

Features:

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

Typical Applications

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

| V _{DRM} , V _{R_{RM}} | Type & Outline |
|--|----------------|
| 2600V | MT120-26-210F2 |
| 3000V | MT120-30-210F2 |
| 3600V | MT120-36-210F2 |

| 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 =85°C | 125 | | | 120 | A |
| I _{T(RMS)} | RMS on-state current | | | | | 188 | A |
| I _{DRM} I _{R_{RM}} | Repetitive peak current | at V _{DRM} at V _{R_{RM}} | 125 | | | 20 | mA |
| I _{TSM} | Surge on-state current | V _R =60%V _{R_{RM}} , t=10ms half sine, | 125 | | | 2.1 | kA |
| I ² t | I ² t for fusing coordination | | 125 | | | 22 | 10 ³ A ² s |
| V _{TO} | Threshold voltage | | 125 | | | 1.10 | V |
| r _T | On-state slope resistance | | | | | 2.90 | mΩ |
| V _{TM} | Peak on-state voltage | I _{TM} =360A | 25 | | | 2.58 | 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 | | 150 | mA |
| V _{GT} | Gate trigger voltage | | | 1.0 | | 2.5 | V |
| I _H | Holding current | | | 20 | | 200 | 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 | | | | 0.17 | °C/W |
| R _{th(c-h)} | Thermal resistance case to heatsink | At 180° sine. Single side cooled | | | | 0.15 | °C/W |
| V _{iso} | Isolation voltage | 50Hz, R.M.S, t=1min, I _{iso} :1mA(MAX) | | 4000 | | | V |
| 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 | | | | 185 | | g |
| Outline | 210F2 | | | | | | |

