

| VRRM | IF (TC≤125℃) | QC |
|------|--------------|------|
| 650V | 12A | 23nC |

Applications:

- Switch Mode Power Supplies
- Power Factor Correction
- Motor drive, PV Inverter, Wind Power Station

Features:

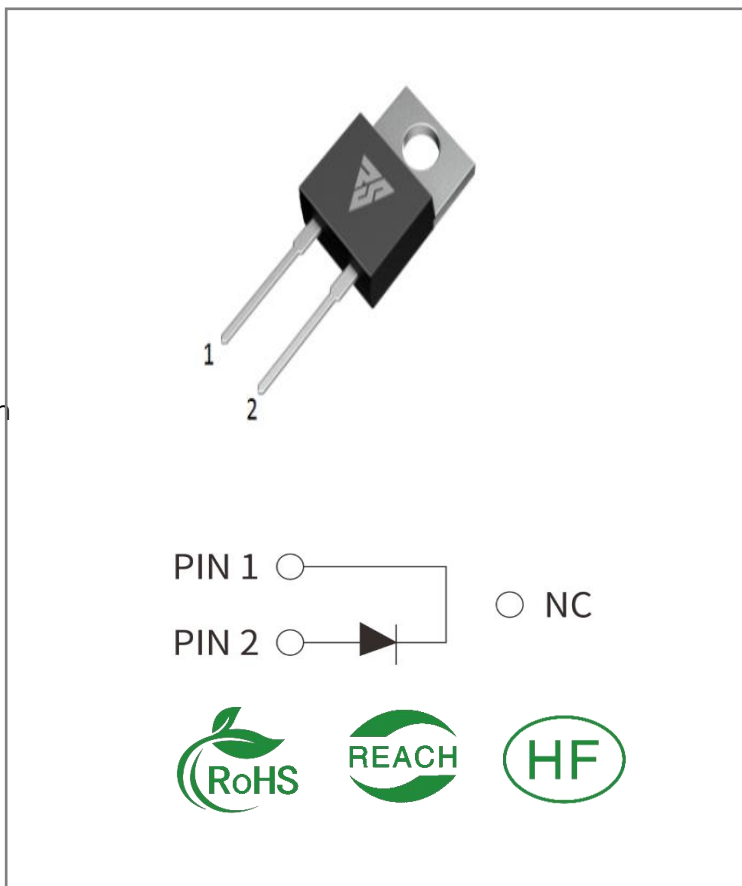
- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- Positive Temperature Coefficient on VF
- Temperature-independent Switching
- 175°C Operating Junction Temperature

Benefits:

- Replace Bipolar with Unipolar Device
- Reduction of Heat Sink Size
- Parallel Devices Without Thermal Runaway
- Essentially No Switching Losses

Ordering Information

| Part Number | Package | Marking | Packing | Qty. |
|-------------|--------------|-----------|---------|--------|
| RSS06065B | TO-220-2 内绝缘 | RSS06065B | Tube | 50 PCS |



Maximum Ratings (T_J = 25°C unless otherwise specified)

| Symbol | Parameter | Value | Unit | Test Conditions | Note |
|-----------------------------------|--|---------------|------|---|-------|
| VRRM | Repetitive Peak Reverse Voltage | 650 | V | TC = 25°C | |
| VRSM | Surge Peak Reverse Voltage | 650 | V | TC = 25°C | |
| VR | DC Blocking Voltage | 650 | V | TC = 25°C | |
| IF | Forward Current | 21 12 6 | A | TC ≤ 25°C TC ≤ 125°C TC ≤ 150°C | Fig.3 |
| IFSM | Non-Repetitive Forward Surge Current | 50 42 | A | TC = 25°C, tp = 10ms, Half Sine Wave TC = 110°C, tp = 10ms, Half Sine Wave | |
| IFRM | Repetitive Peak Forward Surge Current | 35 | A | TC = 25°C, tp = 10ms, Half Sine Wave | |
| P _{tot} | Power Dissipation | 70 | W | TC = 25°C | Fig.4 |
| TC | Maximum Case Temperature | 150 | °C | | |
| T _J , T _{STG} | Operating Junction and Storage Temperature | -55 to 175 | °C | | |

