

Features:

- Non-isolated. Mounting base as anode or cathode terminal
- Pressure contact technology with Increased power cycling capability
- Low on-state voltage drop

Typical Applications:

- Welding Power Supply
- Various DC Power supplies
- DC supply for PWM inverter

| V _{RRM} , V _{DRM} | Type & Outline | |
|-------------------------------------|-----------------|-----------------|
| | MTx100-08-213F4 | MFx100-08-213F4 |
| 800V | MTx100-10-213F4 | MFx100-10-213F4 |
| 1000V | MTx100-12-213F4 | MFx100-12-213F4 |
| 1200V | MTx100-14-213F4 | MFx100-14-213F4 |
| 1400V | MTx100-16-213F4 | MFx100-16-213F4 |
| 1600V | MTx100-18-213F4 | MFx100-18-213F4 |
| 1800V | MTx100-18-213F4 | MFx100-18-213F4 |

MTx stands for any type of **MTG, MTY**
 MFx stands for any type of **MFG, MFY**

| 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 cooled, T _c =90°C | 125 | | | 100 | A |
| I _{T(RMS)} | RMS on-state current | | | | | 157 | A |
| I _{DRM} I _{RRM} | Repetitive peak current | at V _{DRM} at V _{RRM} | 125 | | | 12 | mA |
| I _{TSM} | Surge on-state current | V _R =60%V _{RRM} , t=10ms half sine | 125 | | | 2.5 | kA |
| I ² t | I ² t for fusing coordination | | 125 | | | 31 | 10 ³ A ² s |
| V _{TO} | Threshold voltage | | 125 | | | 0.80 | V |
| r _T | On-state slope resistance | | | | | 2.45 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =300A | 25 | | | 1.67 | 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 | | 100 | mA |
| V _{GT} | Gate trigger voltage | | | 0.8 | | 2.5 | V |
| I _H | Holding current | | | 10 | | 180 | mA |
| I _L | Latching current | | | | | 1000 | mA |
| V _{GD} | Non-trigger gate voltage | V _{DM} =67%V _{DRM} | 125 | | | 0.20 | V |
| R _{th(j-c)} | Thermal resistance Junction to case | At 180° sine, Single side cooled per chip | | | | 0.25 | °C/W |
| R _{th(c-h)} | Thermal resistance case to heatsink | At 180° sine, Single side cooled per chip | | | | 0.10 | °C/W |
| F _m | Terminal connection torque(M6) | | | 4.5 | | 6.0 | N·m |
| | Mounting torque(M6) | | | 4.5 | | 6.0 | N·m |
| T _{vj} | Junction temperature | | | -40 | | 125 | °C |
| T _{stg} | Stored temperature | | | -40 | | 125 | °C |
| W _t | Weight | | | | | 280 | g |
| Outline | 213F4 | | | | | | |

