

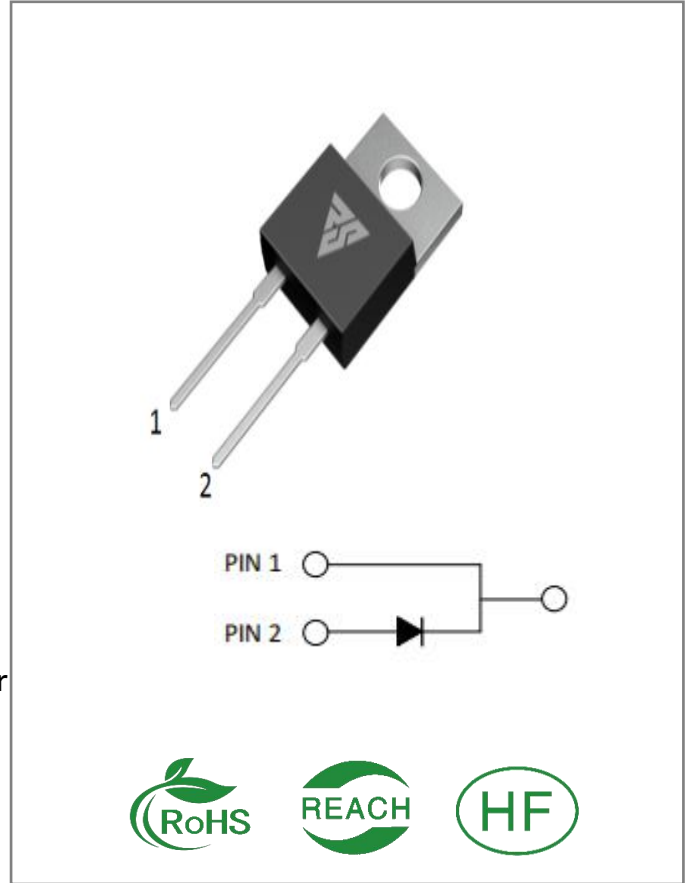
VRRM	IF (TC=150℃)	QC
650V	4.8A	9.5nC

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.
RSS04065A	TO-220-2	RSS04065A	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		
VRSM	Surge Peak Reverse Voltage	650	V		
VR	DC Blocking Voltage	650	V		
IF	Forward Current	4.8	A	TC = 150°C	Fig.7
IFSM	Non-Repetitive Forward Surge Current	26	A	TC = 25°C, t _p = 10ms Half Sine Wave	
IF,Max	Non-Repetitive Peak Forward Surge Current	200	A	TC=25°C, t _P = 10 μs, Pulse	
IFRM	Repetitive Peak Forward Surge Current	20	A	TC = 25°C, t _p = 10ms Half Sine Wave	
P _{tot}	Power Dissipation	76.5 33.2	W	TC = 25°C TC = 110°C	Fig.6
∫t ² dt	I ² t value	3.3	A ² S	TC = 25°C, t _p =10ms	
T _J ,T _{STG}	Operating Junction and Storage Temperature	-55 to175	°C		

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

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
V _F	Forward Voltage	1.5 1.8	1.8 2.0	V	IF = 4A, T _J = 25°C IF = 4A, T _J = 175°C	Fig.1
I _R	Reverse Current	1 12	20 100	μA	VR =650V, T _J = 25°C VR = 650V, T _J = 175°C	Fig.2
C	Total Capacitance	185 19.0 16.7	/	pF	VR=0V, T _J = 25°C, f=1MHz VR=200V, T _J = 25°C, f=1MHz VR=400V, T _J = 25°C, f = 1MHz	Fig.3
Q _C	Total Capacitive Charge	9.5	/	nC	VR =400V, T _J = 25°C Q _c =∫ ₀ ^{V_R} C(V)dV	Fig.4
E _c	Capacitance Stored Energy	2.4	/	μJ	VR =400V	Fig.5

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

Symbol	Parameter	Typ.	Unit	Note
R _{θJC}	Thermal Resistance from Junction to Case	1.96	°C/W	

