

Features

- n Center amplifying gate
- n Metal case with ceramic insulator
- n Low on-state and switching losses

Typical Applications

- n AC controllers
- n DC and AC motor control
- n Controlled rectifiers

| | | | |
|---|--------------|--------------|--|
| Part No. Y60KPC-KT54cT | | | |
| I_{T(AV)} | 2160A | | |
| V_{DRM}, V_{RRM} | 400V | 600V | |
| | 800V | 1000V | |

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | | T _i (°C) | VALUE | | | UNIT |
|--------------------------------------|--|--|----------------------|---------------------|-------|------|-------|----------------------------------|
| | | | | | Min | Type | Max | |
| I _{T(AV)} | Mean on-state current | 180° half sine wave 50Hz Double side cooled, | T _C =70°C | | | | 2160 | |
| V _{DRM} V _{RRM} | Repetitive peak off-state voltage Repetitive peak reverse voltage | tp=10ms | | 125 | 400 | | 1000 | V |
| I _{DRM} I _{RRM} | Repetitive peak current | at V _{DRM} at V _{RRM} | | 125 | | | 120 | mA |
| I _{TSM} | Surge on-state current | 10ms half sine wave | | 125 | | | 33 | kA |
| I ² t | I ² t for fusing coordination | V _R =0.6V _{RRM} | | | | | 5445 | A ² s*10 ³ |
| V _{TO} | Threshold voltage | | | 125 | | | 0.95 | V |
| r _T | On-state slope resistance | | | | | | 0.12 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =4000A, F=28kN | | 25 | | | 1.80 | V |
| dv/dt | Critical rate of rise of off-state voltage | V _{DM} =0.67V _{DRM} | | 125 | | | 1000 | V/μs |
| di/dt | Critical rate of rise of on-state current | V _{DM} = 67%V _{DRM} to3000A, Gate pulse t _r ≤0.5μs I _{GM} =1.5A | | 125 | | | 200 | A/μs |
| Q _{rr} | Recovery charge | I _{TM} =2000A, tp=4000μs, di/dt=-20A/μs, V _R =100V | | 125 | | 1600 | | μC |
| I _{GT} | Gate trigger current | V _A =12V, I _A =1A | | 25 | 40 | | 300 | mA |
| V _{GT} | Gate trigger voltage | | 0.8 | | | 3.0 | V | |
| I _H | Holding current | | 20 | | | 300 | mA | |
| I _L | Latching current | | | | | 1000 | mA | |
| V _{GD} | Non-trigger gate voltage | V _{DM} =67%V _{DRM} | | 125 | | | 0.3 | V |
| R _{th(j-c)} | Thermal resistance Junction to case | At 180° sine double side cooled Clamping force 28kN | | | | | 0.016 | °C /W |
| R _{th(c-h)} | Thermal resistance case to heatsink | | | | | | 0.004 | |
| F _m | Mounting force | | | | 21 | | 30 | kN |
| T _{vj} | Junction temperature | | | | -40 | | 125 | °C |
| T _{stg} | Stored temperature | | | | -40 | | 140 | °C |
| W _i | Weight | | | | | 640 | | g |
| Outline | KT54cT | | | | | | | |

