

THERMAL RESISTANCES

| Symbol | Parameter | Value | Unit |
|--------------|--|-------|------|
| Rth (j-c) DC | Junction to case for DC | 1.5 | °C/W |
| Rth (j-c) AC | Junction to case for 360° conduction angle (F= 50 Hz) | 1.1 | °C/W |

GATE CHARACTERISTICS (maximum values)

P_G (AV) = 1W P_{GM} = 40W (tp = 20 μ s) I_{GM} = 8A (tp = 20 μ s) V_{GM} = 16V (tp = 20 μ s).

ELECTRICAL CHARACTERISTICS

| Symbol | Test Conditions | | Quadrant | | Suffix | | Unit |
|--------------------------------------|--|-----------------------|-------------|-----|--------|-----|------|
| | | | | | A | B | |
| I _{GT} | V _D =12V (DC) R _L =33Ω | T _j =25°C | I-II-III | MAX | 100 | 50 | mA |
| | | | IV | MAX | 150 | 100 | |
| V _{GT} | V _D =12V (DC) R _L =33Ω | T _j =25°C | I-II-III-IV | MAX | 1.5 | | V |
| V _{GD} | V _D =V _{DRM} R _L =3.3kΩ | T _j =125°C | I-II-III-IV | MIN | 0.2 | | V |
| tgt | V _D =V _{DRM} I _G = 500mA dI _G /dt = 3A/μs | T _j =25°C | I-II-III-IV | TYP | 2.5 | | μs |
| I _L | I _G =1.2 I _{GT} | T _j =25°C | I-III-IV | TYP | 70 | 60 | mA |
| | | | II | | 200 | 180 | |
| I _H * | I _T = 500mA gate open | T _j =25°C | | MAX | 100 | 80 | mA |
| V _{TM} * | I _{TM} = 42A tp= 380μs | T _j =25°C | | MAX | 1.8 | | V |
| I _{DRM} I _{RRM} | V _{DRM} Rated V _{RRM} Rated | T _j =25°C | | MAX | 0.01 | | mA |
| | | T _j =125°C | | MAX | 6 | | |
| dV/dt * | Linear slope up to V _D =67%V _{DRM} gate open | T _j =125°C | | MIN | 250 | | V/μs |
| (dV/dt) _c * | (dI/dt) _c = 13.3A/ms | T _j =125°C | | MIN | 10 | | V/μs |

* For either polarity of electrode A2 voltage with reference to electrode A1.

ORDERING INFORMATION

| Package | $I_T(\text{RMS})$ | $V_{\text{DRM}} / V_{\text{RRM}}$ | Sensitivity Specification | |
|--------------------|-------------------|-----------------------------------|---------------------------|---|
| | A | V | A | B |
| BTA (Insulated) | 30 | 400 | X | X |
| | | 600 | X | X |
| | | 700 | X | X |
| | | 800 | X | X |

Fig.1 : Maximum RMS power dissipation versus RMS on-state current ($F=50\text{Hz}$).
(Curves are cut off by $(di/dt)_c$ limitation)

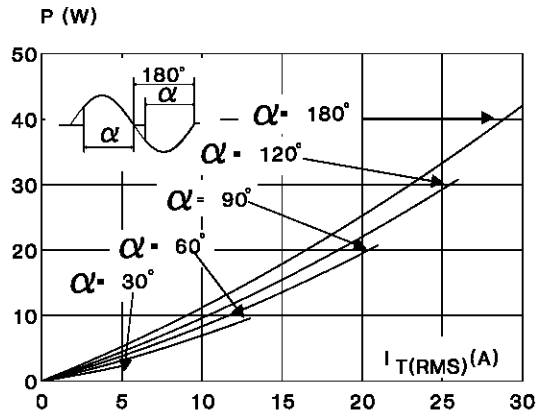


Fig.3 : RMS on-state current versus case temperature.

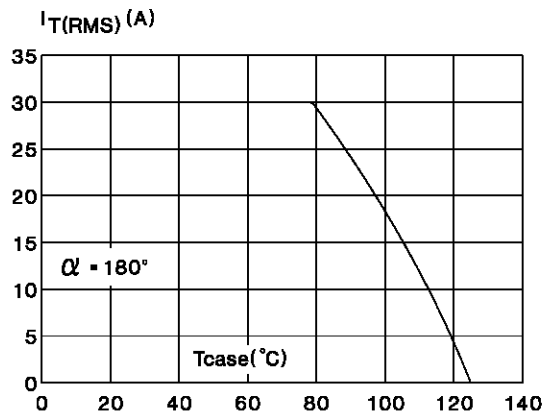


Fig.2 : Correlation between maximum RMS power dissipation and maximum allowable temperatures (T_{amb} and T_{case}) for different thermal resistances heatsink + contact.

