

Features

- Interdigitated amplifying gates
- Fast turn-on and high di/dt
- Low switching losses

Typical Applications

- Design for inverter supply application

Part No. Y76KFE-KT73c(d)T

| | |
|--------------------------|--------------------|
| I_{T(AV)} | 3415A |
| V_{DRM} | 800V~2000V |
| V_{RRM} | 1000V~1800V |
| t_q | 15~75µs |

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | | T _J (°C) | VALUE | | | UNIT |
|--------------------------------------|--|---|--|---------------------|-------|---------------|--------------|----------------------------------|
| | | | | | Min | Type | Max | |
| I _{T(AV)} | Mean on-state current | 180° half sine wave 50Hz Double side cooled, | T _C =55°C T _C =70°C | 125 | | | 3415 2870 | A |
| V _{DRM} | Repetitive peak off-state voltag | tp=10ms | | 125 | 800 | | 2000 | V |
| V _{RRM} | Repetitive peak reverse voltage | | | | 1000 | | 1800 | |
| I _{DRM} I _{RRM} | Repetitive peak current | V _D = V _{DRM} V _R = V _{RRM} | | 125 | | | 200 | mA |
| I _{TSM} | Surge on-state current | 10ms half sine wave | | 125 | | | 35.6 | kA |
| I ² t | I ² t for fusing coordination | V _R =0.6V _{RRM} | | | | | 6337 | A ² s*10 ³ |
| V _{TO} | Threshold voltage | | | 125 | | | 1.21 | V |
| r _T | On-state slop resistance | | | | | | 0.10 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =4000A, F=40kN | 15≤t _q ≤35 | 25 | | | 2.20 | V |
| | | | 36≤t _q ≤50 | | | | 2.00 | V |
| | | | 51≤t _q ≤75 | | | | 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 | | | 1500 | A/µs |
| Q _{rr} | Recovery charge | I _{TM} =2000A, tp=4000µs, di/dt=-20A/µs, V _R =100V | | 125 | | 1300 | | µC |
| t _q | Circuit commutated turn-off time | I _{TM} =2000A, tp=4000µs, V _R =100V dv/dt=30V/µs ,di/dt=-20A/µs | | 100 | 15 | | 75 | µs |
| I _{GT} | Gate trigger current | V _A =12V, I _A =1A | | 25 | 45 | | 300 | mA |
| V _{GT} | Gate trigger voltage | | | | 0.9 | | 4.5 | V |
| I _H | Holding current | | | | 20 | | 500 | 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 40kN | | | | | 0.010 | °C /W |
| R _{th(c-h)} | Thermal resistance case to heat sink | | | | | | 0.003 | |
| F _m | Mounting force | | | | 35 | | 47 | kN |
| T _{vj} | Junction temperature | | | | -40 | | 125 | °C |
| T _{stg} | Stored temperature | | | | -40 | | 140 | °C |
| W _t | Weight | | | | | 1100/ 1460 | | g |
| Outline | KT73cT/ KT73dT | | | | | | | |