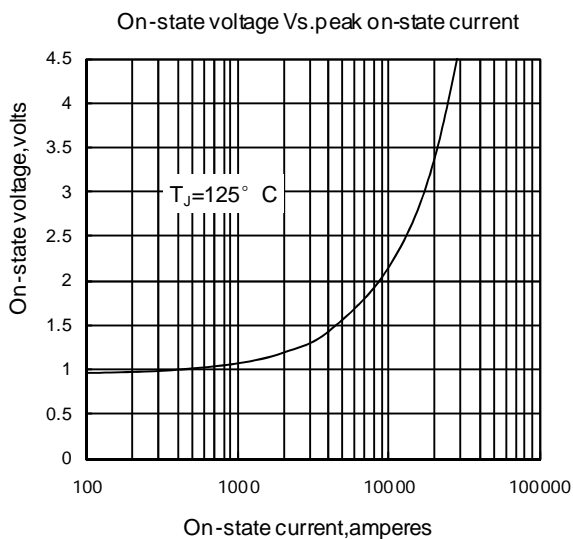


Fig1

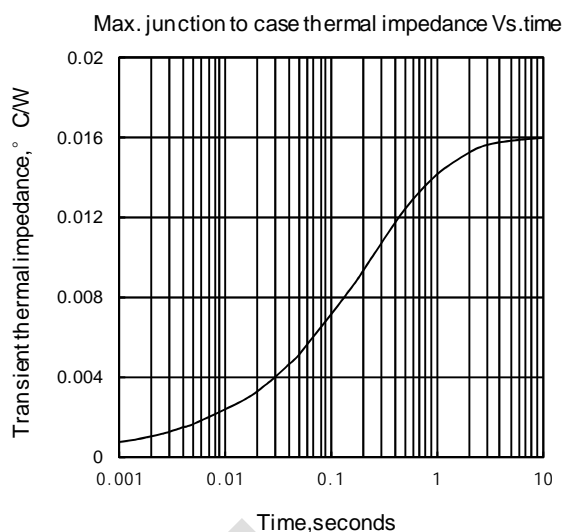


Fig2

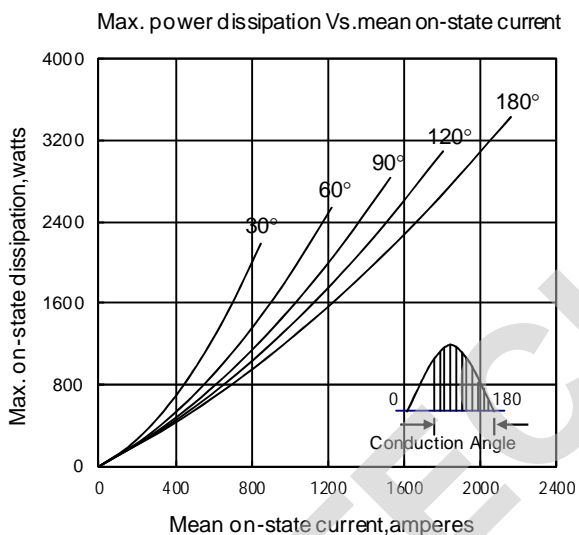


Fig3

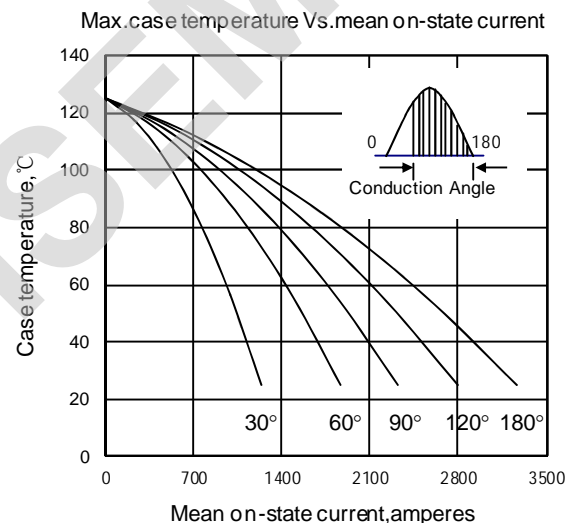


Fig4

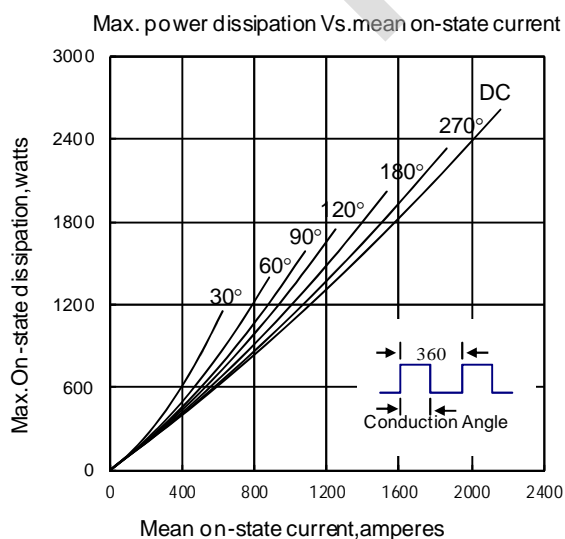


Fig5

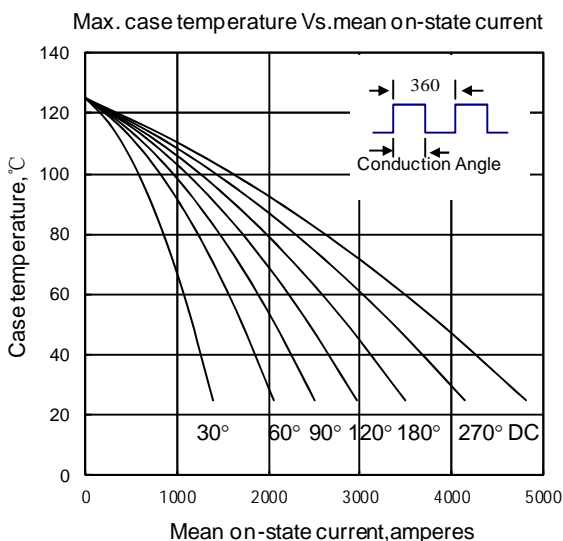


