

VRRM	IF (TC≤135℃)	QC
650V	24A	48nC

Applications:

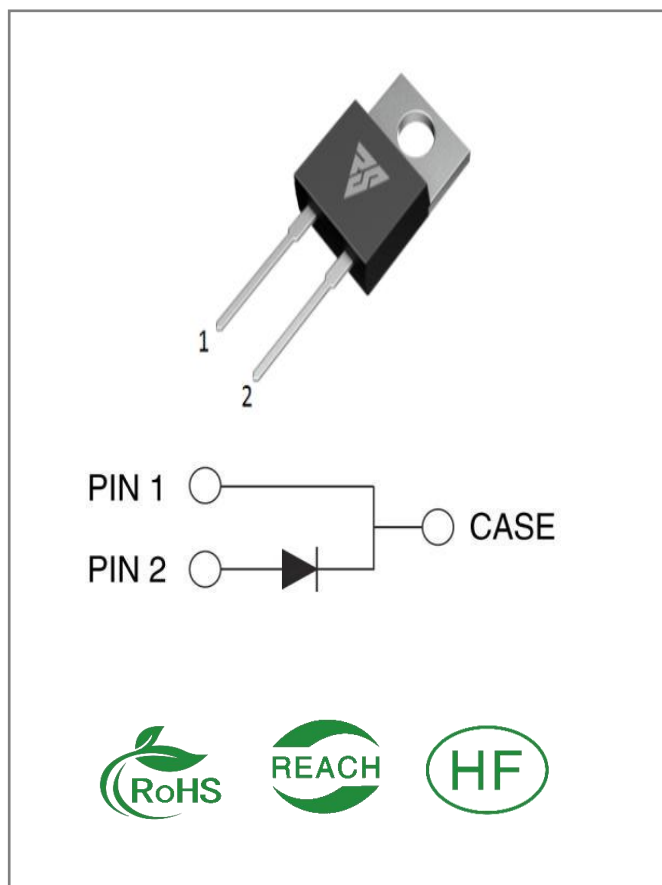
- Switch Mode Power Supplies
- Power Factor Correction
- Motor drive, PV Inverter, Wind Power Station

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.
RSS15065A	TO-220-2	RSS15065A	Tube	50 PCS

Maximum Ratings (TJ= 25℃ unless otherwise specified)

Symbol	Parameter	Value	Unit	Test Conditions	Note
VRRM	Repetitive Peak Reverse Voltage	650	V	TC = 25℃	
VRSM	Surge Peak Reverse Voltage	650	V	TC = 25℃	
VR	DC Blocking Voltage	650	V	TC = 25℃	
IF	Forward Current	51 24 15	A	TC ≤ 25℃ TC ≤ 135℃ TC ≤ 154℃	Fig.3
IFSM	Non-Repetitive Forward Surge Current	120 100	A	TC = 25℃, tp = 10ms, Half Sine Wave TC = 110℃, tp = 10ms, Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	103	A	TC = 25℃, tp = 10ms, Half Sine Wave	
Ptot	Power Dissipation	214	W	TC = 25℃	Fig.4
TC	Maximum Case Temperature	154	℃		
TJ,TST G	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	1.43 1.72	1.6 -	V	IF = 15A, TJ = 25℃ IF = 15A, TJ = 175℃	Fig.1
IR	Reverse Current	7 15	100 -	μA	VR = 650V, TJ = 25℃ VR = 650V, TJ = 175℃	Fig.2
C	Total Capacitance	659 96 95	/	pF	VR = 1V, TJ = 25℃, f = 1MHz VR = 200V, TJ = 25℃, f = 1MHz VR = 400V, TJ = 25℃, f = 1MHz	Fig.5
QC	Total Capacitive Charge	48	/	nC	VR =400V,	Fig.6
Ec	Capacitance Stored Energy	8		uJ	VR =400V,	Fig.7

Thermal Characteristics (TJ= 25℃ unless otherwise specified)

Symbol	Parameter	Typ.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	0.70	℃/W	Fig.8

