

VRRM	IF (TC≤135°C)	QC
650V	15A	30nC

Applications:

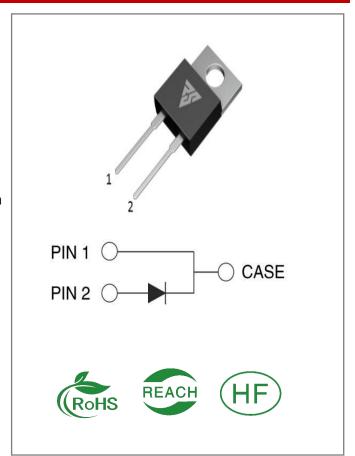
- Switch Mode Power Supplies
- Power Factor Correction
- Motor drive, PV Inverter, Wind Power Station

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.
RSS10065A	TO-220-2	RSS10065A	Tube	50 PCS



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

Symbo I	Parameter	Valu e	Unit	Test Conditions	Not e
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	32 15 10	А	TC ≤ 25°C TC ≤ 135°C TC ≤ 154°C	Fig.
IFSM	Non-Repetitive Forward Surge Current	96 83	А	TC = 25° C, tp = 10ms, Half Sine Wave TC = 110° C, tp = 10ms, Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	85	Α	TC = 25°C, tp = 10ms, Half Sine Wave	
Ptot	Power Dissipation	127	W	TC = 25℃	Fig. 4
TC	Maximum Case Temperature	154	$^{\circ}$		
TJ,TST G	Operating Junction and Storage Temperature	-55 to17 5	$^{\circ}\!\mathbb{C}$		

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

Symbo I	Parameter	Тур.	Max ·	Unit	Test Conditions	Note
VF	Forward Voltage	1.37 1.66	1.6 -	٧	IF = 10A, TJ = 25°C IF = 10A, TJ = 175°C	Fig.1
IR	Reverse Current	5 12	60 -	μΑ	VR = 650V, TJ = 25°C VR = 650V, TJ = 175°C	Fig.2
С	Total Capacitance	455 57 56	/	pF	VR = 1V, TJ = 25° C, f = 1MHz VR = 200V, TJ = 25° C, f = 1MHz VR = 400V, TJ = 25° C, f = 1MHz	Fig.5
QC	Total Capacitive Charge	30	/	nC	VR =400V,	Fig.6
Ec	Capacitance Stored Energy	4.8		uJ	VR =400V,	Fig.7

Thermal Characteristics (TJ= 25 ℃ unless otherwise specified)

Symbol	Parameter	Тур.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	1.175	°C/W	Fig.8



Typical Feature Curve

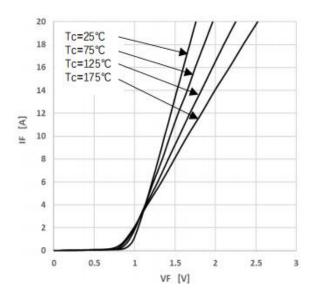


Figure 1 Forward Characteristics

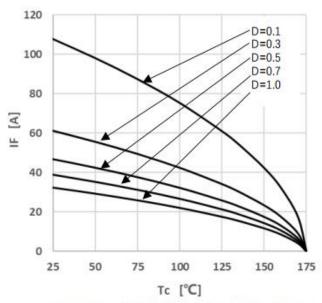


Figure 3 Peak Forward Current Derating

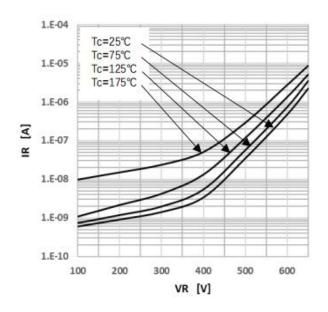


Figure 2 Reverse Characteristics

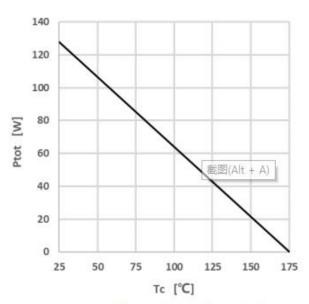


Figure 4 Power Dissipation



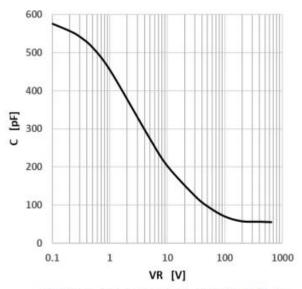


Figure 5 Capacitance vs. Reverse Voltage

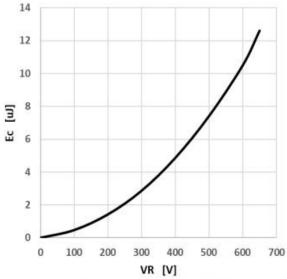


Figure 7 Capacitance Stored Energy

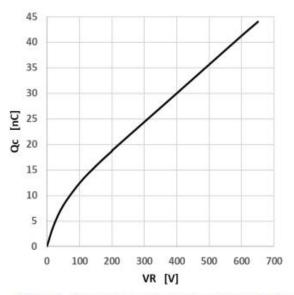


Figure 6 Capacitance Charge vs. Reverse Voltage

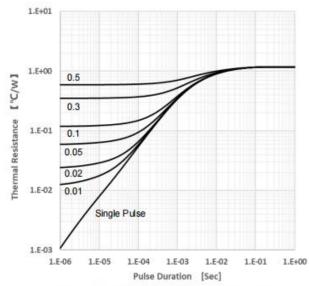
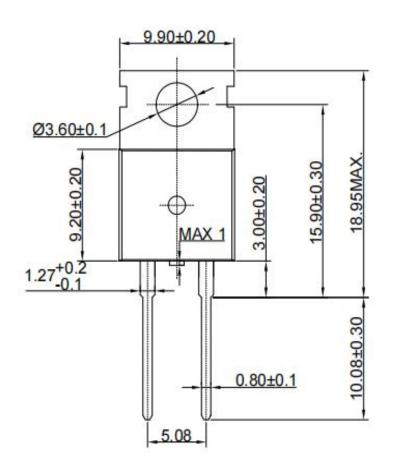


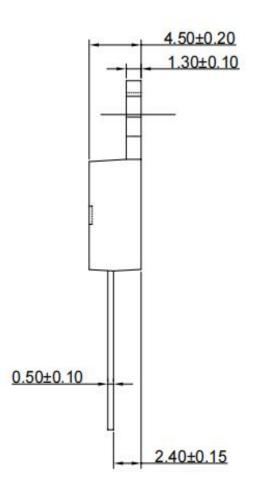
Figure 8 Transient Thermal Impedance

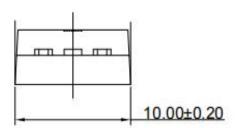
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Package outline drawing(TO-220 Unit: mm)









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