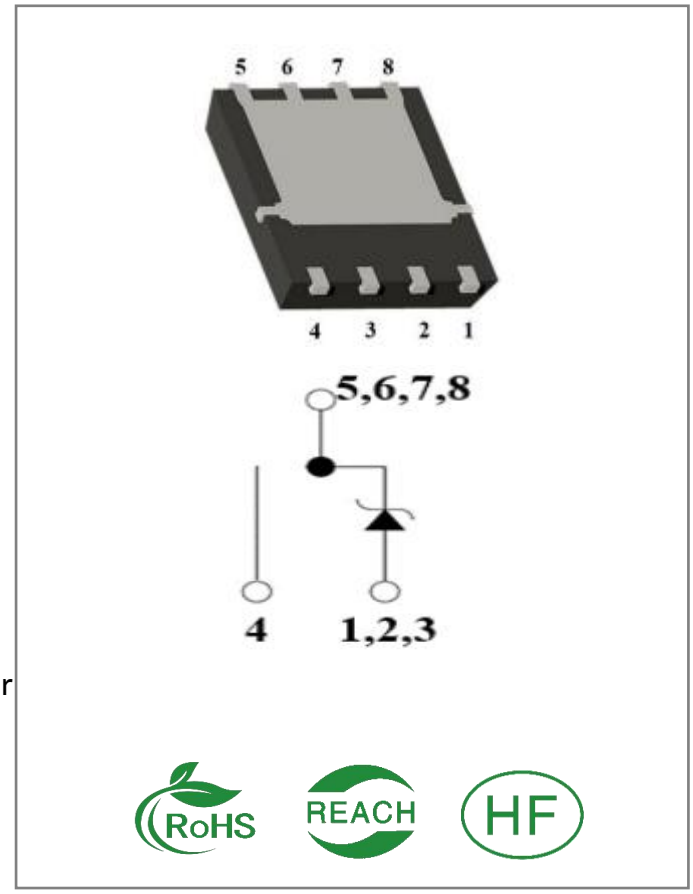
| VRRM | IF ( TC=150℃) | QC |
|---|---|---|
| 650V | 4.8A | 9.5nC |




## Applications:

- Power Factor Correction
- Sever Mode Power Supplies
- Uninterruptible Power Supply

## Features:

- Low Forward Voltage Drop
- High-Speed Switching
- Positive Temperature Coefficient
- Temperature-Independent Switching Behavior

## Ordering Information

| Part Number | Package | Marking | Packing | Qty. |
|---|---|---|---|---|
| RSS04065G | DFN5*6 | RSS04065G | Tape&reel | 5000 PCS |

## Maximum Ratings (TJ= 25℃ unless otherwise specified)

| Symbol | Parameter | Value | Unit | Test Conditions | Note |
|---|---|---|---|---|---|
| VRRM | Repetitive Peak Reverse Voltage | 650 | V | | |
| VRSM | Surge Peak Reverse Voltage | 650 | V | | |
| VR | DC Blocking Voltage | 650 | V | | |
| IF | Forward Current | 4.8 | A | TC = 150℃ | Fig.7 |
| IFSM | Non-Repetitive Forward Surge Current | 26 | A | TC = 25℃, tp = 10ms Half Sine Wave | |
| IF,Max | Non-Repetitive Peak Forward Surge Current | 200 | A | TC=25˚C, tP= 10 μs, Pulse | |
| IFRM | Repetitive Peak Forward Surge Current | 20 | A | TC = 25℃, tp = 10ms Half Sine Wave | |
| Ptot | Power Dissipation | 76.5<br>33.2 | W | TC = 25℃<br>TC = 110℃ | Fig.6 |
| $\int t^2dt$ | $I^2t$ value | 3.3 | $A^2S$ | TC = 25℃,tp=10ms | |
| TJ,TSTG | Operating Junction and Storage Temperature | -55 to175 | ℃ | | |

