

Features:

- Isolated mounting base 3000V~
- Pressure contact technology with increased power cycling capability
- Space and weight saving

Typical Applications

- AC/DC Motor drives
- Various rectifiers
- DC supply for PWM inverter

| V _{DSM} , V _{RSM} | V _{DRM} , V _{RRM} | Type & Outline |
|-------------------------------------|-------------------------------------|-----------------|
| 2100V | 2000V | MFx400-20-405F3 |
| 2300V | 2200V | MFx400-22-405F3 |
| 2600V | 2500V | MFx400-25-405F3 |

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | T _j (°C) | VALUE | | | UNIT |
|--------------------------------------|--|--|---------------------|-------|------|------|----------------------------------|
| | | | | Min | Type | Max | |
| I _{T(AV)} | Mean on-state current | 180° half sine wave 50Hz Single side water cooled, T _c =55°C | 125 | | | 400 | A |
| I _{T(RMS)} | RMS on-state current | | | | | 628 | A |
| I _{DRM} I _{RRM} | Repetitive peak current | at V _{DRM} at V _{RRM} | 125 | | | 45 | mA |
| I _{TSM} | Surge on-state current | 10ms half sine wave V _R =60%V _{RRM} | 125 | | | 11 | kA |
| I ² t | I ² t for fusing coordination | | | | | 605 | A ² s*10 ³ |
| V _{TO} | Threshold voltage | | 125 | | | 0.82 | V |
| r _T | On-state slope resistance | | | | | 0.79 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =1200A | 25 | | | 2.18 | V |
| dv/dt | Critical rate of rise of off-state voltage | V _{DM} =67%V _{DRM} | 125 | | | 800 | V/μs |
| di/dt | Critical rate of rise of on-state current | Gate source 1.5A t _r ≤0.5μs Repetitive | 125 | | | 100 | A/μs |
| I _{GT} | Gate trigger current | V _A =12V, I _A =1A | 25 | 30 | | 200 | mA |
| V _{GT} | Gate trigger voltage | | | 0.8 | | 3.0 | V |
| I _H | Holding current | | | 10 | | 200 | mA |
| V _{GD} | Non-trigger gate voltage | V _{DM} =67%V _{DRM} | 125 | 0.2 | | | V |
| R _{th(j-c)} | Thermal resistance Junction to case | Single side cooled per chip | | | | 0.11 | °C/W |
| R _{th(c-h)} | Thermal resistance case to heat sink | Single side cooled per chip | | | | 0.04 | °C/W |
| V _{iso} | Isolation voltage | 50Hz, R.M.S, t=1min, I _{iso} : 1mA(MAX) | | 3000 | | | V |
| F _m | Terminal connection torque(M8) | | | | 12.0 | | N·m |
| | Mounting torque(M6) | | | | 6.0 | | N·m |
| T _{vj} | Junction temperature | | | -40 | | 125 | °C |
| T _{stg} | Stored temperature | | | -40 | | 125 | °C |
| W _t | Weight | | | | 1055 | | g |
| Outline | 405F3 | | | | | | |