Electrical Characteristics (T_J = 25°C unless otherwise specified)

| Symbol | Parameter | Typ. | Max. | Unit | Test Conditions | Note |
|--------|-------------------------|-----------------|------------|------|--|-------|
| VF | Forward Voltage | 1.42 1.59 | 1.6 1.8 | V | IF = 6A, T _J = 25°C IF = 6A, T _J = 175°C | Fig.1 |
| IR | Reverse Current | 2 15 | 30 120 | μA | VR = 650V, T _J = 25°C VR = 650V, T _J = 175°C | Fig.2 |
| C | Total Capacitance | 423 44 37 | / | pF | VR = 1V, T _J = 25°C, f = 1MHz VR = 200V, T _J = 25°C, f = 1MHz VR = 400V, T _J = 25°C, f = 1MHz | Fig.5 |
| QC | Total Capacitive Charge | 23 | / | nC | VR = 400V, | |

Thermal Characteristics (T_J = 25°C unless otherwise specified)

| Symbol | Parameter | Typ. | Unit | Note |
|------------------|--|------|------|-------|
| R _{θJC} | Thermal Resistance from Junction to Case | 2.3 | °C/W | Fig.6 |

Typical Feature Curve

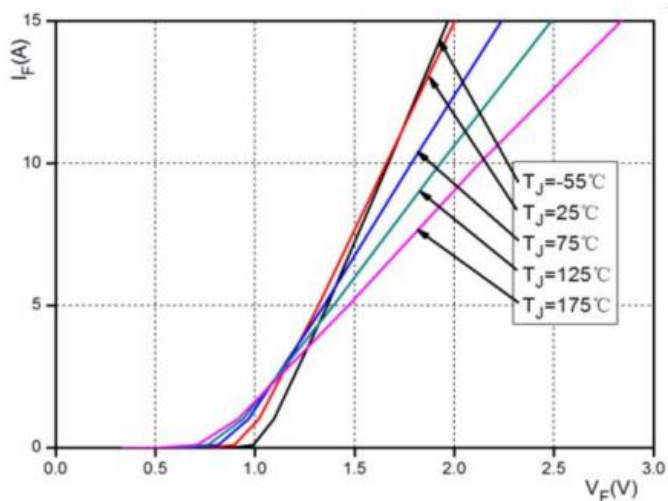


图 1. 正向特性曲线

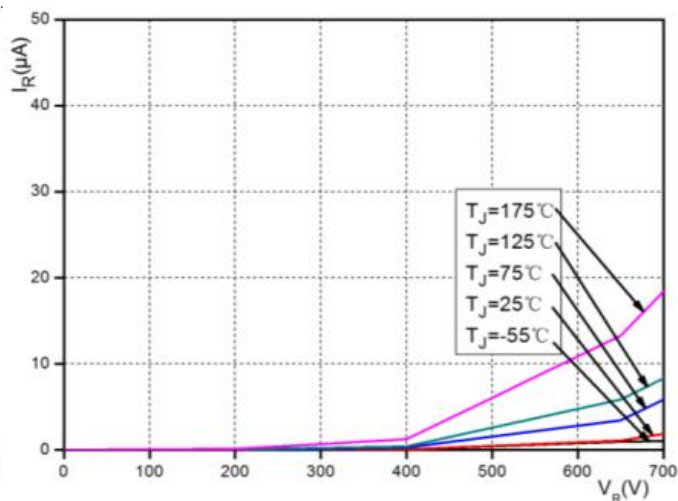


图 2 反向特性

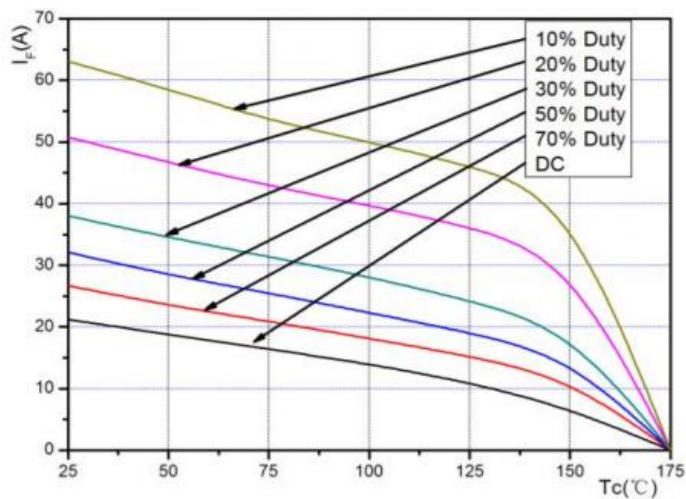


图 3 不同负载下的电流

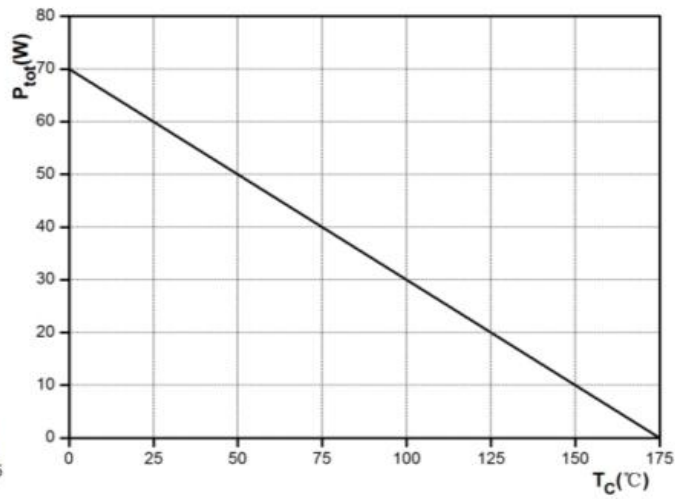


图 4 耗散功率曲线

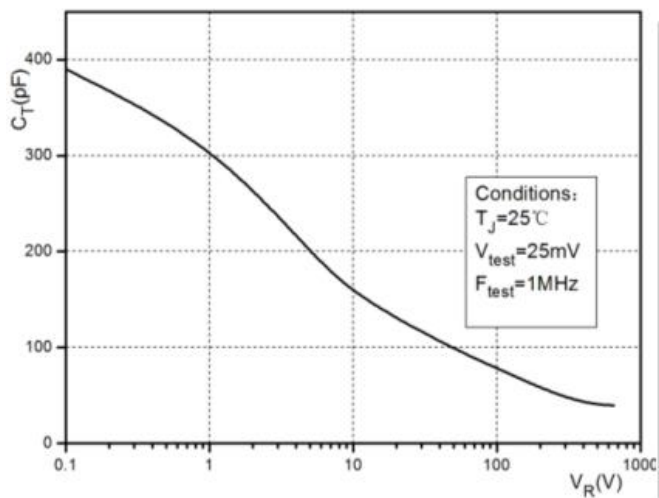


图 5 电容—反向电压曲线

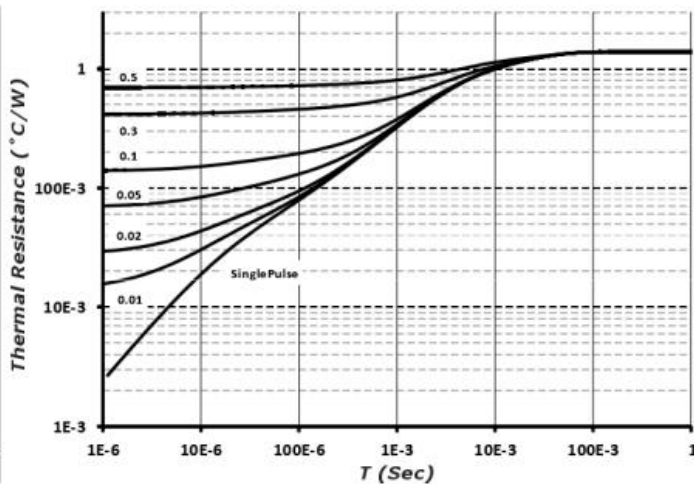
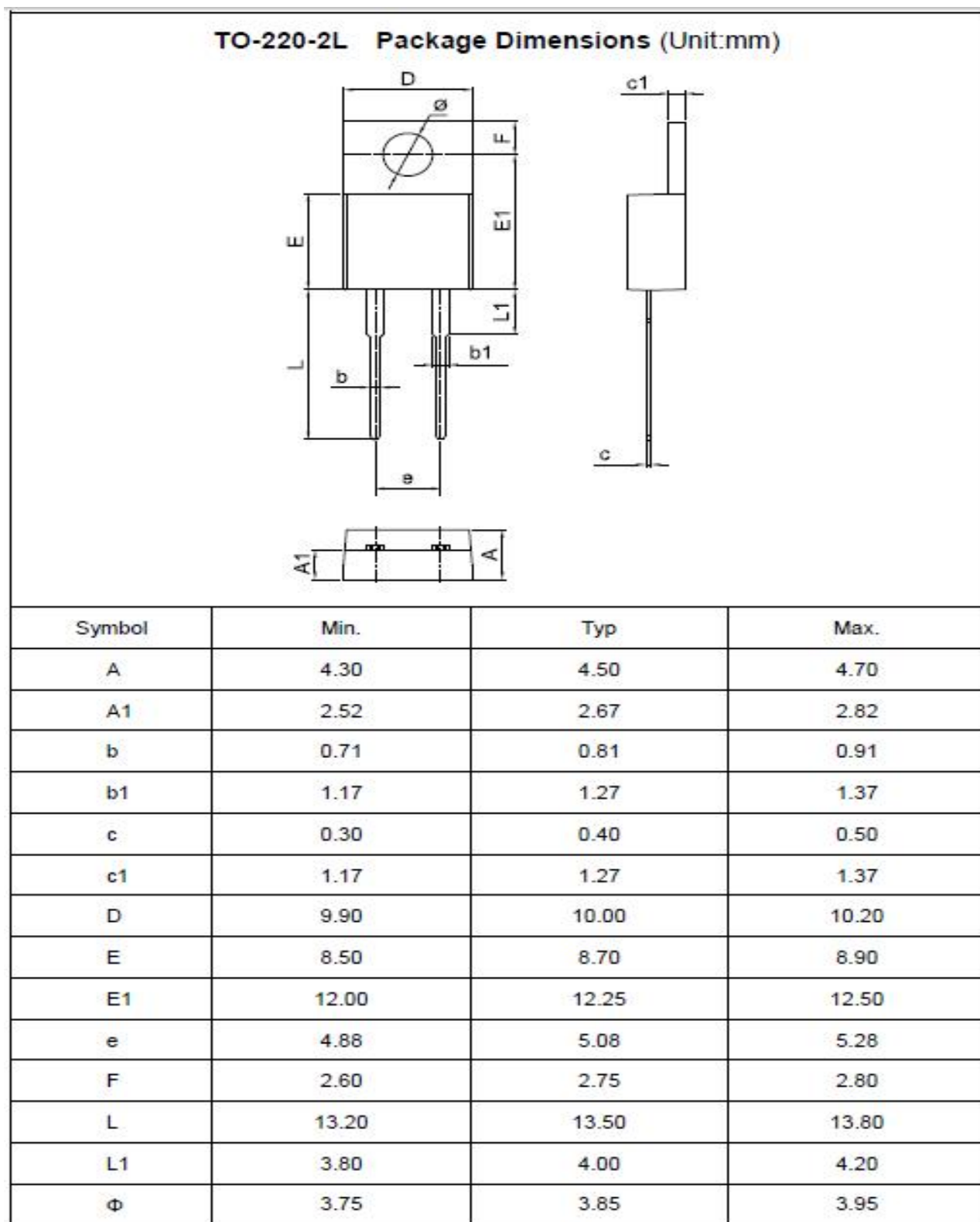


图 6 结到壳热阻曲线

Package outline drawing(TO-220 Unit: mm)



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