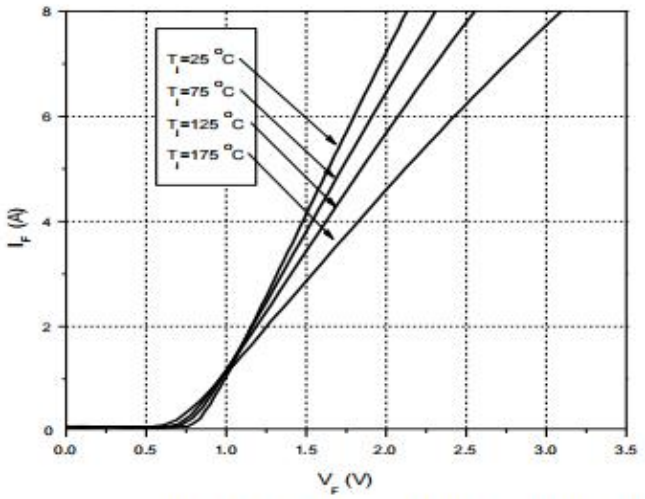
## Electrical Characteristics (TJ= 25℃ unless otherwise specified)

| Symbol | Parameter | Typ. | Max. | Unit | Test Conditions | Note |
|---|---|---|---|---|---|---|
| VF | Forward Voltage | 1.5<br>1.8 | 1.8<br>2.0 | V | IF = 4A, TJ = 25℃<br>IF = 4A, TJ = 175℃ | Fig.1 |
| IR | Reverse Current | 1<br>12 | 20<br>100 | μA | VR =650V, TJ = 25℃<br>VR = 650V, TJ = 175℃ | Fig.2 |
| C | Total Capacitance | 185<br>19.0<br>16.7 | / | pF | VR=0V, TJ = 25℃, f=1MHz<br>VR=200V, TJ = 25℃, f=1MHz<br>VR=400V, TJ = 25℃, f = 1MHz | Fig.3 |
| QC | Total Capacitive Charge | 9.5 | / | nC | VR =400V,TJ = 25℃<br>$Qc=\int_0^{V_R} C(V)dV$ | Fig.4 |
| Ec | Capacitance Stored Energy | 2.4 | / | μJ | VR =400V | Fig.5 |

## Thermal Characteristics (TJ= 25℃ unless otherwise specified)

| Symbol | Parameter | Typ. | Unit | Note |
|---|---|---|---|---|
| RθJC | Thermal Resistance from Junction to Case | 1.95 | ℃/W | |