Typical Feature Curve

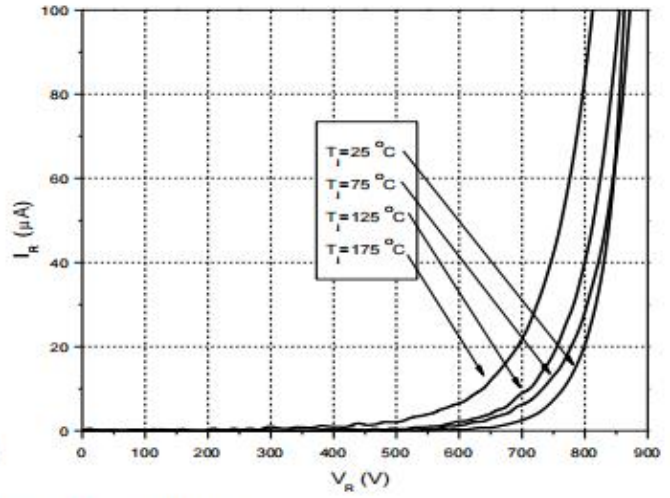
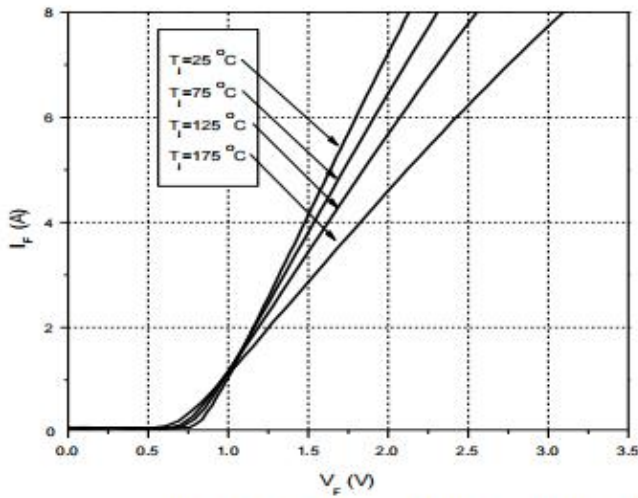


