

### Feature

- The chips are electrically insulated from bottom plate, 2500V AC voltage
- Complete pressure connection structure, with excellent temperature Characteristics and power cycling capacity
- Forced air cooling for modules below 400A and air cooling or water Cooling for modules above 500A

### Typical application

- DC power supplies of appliances and devices
- AC and DC motor control, Soft starting for motors
- Various rectifying power supply
- Electric welders, Frequency transformers, Battery charging and discharging

|             |                  |
|-------------|------------------|
| $I_{F(AV)}$ | 110A             |
| $V_{RRM}$   | 500-2500V        |
| $I_{FSM}$   | 2.6 KA           |
| $I^2t$      | 34.4 $10^3 A^2s$ |

| SYMBOL               | CHARCTERISTIC                            | TEST CONDITIONS                                                                                                            | T <sub>J</sub><br>(℃) | VALUE |       | UNIT                |
|----------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------|-------|-------|---------------------|
|                      |                                          |                                                                                                                            |                       | Min   | Max   |                     |
| I <sub>F(AV)</sub>   | Mean forward current                     | 180° half sine wave, 50HZ<br>Single heat sink, T <sub>C</sub> =98℃                                                         | 150                   |       | 110   | A                   |
| I <sub>T(RMS)</sub>  | RMS current                              |                                                                                                                            | 150                   |       | 173   | A                   |
| V <sub>RRM</sub>     | Repetitive peak reverse voltage          | V <sub>DRM</sub> &V <sub>RRM</sub> tp=10ms<br>V <sub>DSM</sub> &V <sub>RSM</sub> =V <sub>DRM</sub> &V <sub>RRM</sub> +200V | 150                   | 500   | 2500  | V                   |
| I <sub>RRM</sub>     | Repetitive peak current                  | V <sub>RM</sub> =0V <sub>RRM</sub>                                                                                         | 150                   |       | 8     | mA                  |
| I <sub>FSM</sub>     | Surge on-state current                   | 10ms half sine wave<br>V <sub>R</sub> =0.6V <sub>RRM</sub>                                                                 | 150                   |       | 2.6   | KA                  |
| I <sup>2</sup> t     | I <sup>2</sup> t for fusing coordination |                                                                                                                            |                       |       | 34.4  | A <sup>2S</sup> *10 |
| V <sub>TO</sub>      | Threshold voltage                        |                                                                                                                            | 150                   |       | 0.80  | V                   |
| r <sub>T</sub>       | On-state slop resistance                 |                                                                                                                            |                       |       | 1.74  | mΩ                  |
| V <sub>FM</sub>      | Peak on-state voltage                    | I <sub>TM</sub> =330A                                                                                                      | 25                    |       | 1.45  | V                   |
| R <sub>th(j-c)</sub> | Thermal impedance node to the shell      | 180 ° sine wave, single heat sink                                                                                          |                       |       | 0.350 | ℃/W                 |
| R <sub>th(c-h)</sub> | Thermal impedance ( shell to powder)     | 180 ° sine wave, single heat sink                                                                                          |                       |       | 0.15  | ℃/W                 |
| V <sub>iso</sub>     | Insulation voltage                       |                                                                                                                            |                       | 2500  |       | V                   |
| F <sub>M</sub>       | Mounting force (M5)                      |                                                                                                                            |                       |       | 4     | N-m                 |
|                      | Mounting force (M6)                      |                                                                                                                            |                       |       | 6     | N-m                 |
| T <sub>stq</sub>     | Stored temperature                       |                                                                                                                            |                       | -40   | 125   | ℃                   |
| W <sub>t</sub>       | Weight                                   |                                                                                                                            | 105                   |       |       | g                   |
| Outline              |                                          |                                                                                                                            |                       |       |       |                     |