Fig6

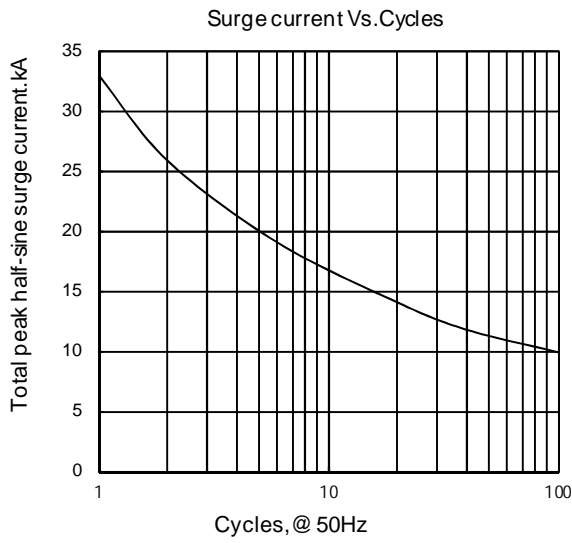


Fig 7

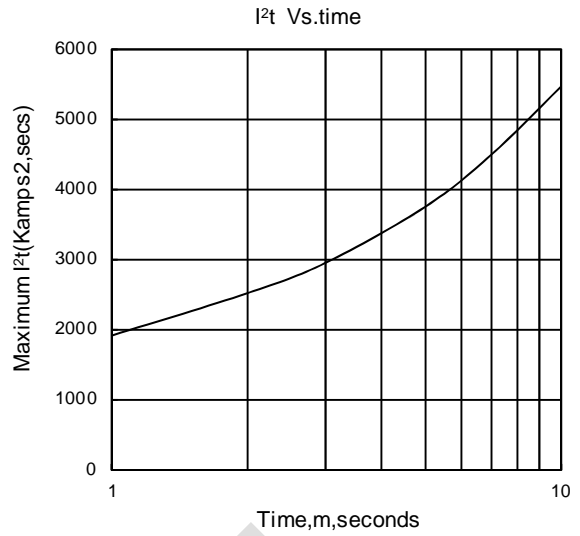


Fig 8

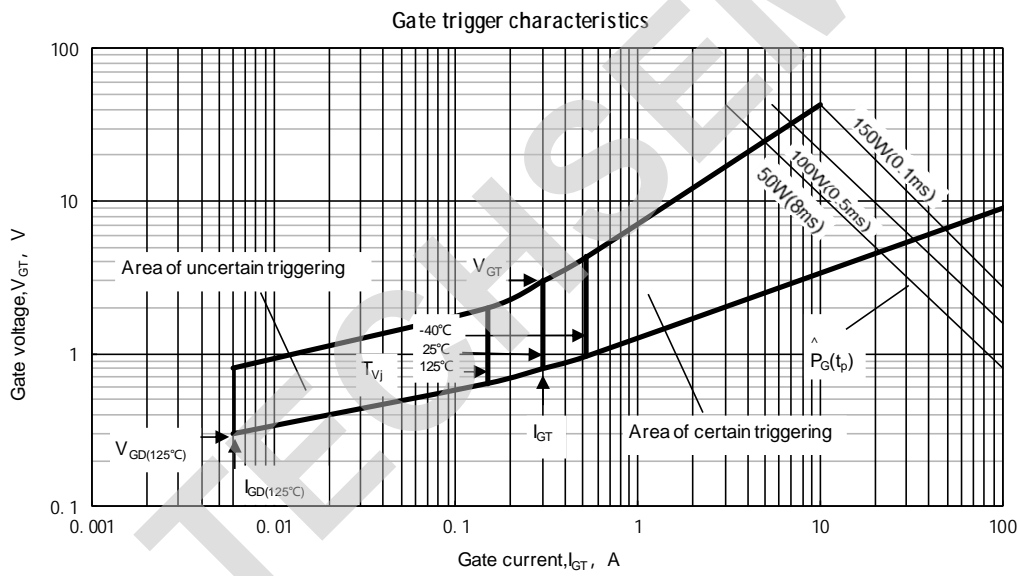
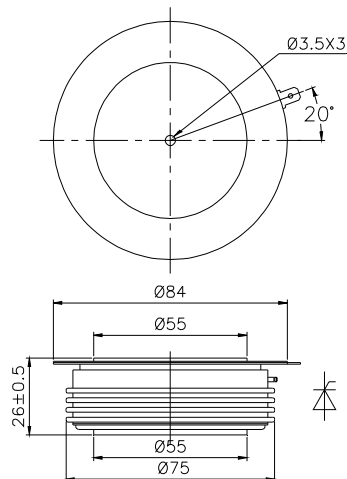


Fig.9

Outline:



TECHSEM reserves the right to change specifications without notice.