## Typical Feature Curve



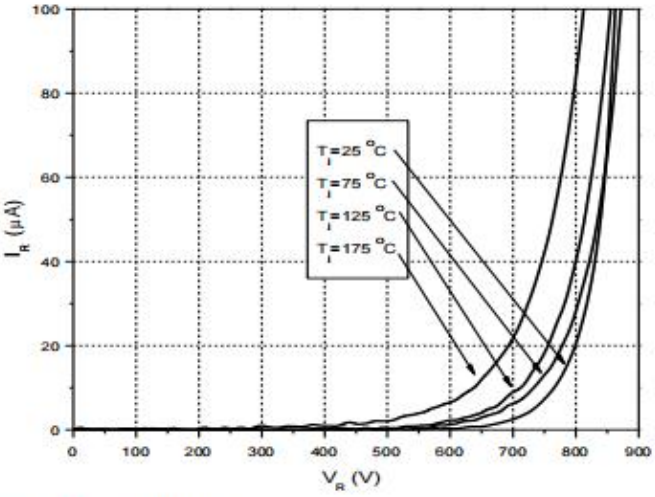




Figure 1.Forward CharacteristicsFigure2. Reverse Characteristics

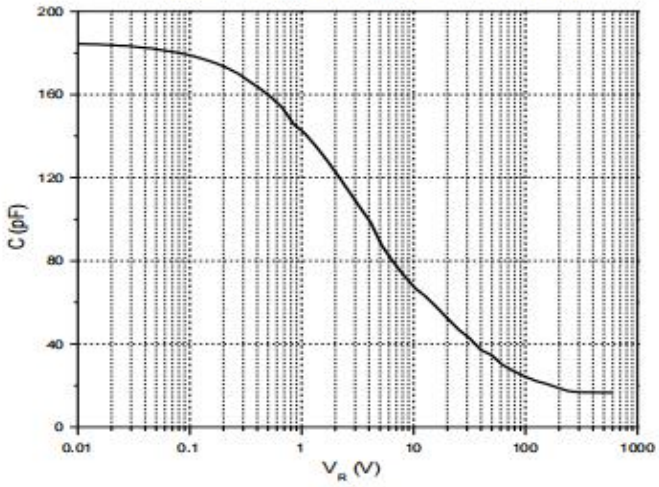



Figure 3.Capacitance vs. Reverse Voltage

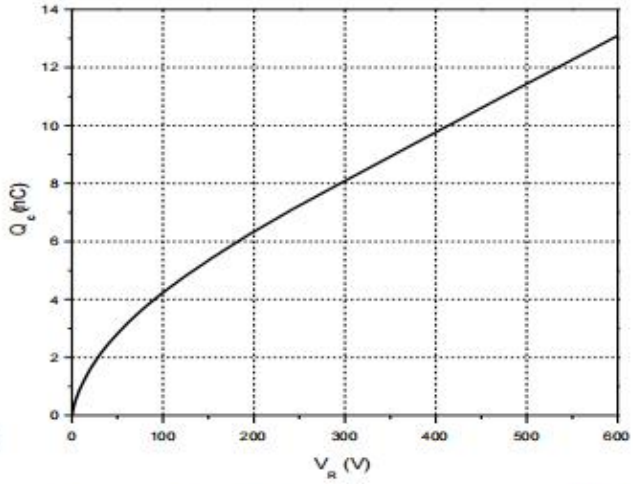



Figure 4. Total Capacitance Charge vs. Reverse Voltage

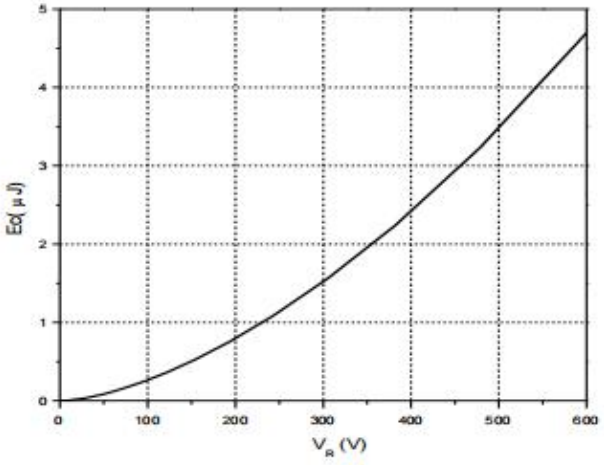



Figure 5. Capacitance Stored Energy

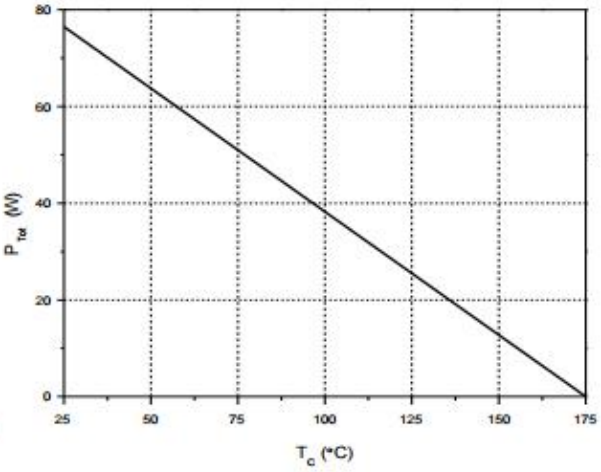



Figure 6. Power Derating

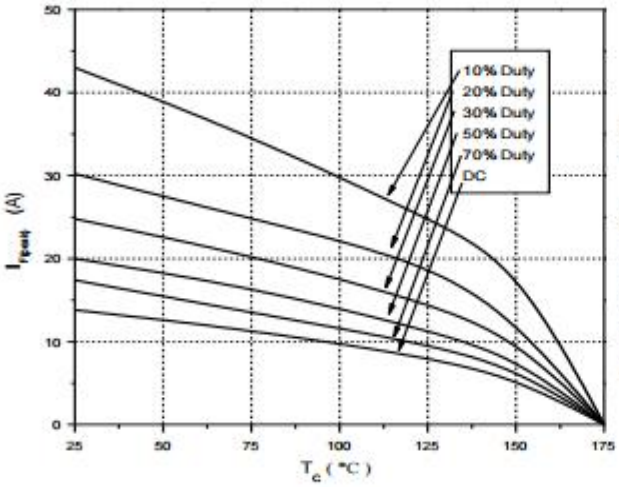



Figure 7. Current Derating