Typical Feature Curve

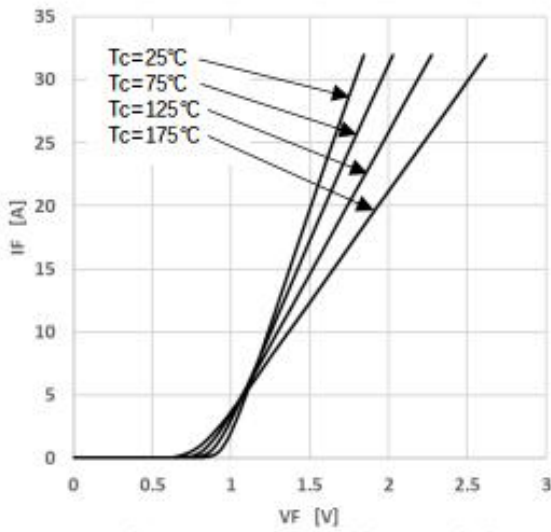


Figure 1 Forward Characteristics

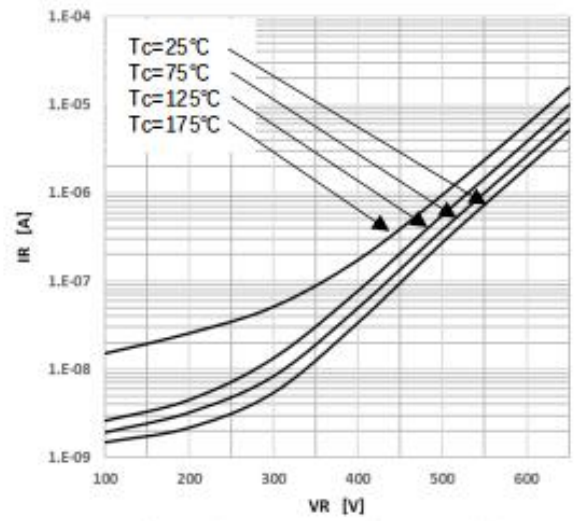


Figure 2 Reverse Characteristics

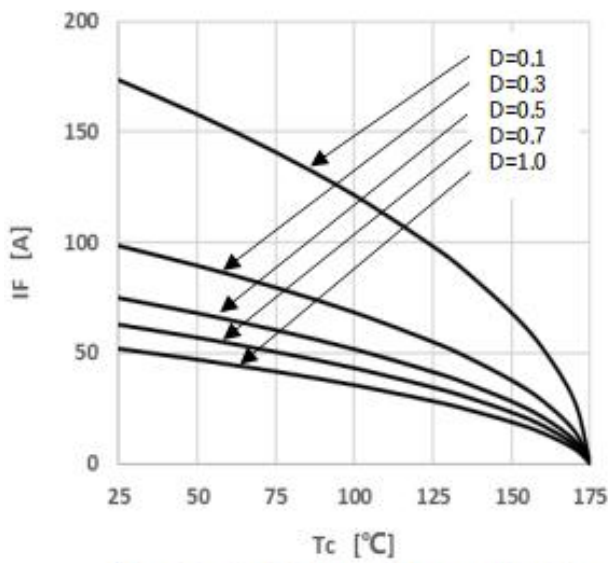


Figure 3 Peak Forward Current Derating

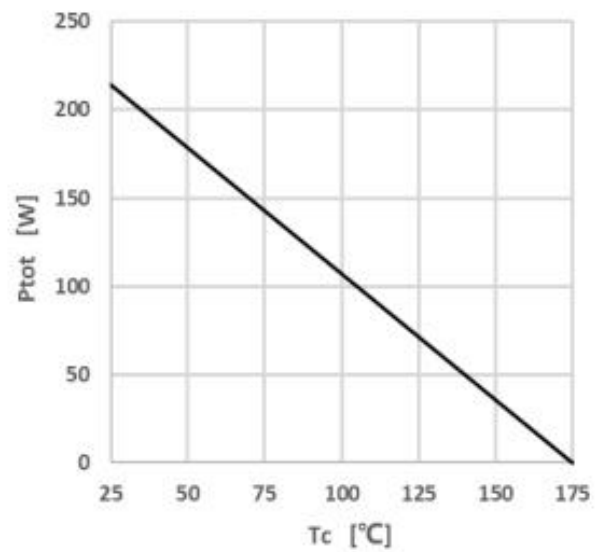