Peak forward Voltage Vs. Peak forward Current

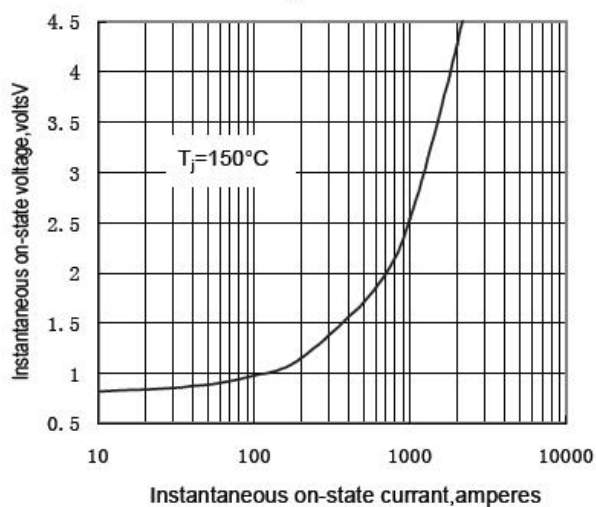


Fig.1

Max. junction To case Thermal Impedance Vs. Time

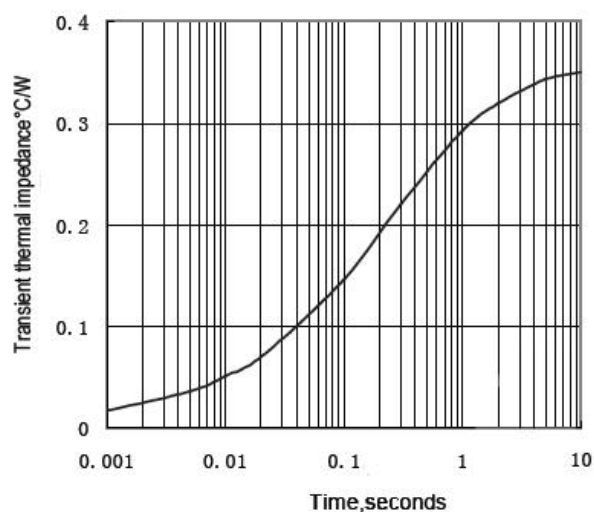


Fig.2

Max. Power Dissipation Vs. Mean forward Current

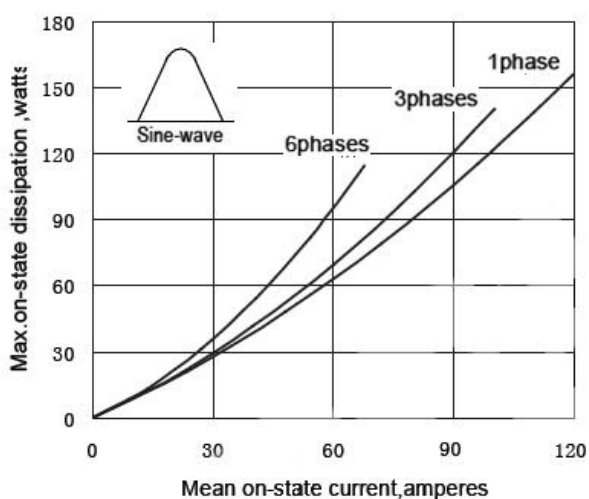


Fig.3

Max. heatsink Temperature Vs. Mean On-state Current

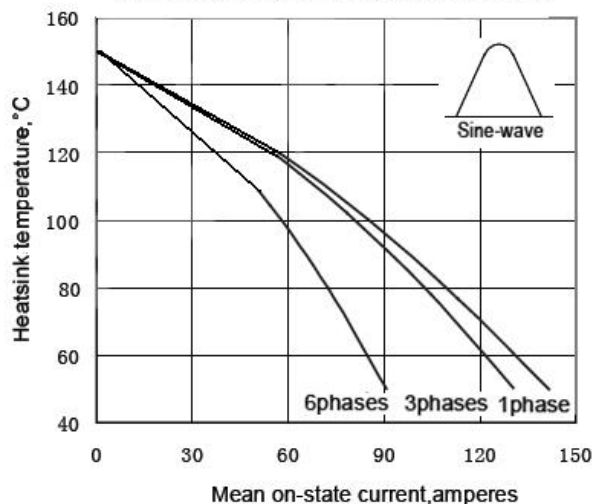