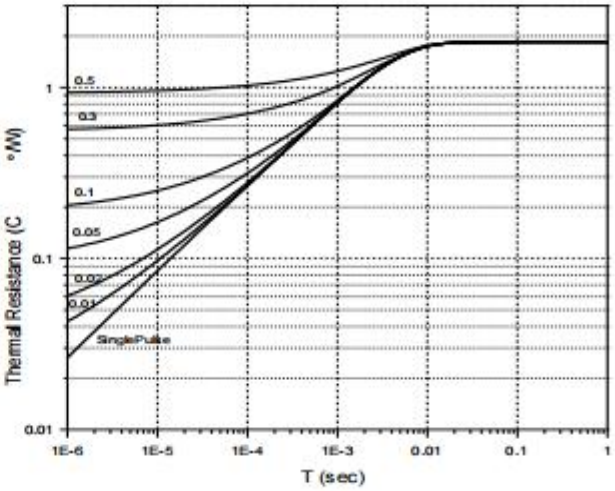
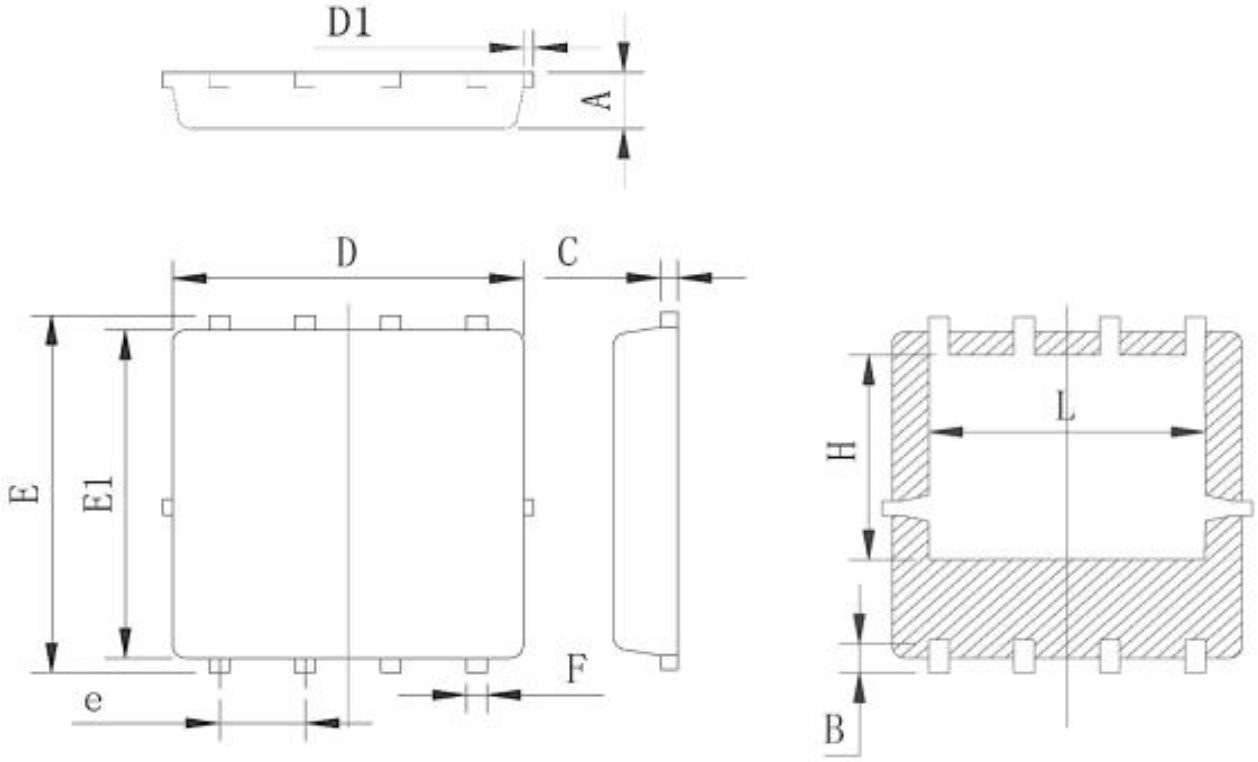



Figure 8. Transient Thermal Impedance

## Package outline drawing(DFN5*6 Unit: mm )




| Symbol | Min | Typ | Max |
|---|---|---|---|
| A | 0.90 | 0.95 | 1.00 |
| B | 0.48 | 0.58 | 0.68 |
| C | 0.20 | 0.254 | 0.30 |
| D | 5.00 | 5.20 | 5.40 |
| D1 | | | 0.15 |
| E | 5.90 | 6.05 | 6.20 |
| E1 | 5.40 | 5.55 | 5.70 |
| e | 1.22 | 1.27 | 1.32 |
| F | 0.25 | 0.30 | 0.35 |
| H | 3.27 | 3.47 | 3.67 |
| L | 3.80 | 4.00 | 4.20 |

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