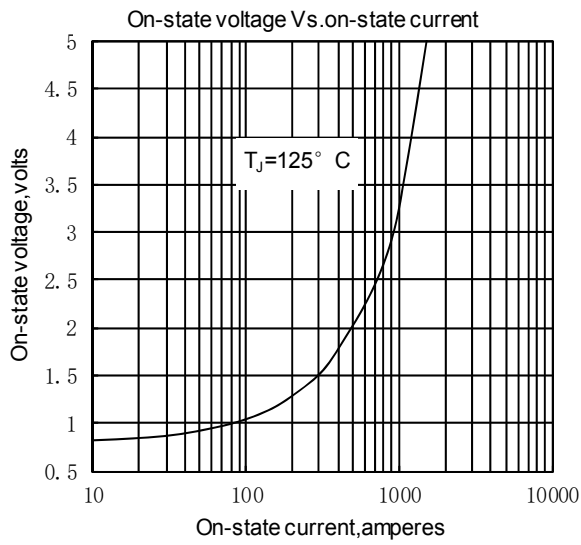


Fig.1

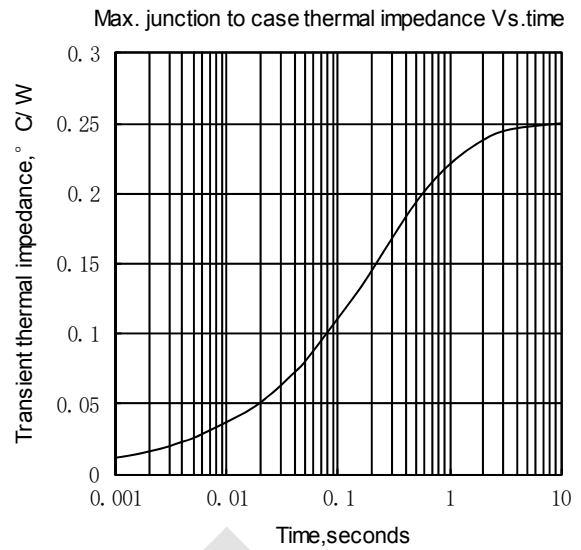


Fig.2

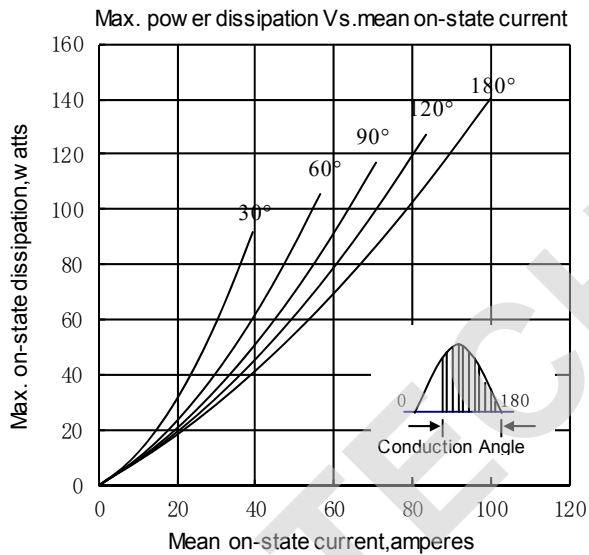


Fig.3

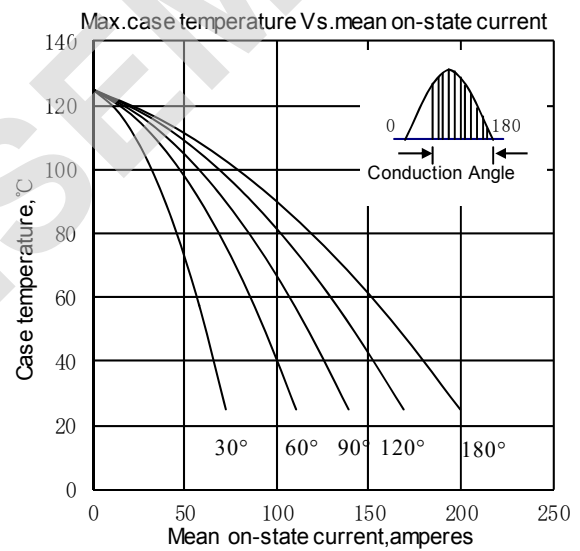


Fig.4