Fig.4

Max. Power Dissipation Vs. Mean On-state Current

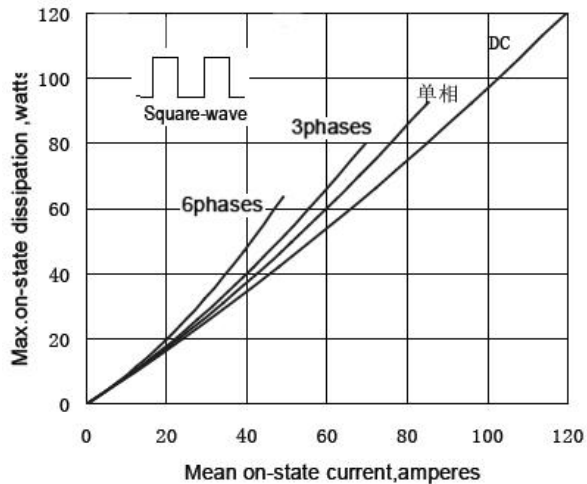


Fig.5

Max. case Temperature Vs. Mean forward Current

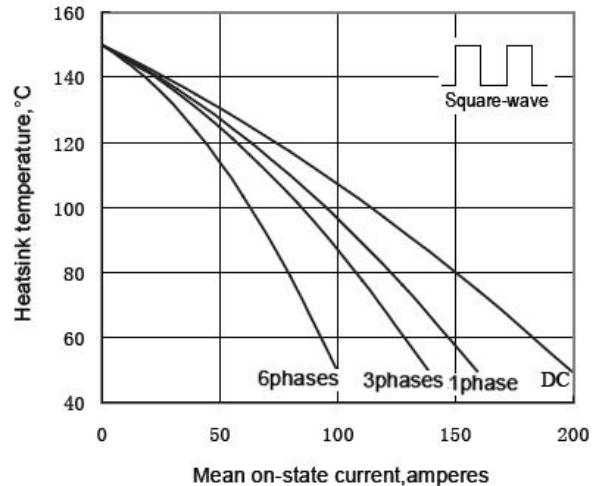


Fig.6

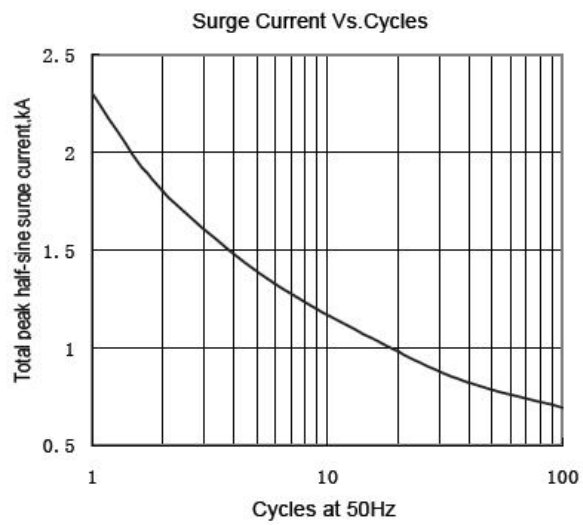


Fig.7

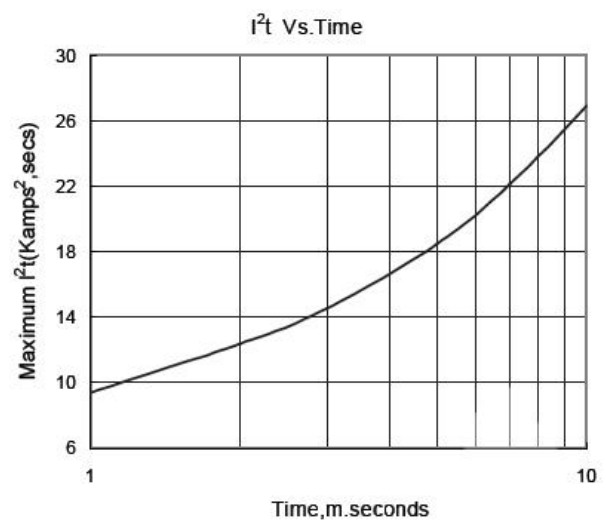
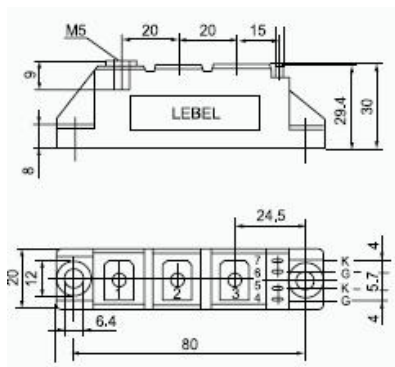


Fig.8

Outline in MM :



1

Circuit Drawing :