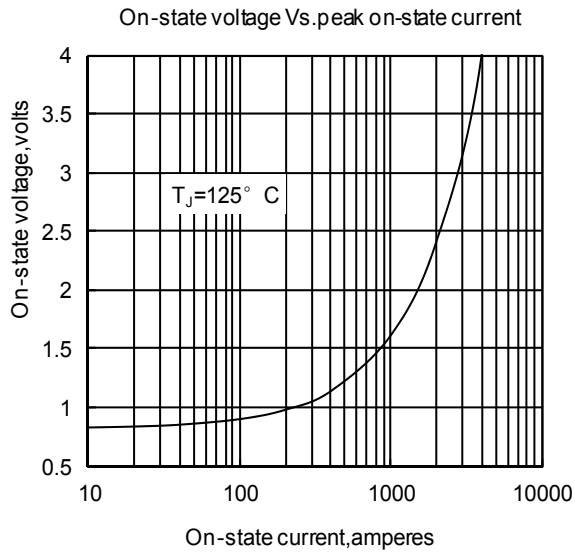


Fig1

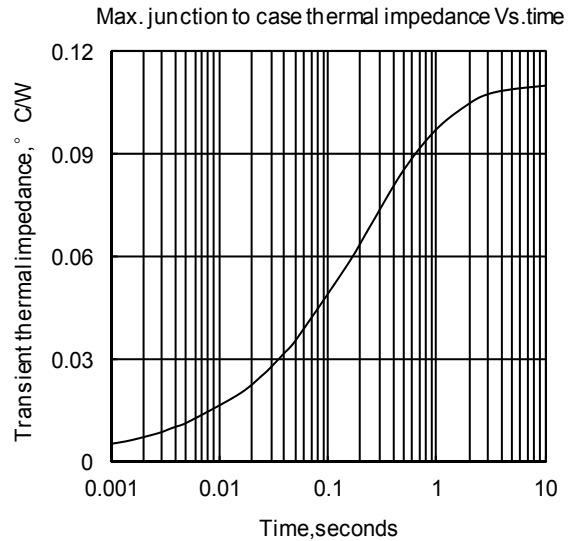


Fig2

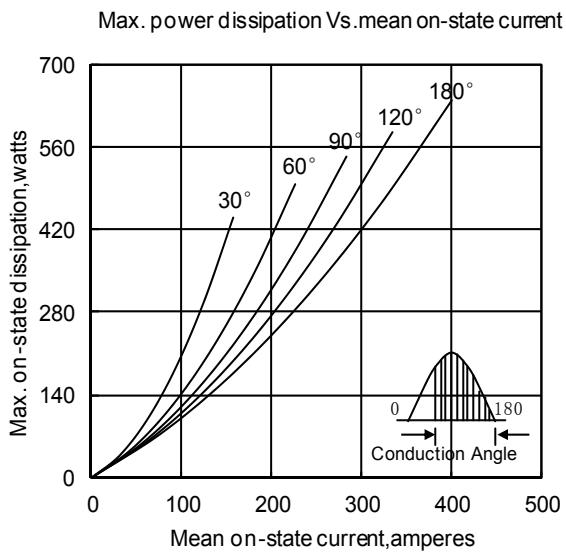


Fig3

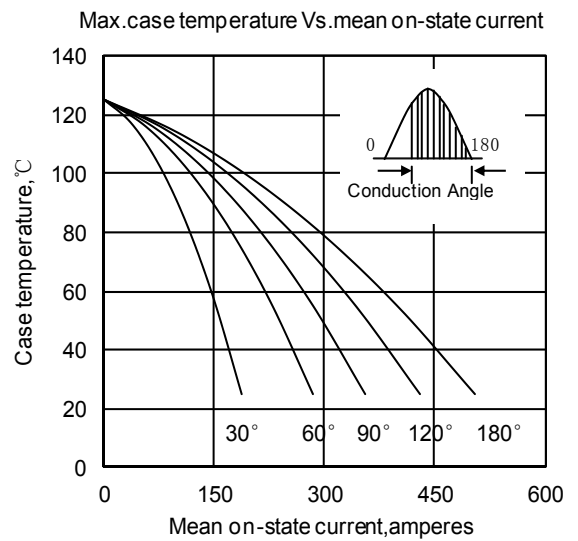


Fig4

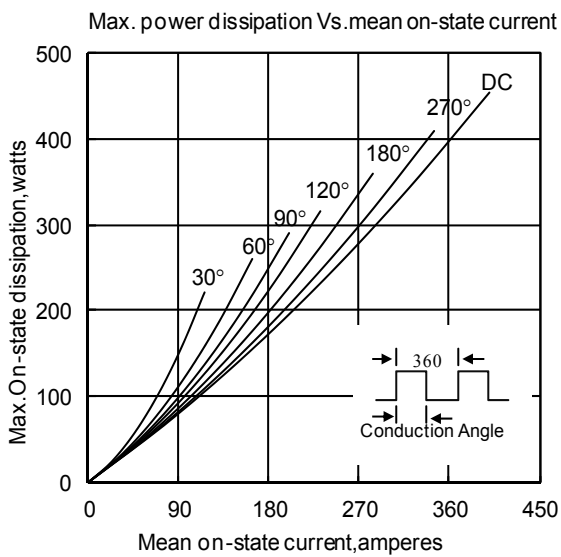


Fig5