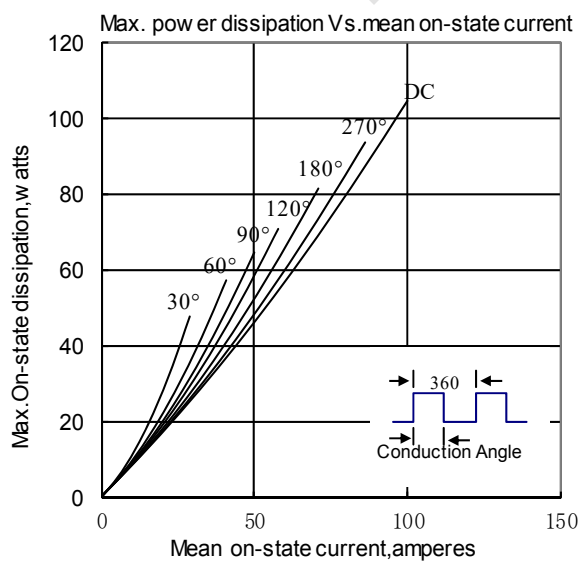


Fig.5

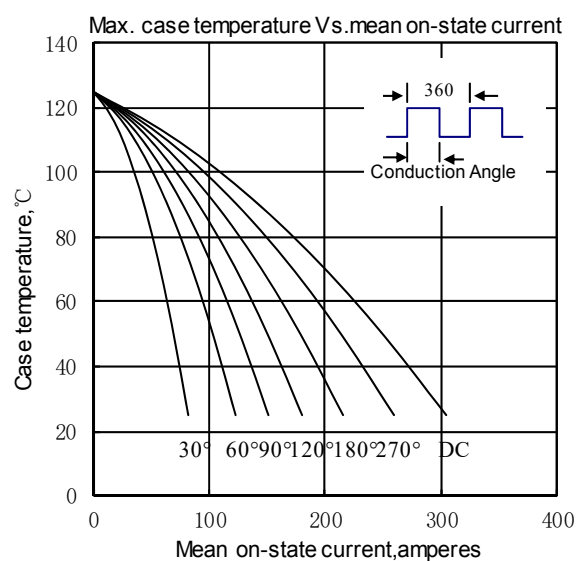


Fig.6

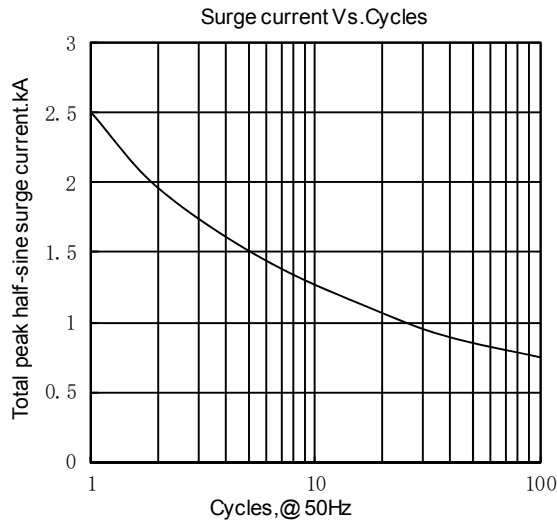


Fig.7

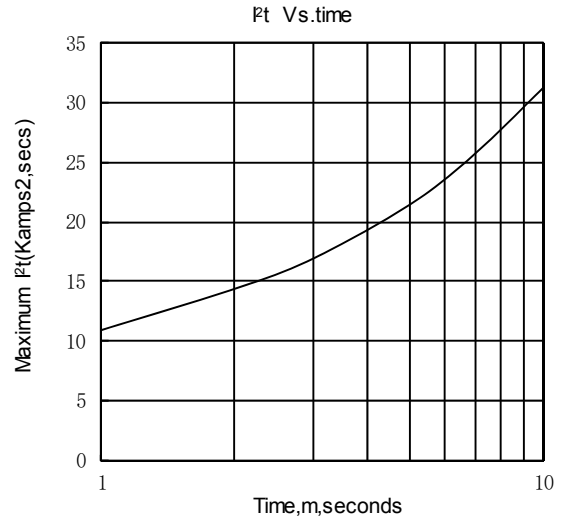


Fig.8

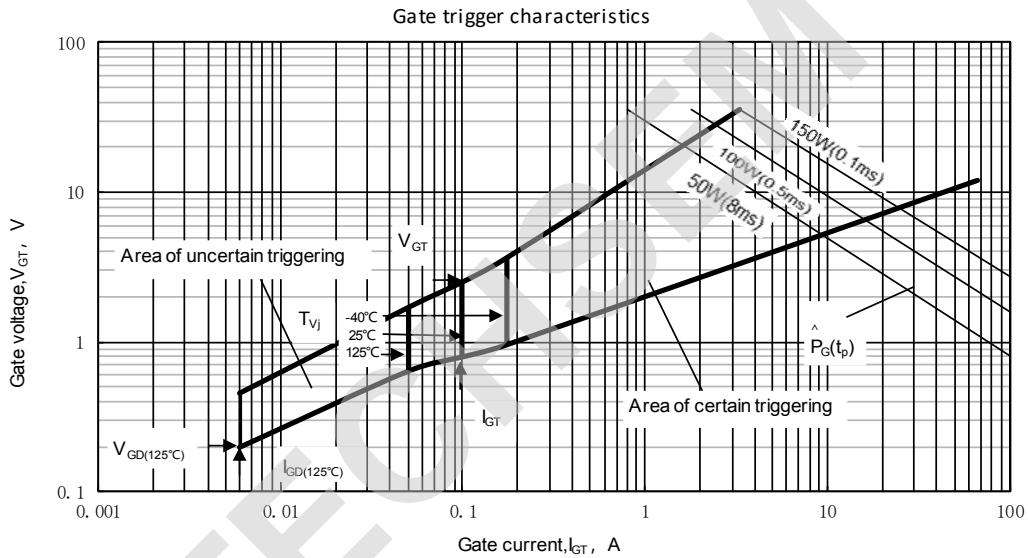