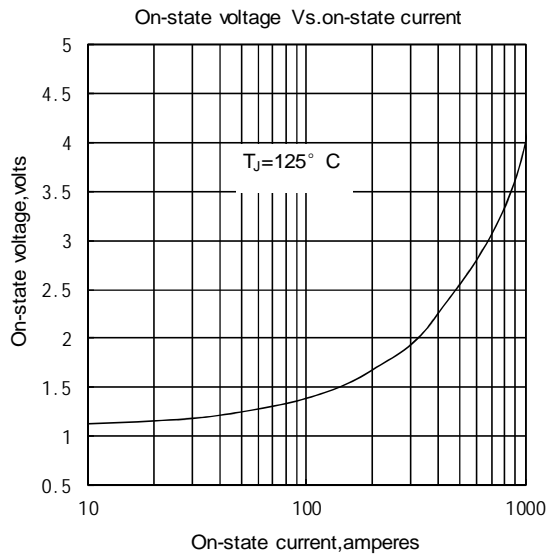


Fig.1

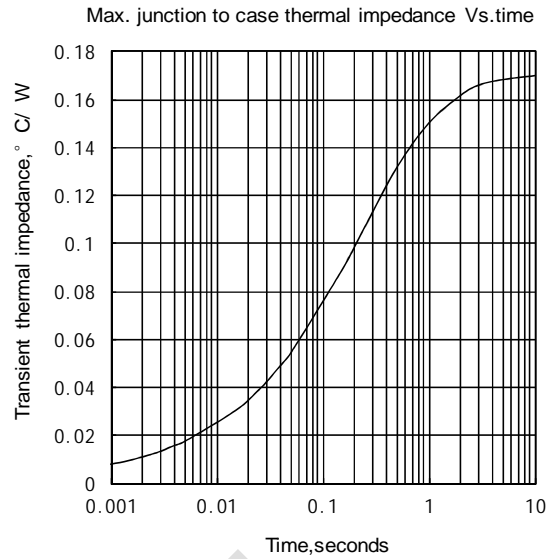


Fig.2

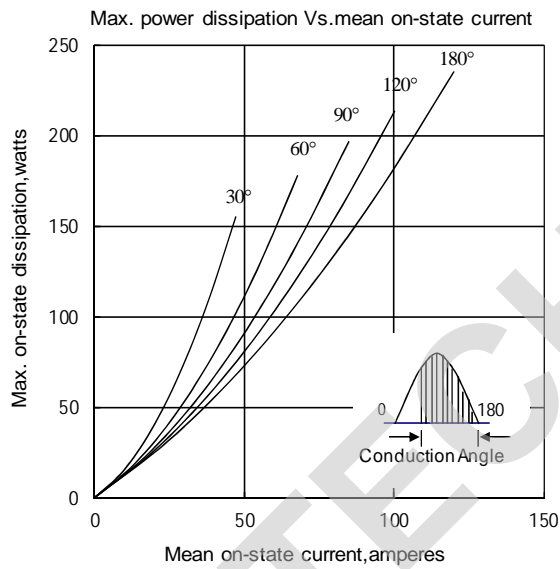


Fig.3

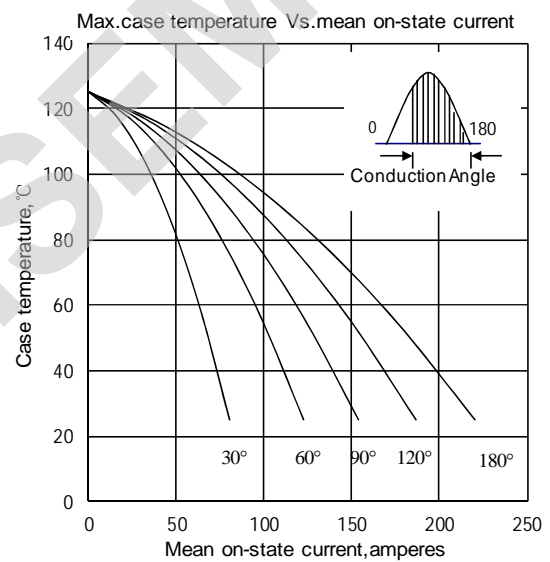


Fig.4

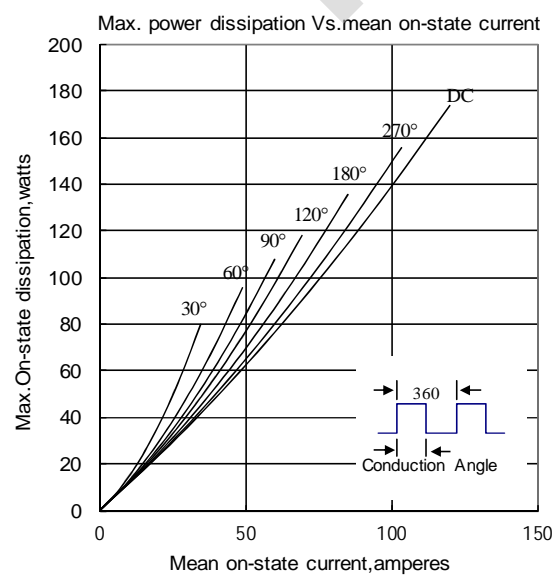


Fig.5

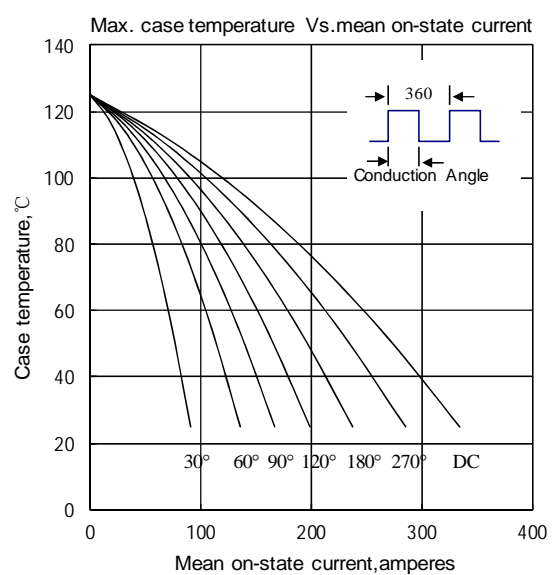


Fig.6

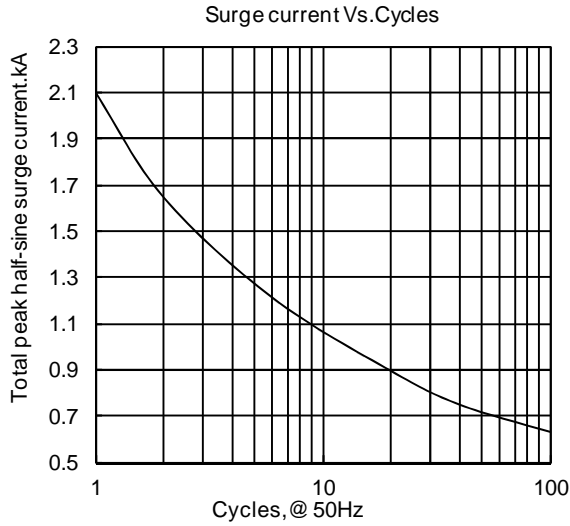


