristics

	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 Ω
$(dv/dt)_{cr}$	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_{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	$di/dt=100A/\mu s$, $T_j=25^\circ C$	A
t_{gd}	Gate controlled turn-on delay time	-	0.9	-	$V_D=1500V$, $I_{TM}=10kA$, $di/dt=2500A/\mu s$, $I_{FG}=50A$, $di/dt=100A/\mu s$, $T_j=25^\circ C$.	μs
t_{gt}	Turn-on time	-	1.0	-		
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)

Y2002	KC	♦♦	0
Fixed Type Code	Fixed Outline Code	Fixed Voltage Code $V_{DRM}/100$ 25	Fixed code

Typical order code: Y2002KC250 – 2500V V_{DRM} , 16.5mm clamp height capsule.

IXYS Semiconductor GmbH
Edisonstraße 15
D-68623 Lampertheim
Tel: +49 6206 503-0
Fax: +49 6206 503-627
E-mail: marcom@ixys.de

IXYS Corporation
3540 Bassett Street
Santa Clara CA 95054 USA
Tel: +1 (408) 982-0700
Fax: +1 (408) 496-0670
E-mail: sales@ixys.net

WESTCODE
An IXYS Company

www.westcode.com

www.ixys.net

Westcode Semiconductors Ltd
PO Box 57 Chippenham
Wiltshire SN15 1JL
Tel: +44 (0)1249 444524
Fax: +44 (0)1249 659448
E-mail: WSL.sales@westcode.com

Westcode Semiconductors Inc
3270 Cherry Avenue
Long Beach CA 90807 USA
Tel: +1 (562) 595 6971
Fax: +1 (562) 595 8182
E-mail: WSI.sales@westcode.com

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