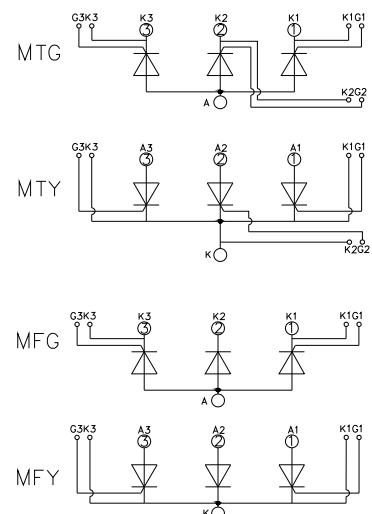
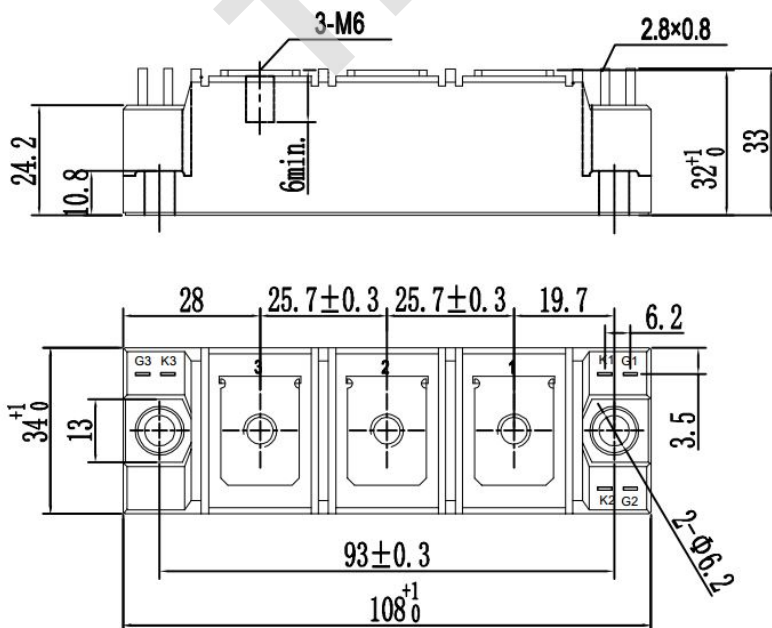


Fig.9

Outline:



Unmarked dimensional tolerance: ±0.5mm

TECHSEM reserves the right to change specifications without notice.