Fig. 7

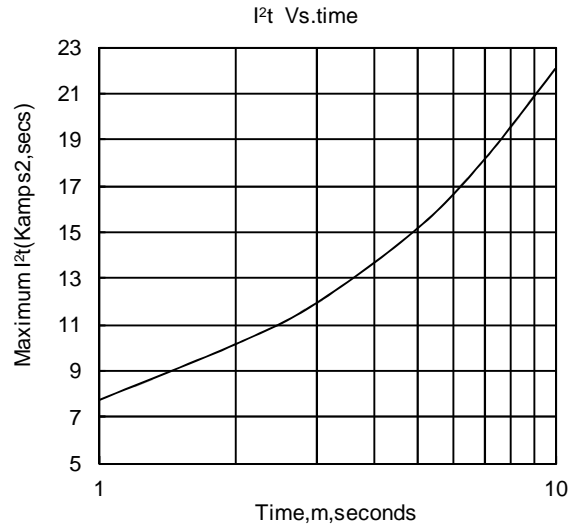


Fig. 8

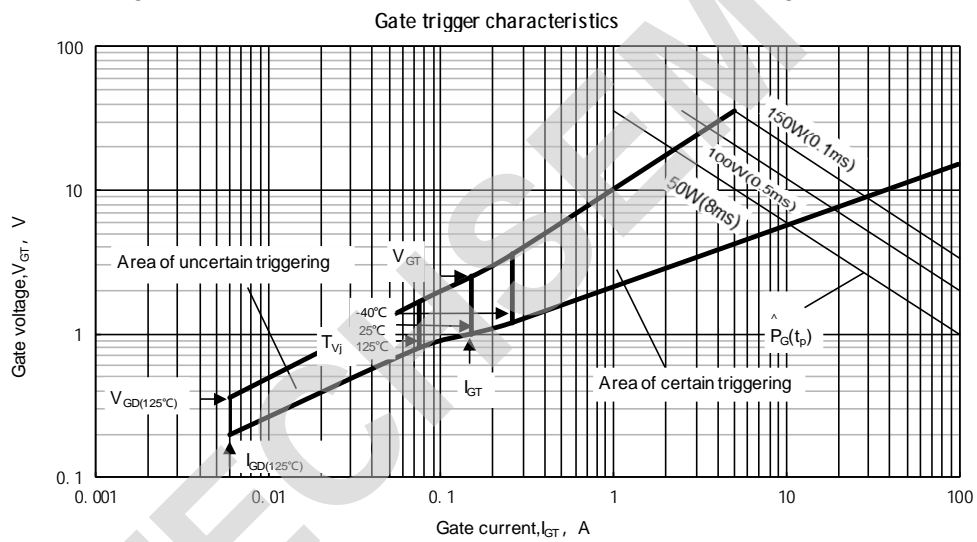
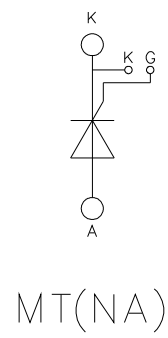
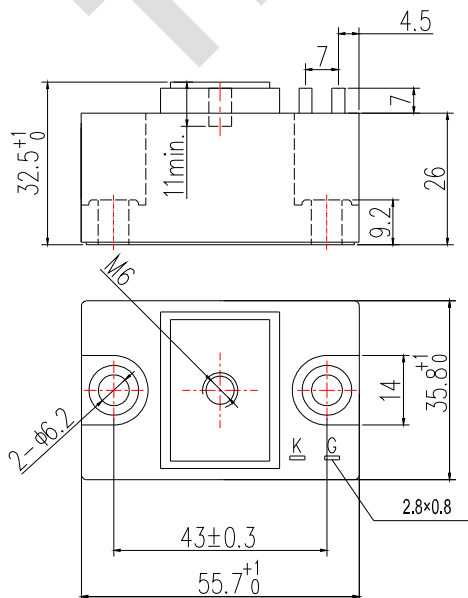


Fig.9

Outline:



Unmarked dimensional tolerance: $\pm 0.5mm$

TECHSEM reserves the right to change specifications without notice.