**Features:**

- n Isolated mounting base 2500V~
- n Pressure contact technology with Increased power cycling capability
- n Space and weight saving

Typical Applications

- n Inverter
- n Inductive heating
- n Chopper

| V _{DRM} , V _{R_{RRM}} | Type & Outline | |
|---|-----------------|-----------------|
| | Type | Outline |
| 800V | MKx400-08-416F3 | MHx400-08-416F3 |
| 1000V | MKx400-10-416F3 | MHx400-10-416F3 |
| 1200V | MKx400-12-416F3 | MHx400-12-416F3 |
| 1400V | MKx400-14-416F3 | MHx400-14-416F3 |
| 1600V | MKx400-16-416F3 | MHx400-16-416F3 |
| 1800V | MKx400-18-416F3 | MHx400-18-416F3 |

| 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 | | | 400 | A | |
| I _{T(RMS)} | RMS on-state current | | | | | 628 | A | |
| I _{DRM} I _{R_{RRM}} | Repetitive peak current | at V _{DRM} at V _{R_{RRM}} | 125 | | | 100 | mA | |
| I _{TSM} | Surge on-state current | 10ms half sine wave | 125 | | | 8 | kA | |
| I ² t | I ² t for fusing coordination | V _R =60%V _{R_{RRM}} | | | | 320 | A ² s*10 ³ | |
| V _{TO} | Threshold voltage | | 125 | | | 0.83 | V | |
| r _T | On-state slope resistance | | | | | 0.72 | mΩ | |
| V _{TM} | Peak on-state voltage | I _{TM} =1200A | 25 | | | 2.40 | 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 | | | 200 | A/μs | |
| Q _{rr} | Recovery charge | I _{TM} =300A, t _p =4000μs, di/dt=-20A/μs, V _R =100V | 125 | | 650 | | μC | |
| t _q | Circuit commutated turn-off time | I _{TM} =300A, t _p =4000μs, V _R =100V dv/dt=30V/μs, di/dt=-20A/μs | 125 | 15 | | 35 | μs | |
| I _{GT} | Gate trigger current | V _A =12V, I _A =1A | 25 | | | 30 | 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 | | | | 0.065 | °C/W | |
| R _{th(c-h)} | Thermal resistance case to heatsink | Single side cooled per chip | | | | 0.023 | °C/W | |
| V _{iso} | Isolation voltage | 50Hz, R.M.S, t=1min, I _{isc} :1mA(MAX) | | 2500 | | | V | |
| F _m | Terminal connection torque(M10) | | | | 12.0 | | N·m | |
| | Mounting torque(M6) | | | | 6.0 | | N·m | |
| T _{vj} | Junction temperature | | | -40 | | 115 | °C | |
| T _{stg} | Stored temperature | | | -40 | | 115 | °C | |
| W _t | Weight | | | | 1500 | | g | |
| Outline | 416F3 | | | | | | | |