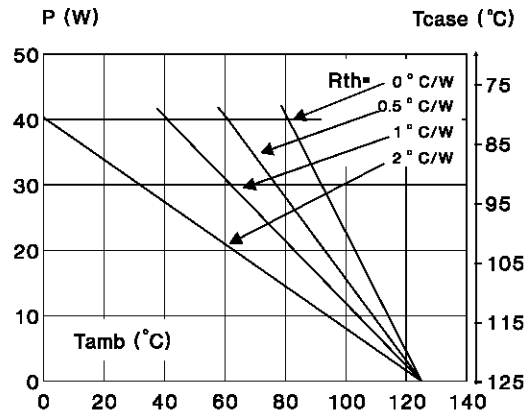


Fig.4 : Relative variation of thermal impedance junction to case versus pulse duration.

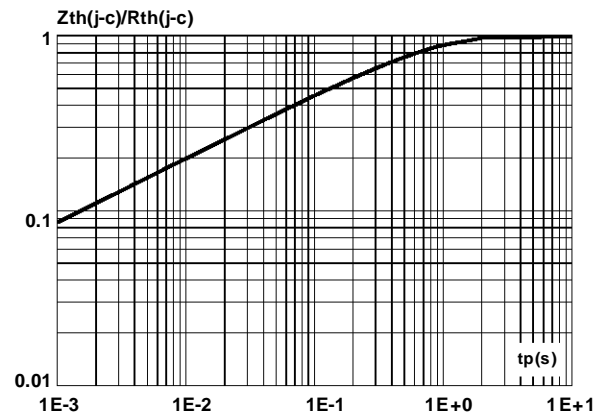


Fig.5 : Relative variation of gate trigger current and holding current versus junction temperature.

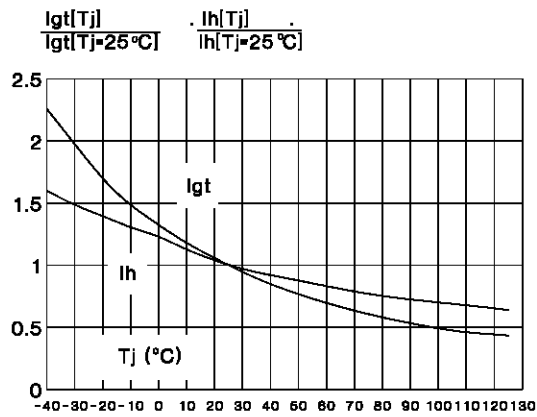


Fig.6 : Non Repetitive surge peak on-state current versus number of cycles.

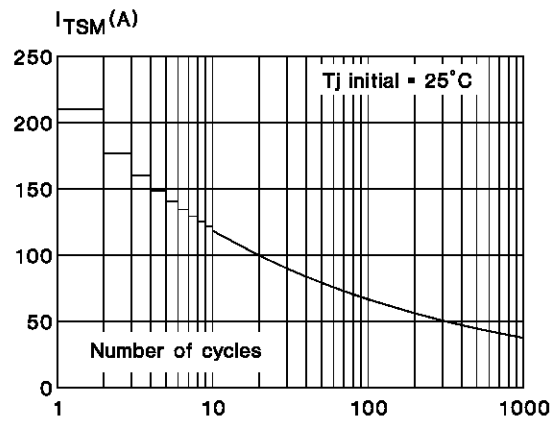


Fig.7 : Non repetitive surge peak on-state current for a sinusoidal pulse with width : $t \leq 10\text{ms}$, and corresponding value of I^2t .