Figure 1. Forward Characteristics Figure 2. Reverse Characteristics

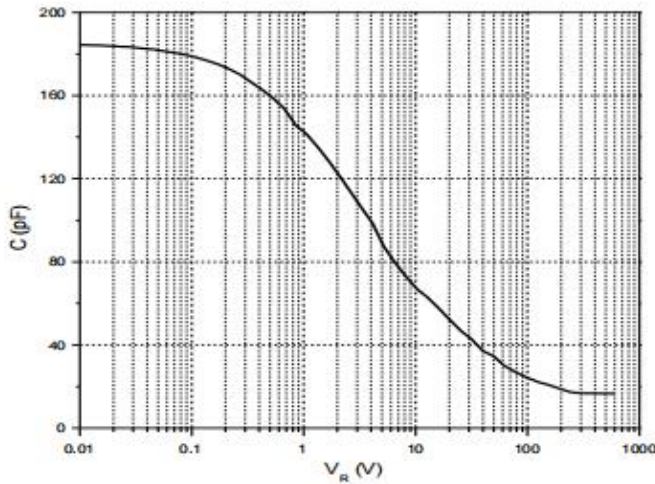


Figure 3. Capacitance vs. Reverse Voltage

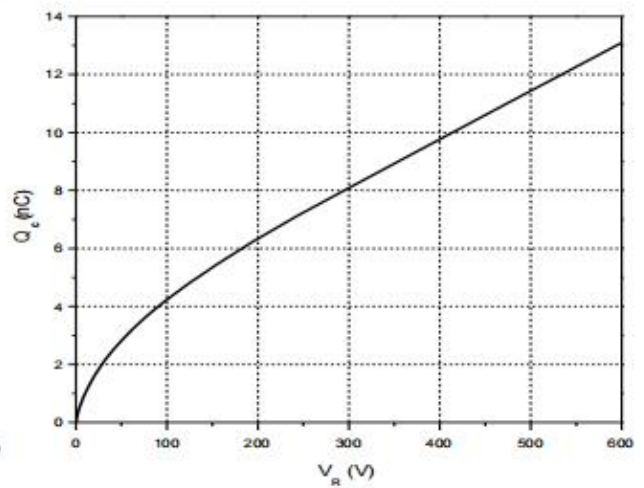


Figure 4. Total Capacitance Charge vs. Reverse Voltage

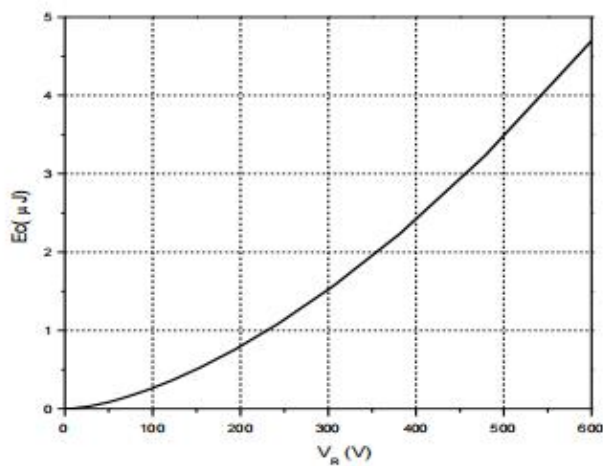


Figure 5. Capacitance Stored Energy

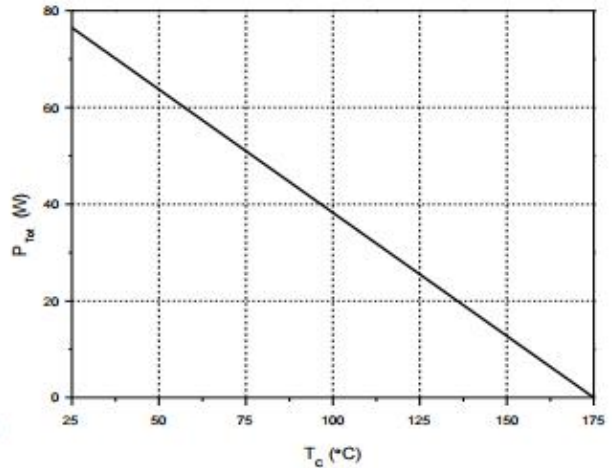