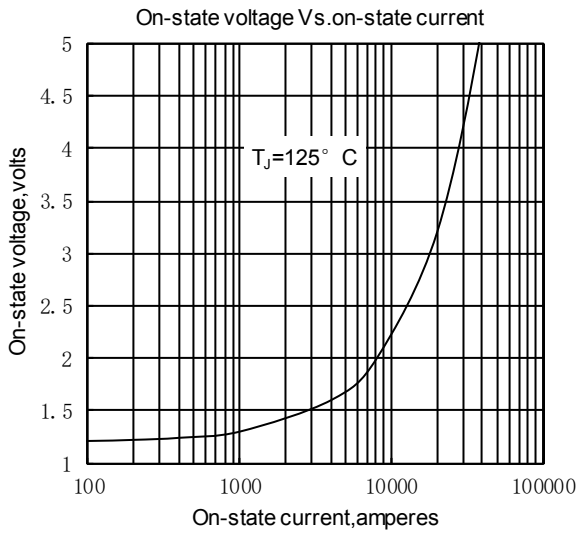


Fig.1

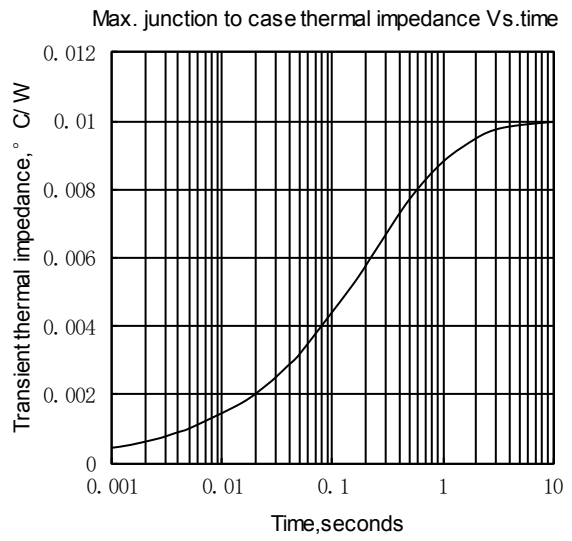


Fig.2

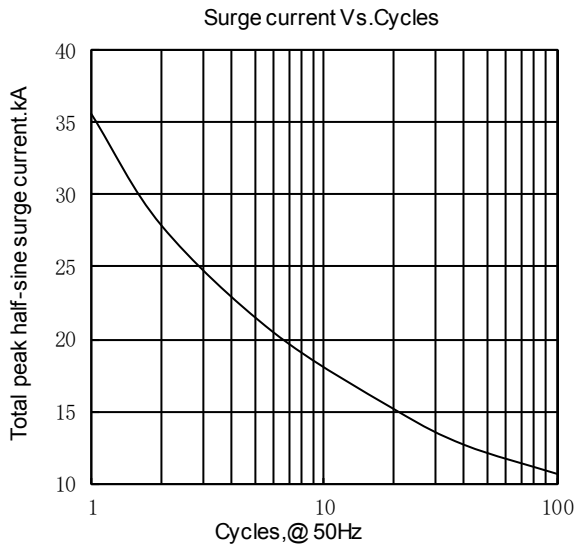


Fig.3

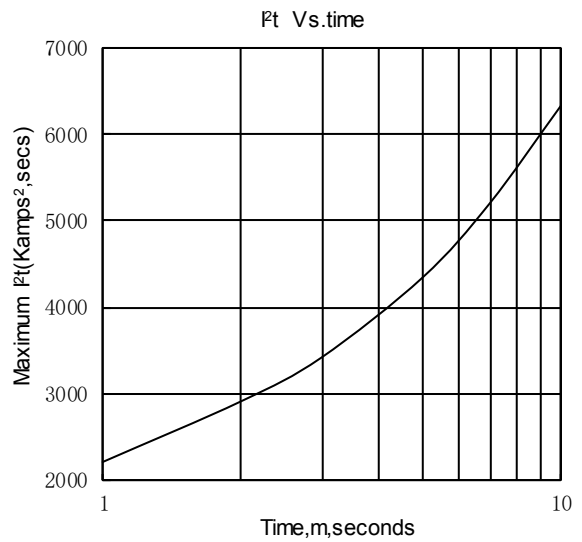


Fig.4

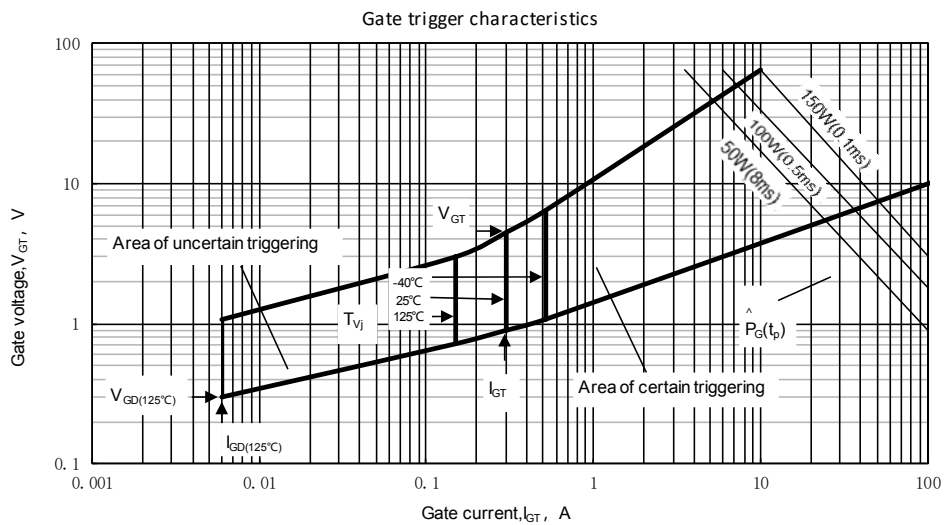
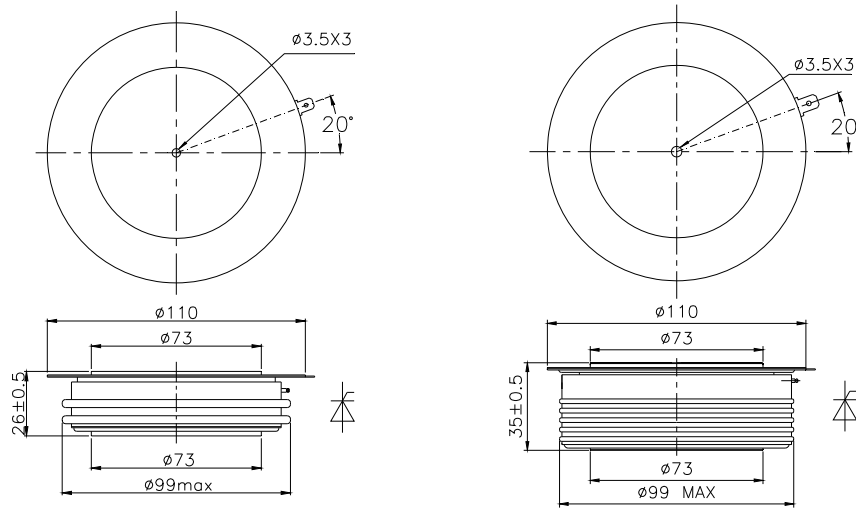


Fig.5

Outline:



TECHSEM reserves the right to change specifications without notice.