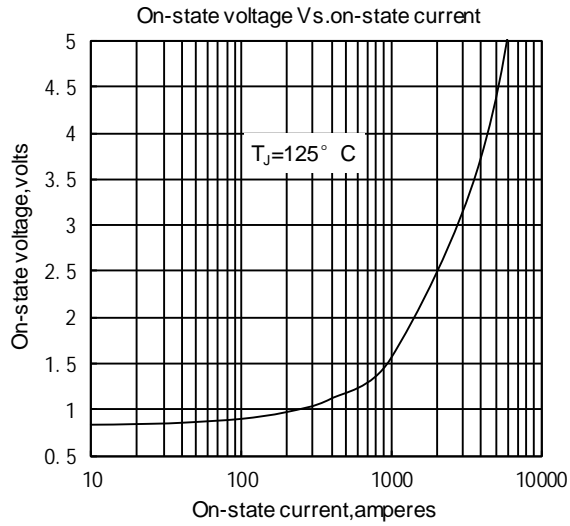


Fig.1

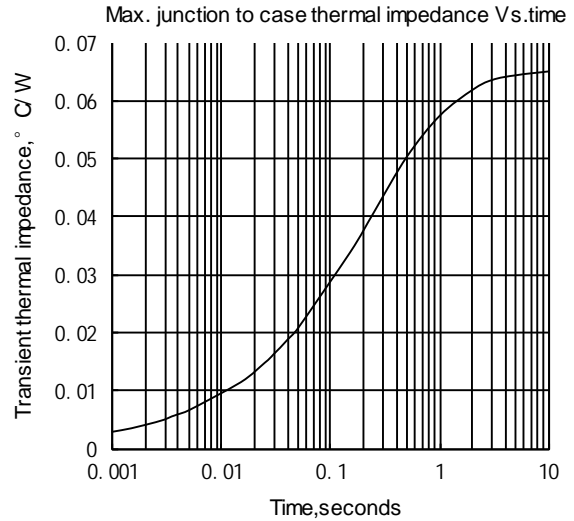


Fig.2

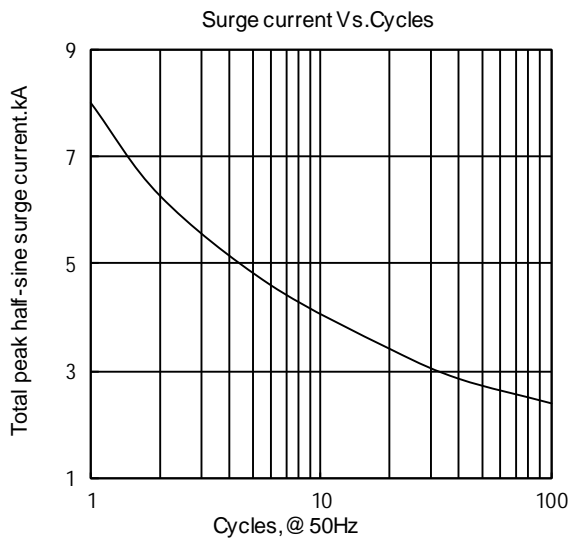


Fig.3

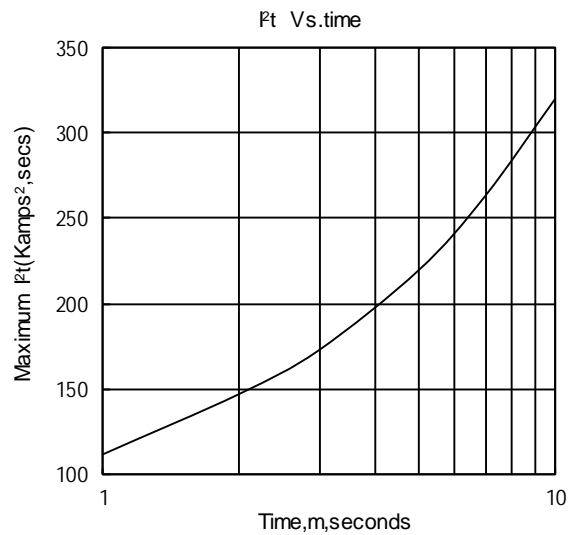


Fig.4

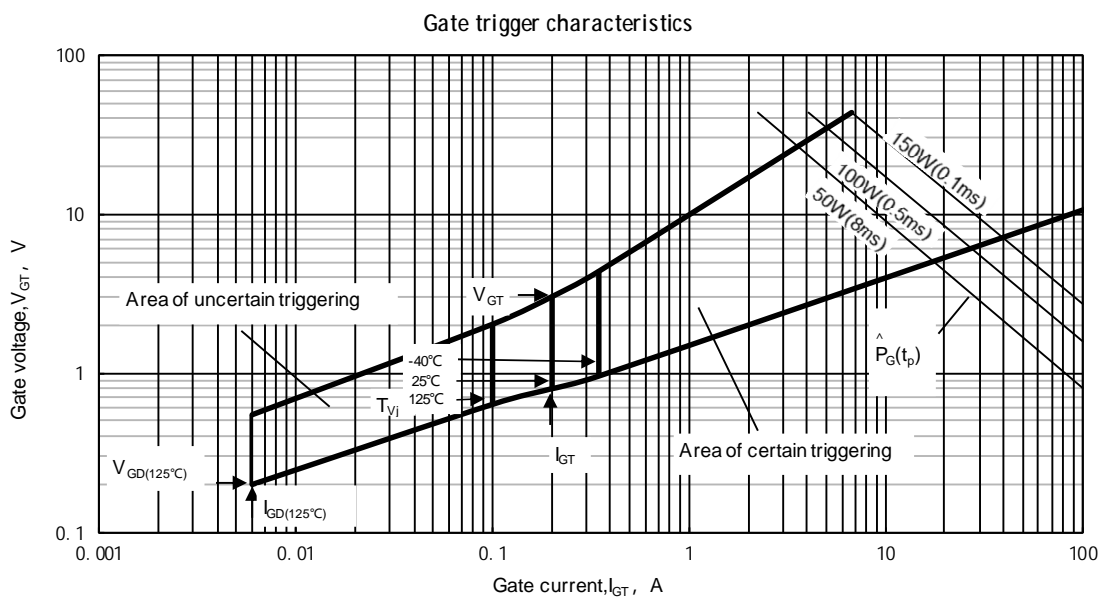
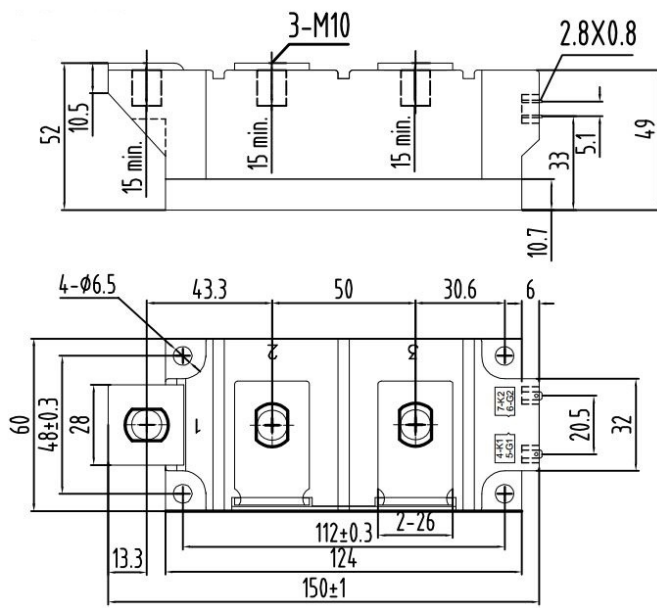


Fig.5

Outline:



Unmarked dimensional tolerance: ± 0.5mm

TECHSEM reserves the right to change specifications without notice.

