

Pulse Thyristor

Type Y200CKC250

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 ² t | Load limit integral, (note 2) | 50×10 ³ | A ² s |
| I _{T(AV)M} | Maximum average on-state current. T _{sink} =85°C, (note 3) | 245 | A |
| (di/dt) _{cr} | Critical rate of rise of on-state current (non-repetitive), (Note 4) | 5000 | A/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.

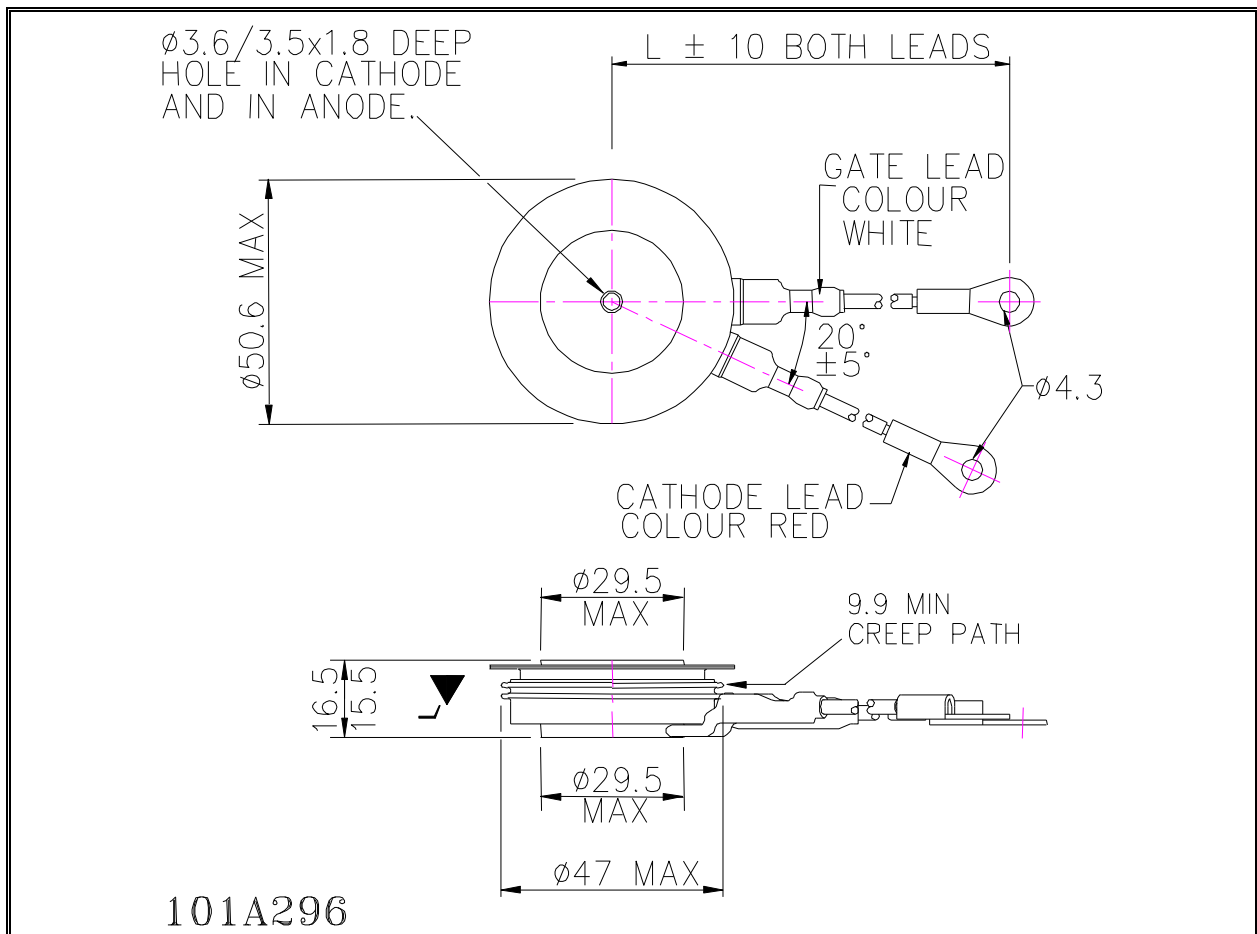
Characteristics

| | PARAMETER | MIN. | TYP. | MAX. | TEST CONDITIONS (Note 1) | UNITS |
|----------------|--|------|------|-------|---|------------|
| V_{TM} | Maximum peak on-state voltage | - | - | 10 | $I_G=4A, I_{TM}=4000A$ | 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/ 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 | - | $V_D=1500V, I_{TM}=10kA, di/dt=2500A/\mu s,$ | 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 | - | - | 0.065 | 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)

| | | | |
|-----------------|--------------------|---|------------|
| Y200C | KC | ◆◆ | 0 |
| 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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