Figure 6. Power Derating

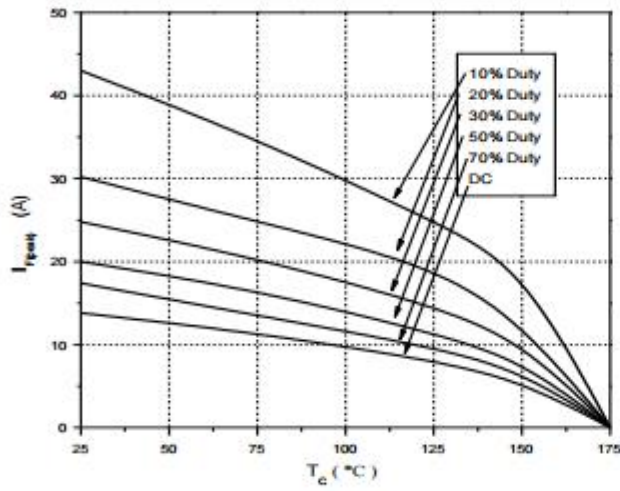


Figure 7. Current Derating

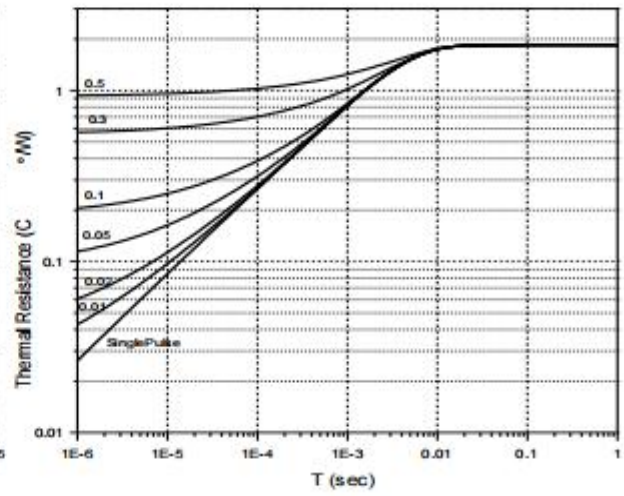
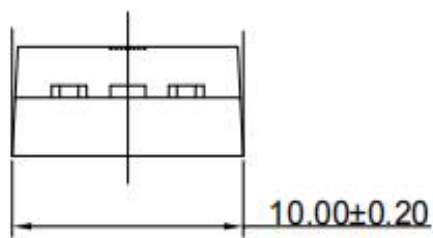
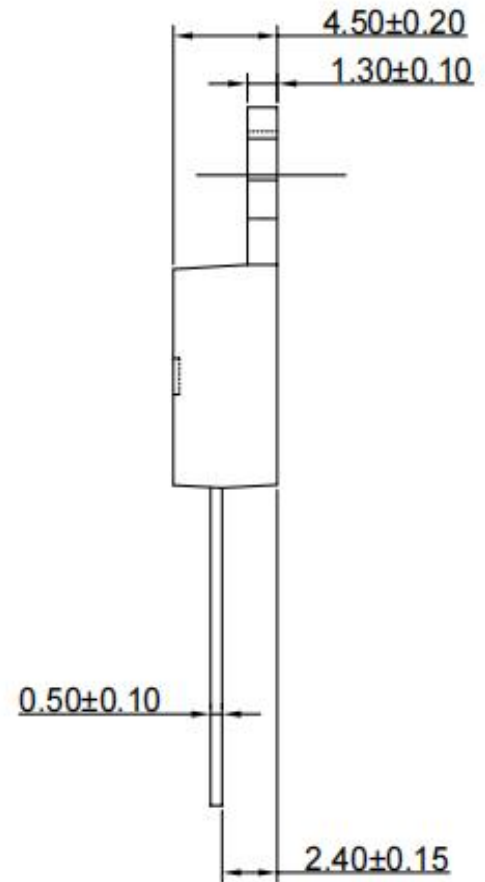
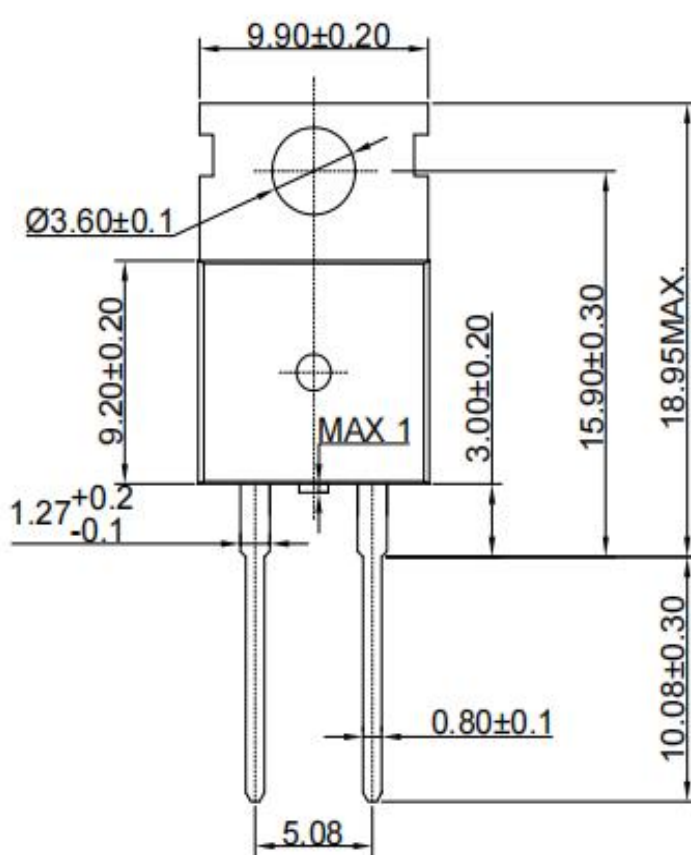


Figure 8. Transient Thermal Impedance

Package outline drawing(TO-220 Unit: mm)



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