

KP1000-POWER THYRISTOR

Jiangsu Yangjie Runau Semiconductor Co.,Ltd

2600-3200 V_{DRM}

HIGH POWER THYRISTOR FOR PHASE CONTROL APPLICATIONS

Features:

- . All Diffused Structure
- . Amplifying Gate Configuration
- . Blocking capability up to 3200 volts
- . High dv/dt Capability
- . Pressure Assembled Device

ELECTRICAL CHARACTERISTICS AND RATINGS

Blocking - Off State

| Device Type | $V_{RRM} (1)$ | $V_{DRM} (1)$ | $V_{RSM} (1)$ |
|-------------|---------------|---------------|---------------|
|-------------|---------------|---------------|---------------|

Gating

| Parameter | Symbol | Min. | Max. | Typ. | Units | Conditions |
|--------------------------------|--------------------|------|------|------|-------|---|
| Peak gate power dissipation | P _{GM} | | 20 | | W | |
| Average gate power dissipation | P _{G(AV)} | | 4 | | W | |
| Gate-trigger current | I _{GT} | | 200 | | mA | V _D =12 V;R _L = 3 ohms;T _j = +25 °C |
| Gate- trigger voltage | V _{GT} | 0.70 | 2.5 | | V | V _D = 12 V;R _L = 3 ohms;T _j = +25 °C |
| Peak negative voltage | V _{GRM} | | 5 | | V | |

Dynamic

| Parameter | Symbol | Min. | Max. | Typ. | Units | Conditions |
|--|-----------------|------|------|------|-------|--|
| Delay time | t _d | | 3.0 | 2.5 | μs | I _{TM} =100 A; V _D = 67% V _{DRM} Gate pulse: V _G = 30 V; R _G = 10 ohms; t _r % _p % |
| Turn-off time (with V _R = -5 V) | t _q | | | 400 | μs | I _{TM} =1000 A; di/dt =- 10 A/μs; V _R =50 V; dV/dt=30V/μs ; V _D = 67%V _{DRM} ;T _j =125°C |
| Reverse recovery charge | Q _{rr} | | | 4000 | μC | I _{TM} =1000A; di/dt=-10A/s; V _R =50 V; T _j =125°C |

THERMAL AND MECHANICAL CHARACTERISTICS AND RATINGS

| Parameter | Symbol | Min. | Max. | Typ. | Units | Conditions |
|---------------------------------------|-------------------|------|-------|------|-------|---------------------|
| Operating temperature | T _j | -40 | +125 | | °C | |
| Storage temperature | T _{stg} | -40 | +140 | | °C | |
| Thermal resistance - junction to case | R _{θ(c)} | | 0.022 | | °C/W | Double sided cooled |
| Thermal resistance - case to heatsink | R _{θ(s)} | | 0.005 | | °C/W | Double sided cooled |
| Mounting force | P | 22 | 27 | 25 | kN | |
| Weight | W | | | 0.46 | kg | |

* Mounting surfaces smooth, flat and greased