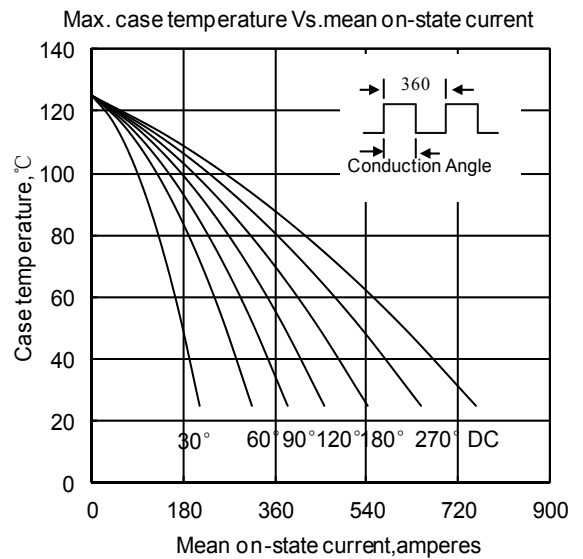


Fig6

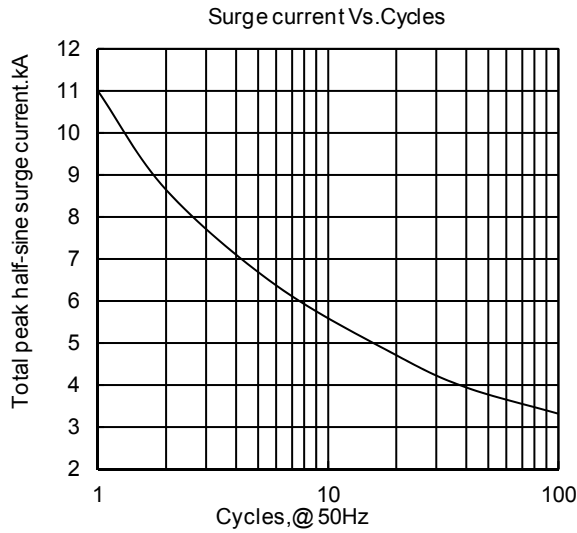


Fig7

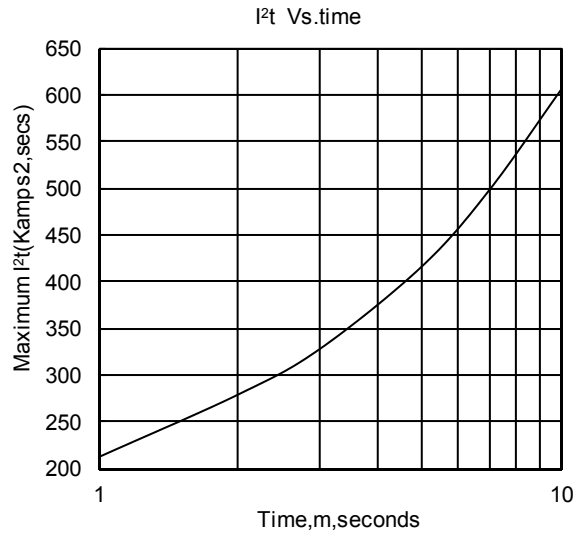


Fig8

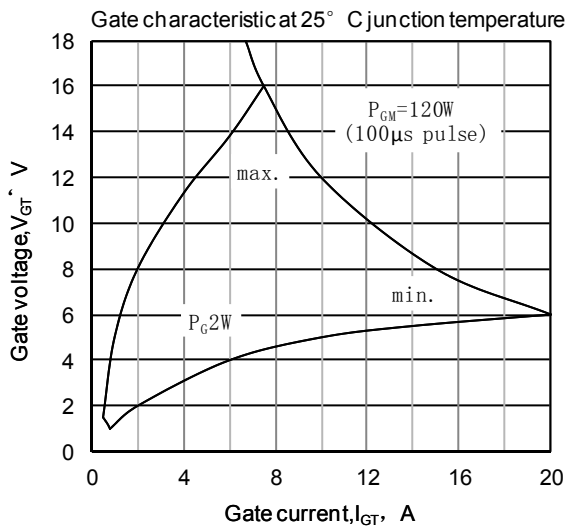


Fig9

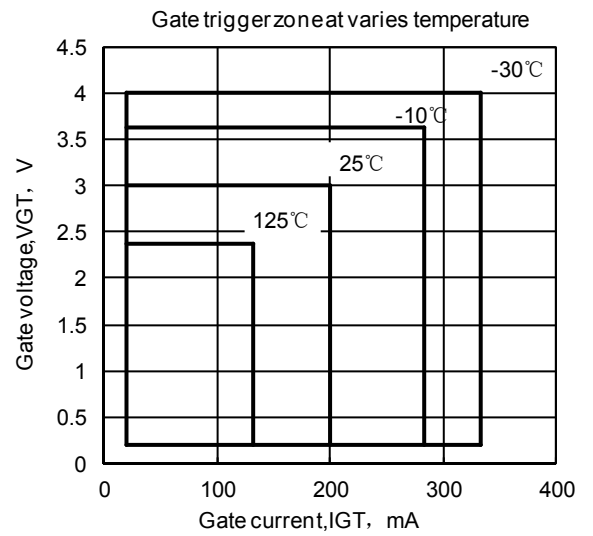


Fig10

Outline