Figure 4 Power Dissipation

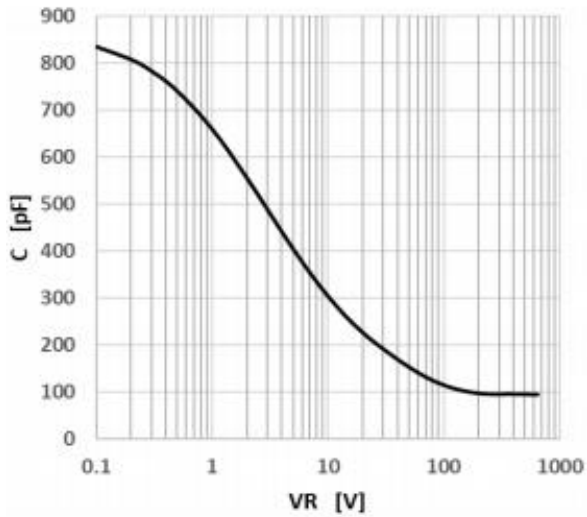


Figure 5 Capacitance vs. Reverse Voltage

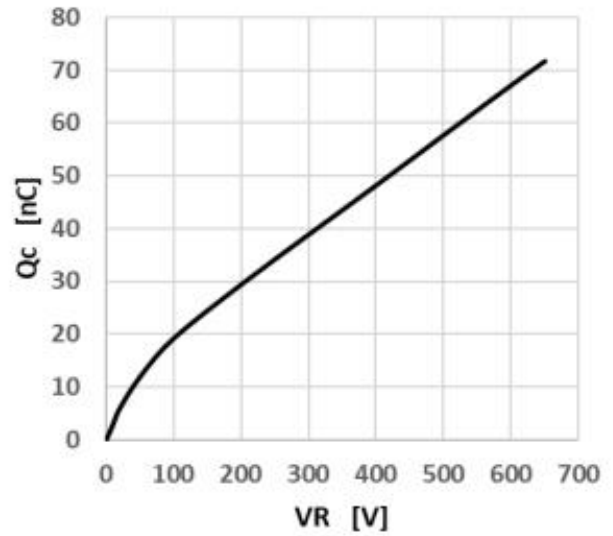


Figure 6 Capacitance Charge vs. Reverse Voltage

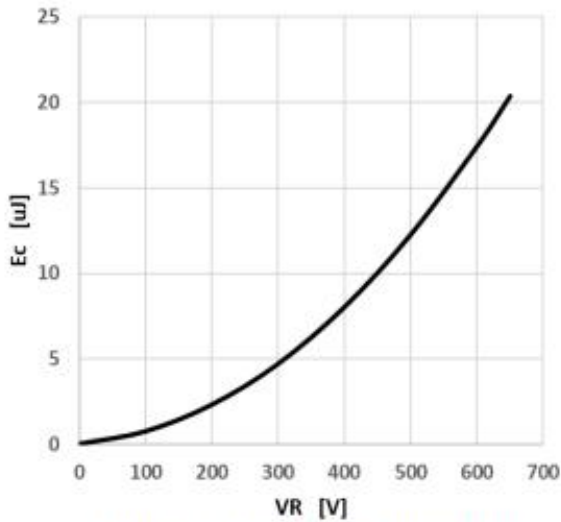


Figure 7 Capacitance Stored Energy