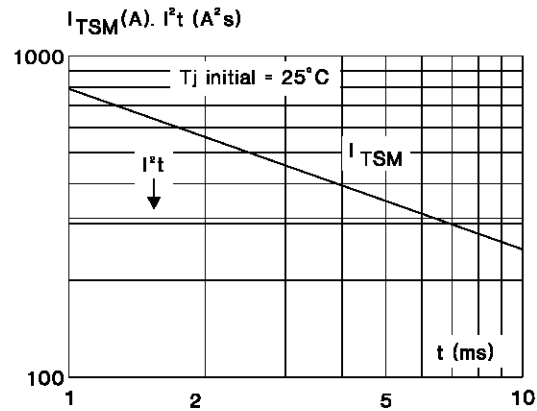
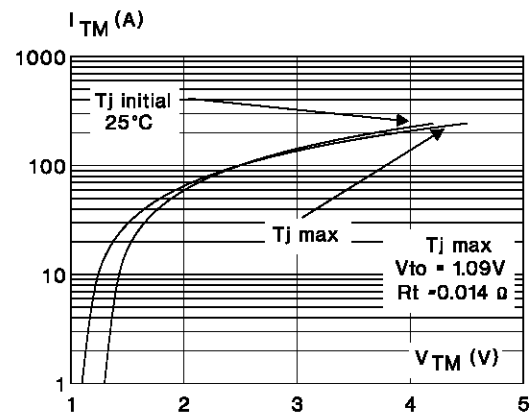
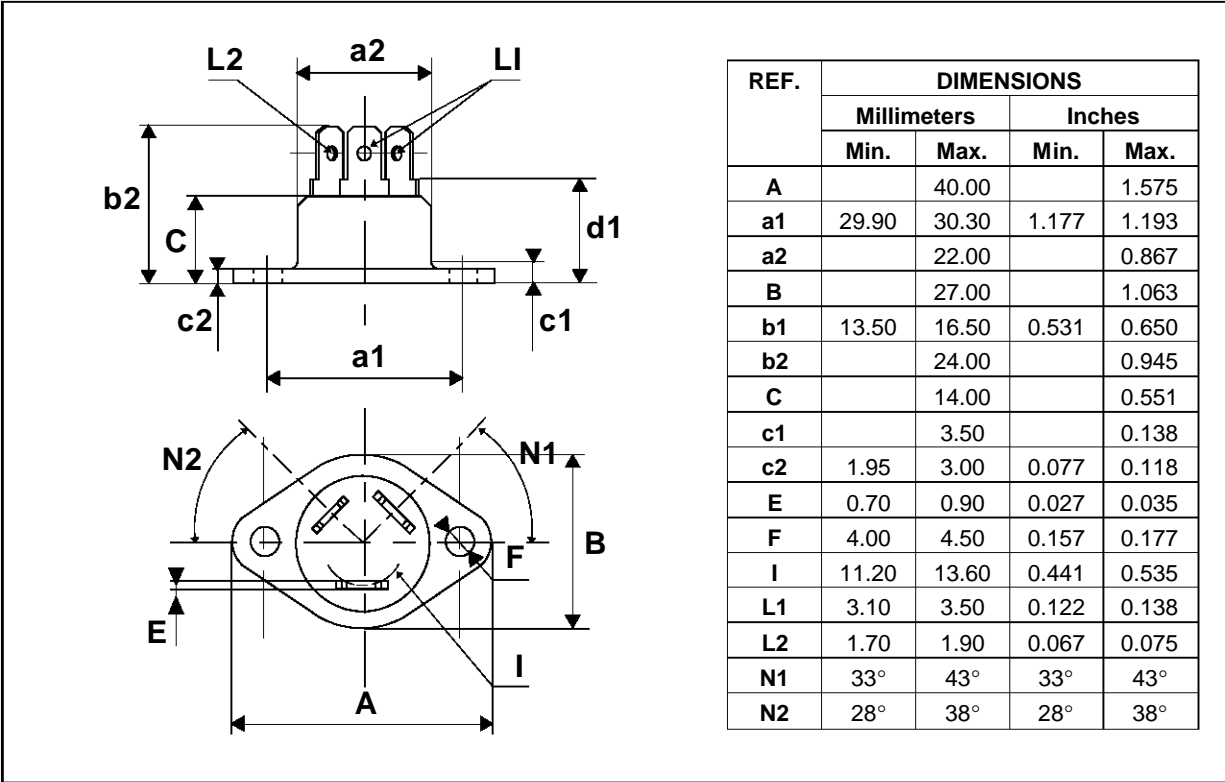


Fig.8 : On-state characteristics (maximum values).



PACKAGE MECHANICAL DATA

RD91 Plastic



Marking : type number
Weight : 20 g

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