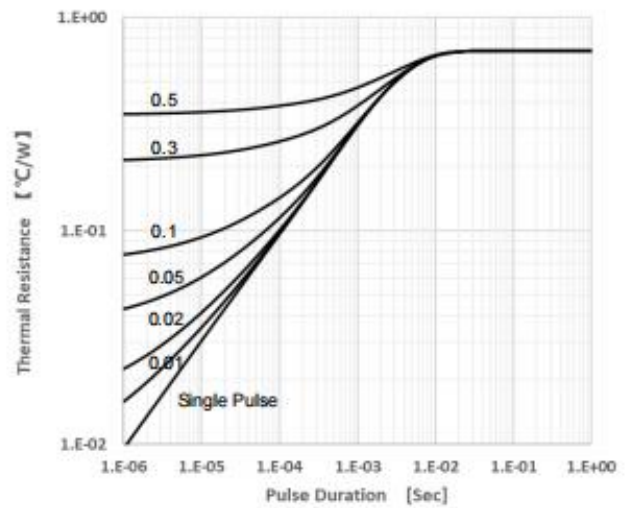
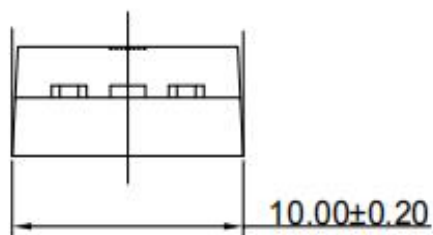
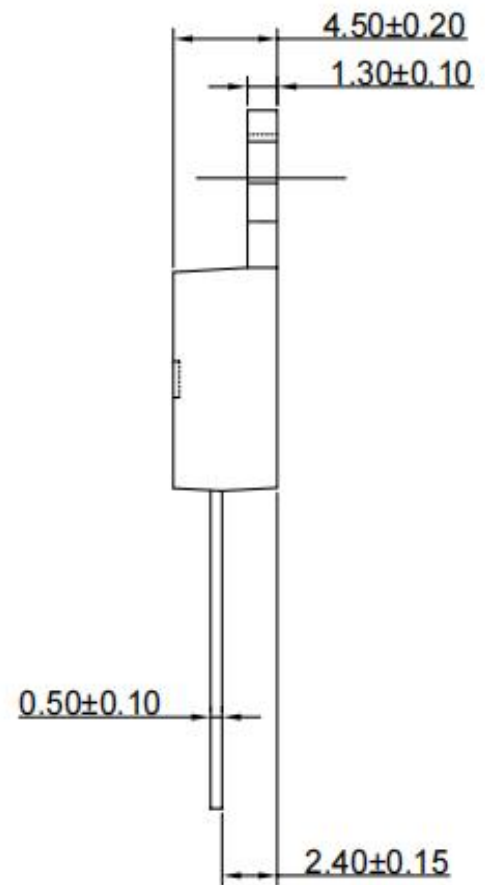
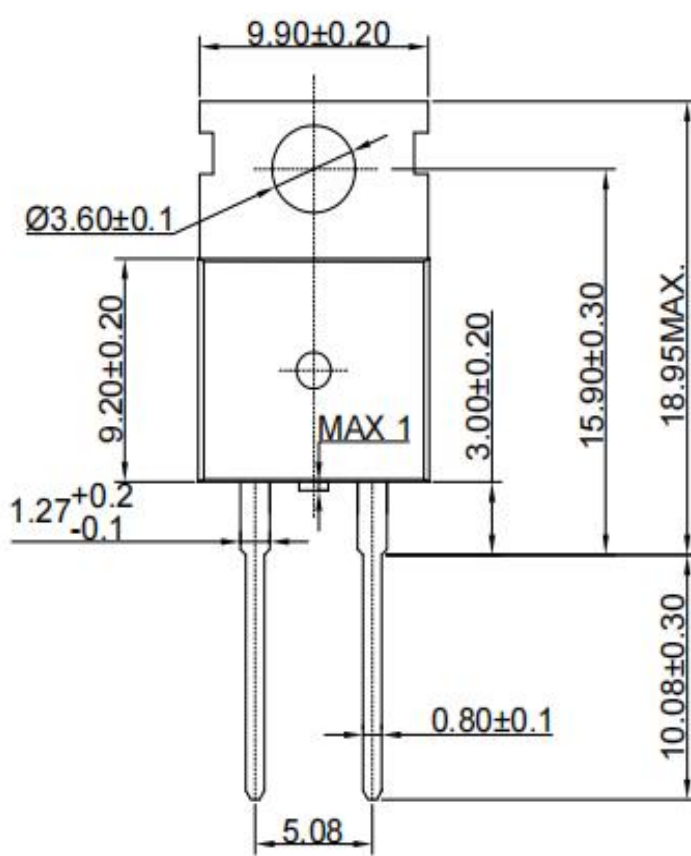


Figure 8 Transient Thermal Impedance

Package outline drawing(TO-220 Unit: mm)



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