

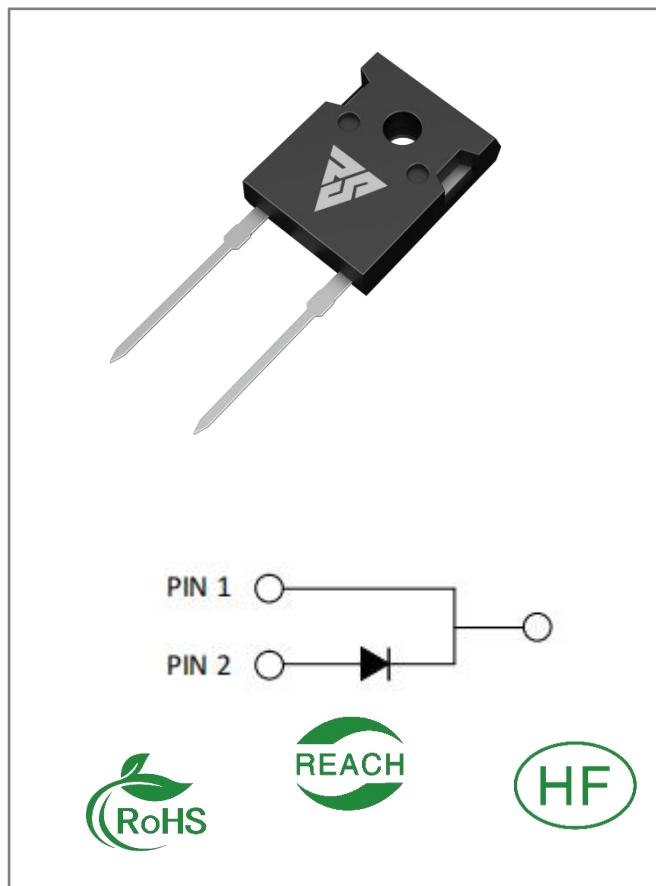
VRRM	IF (TC=150℃)	QC
650V	30A	85nC

Applications:

- Switch Mode Power Supplies (SMPS)
- Server/Telecom Power Supplies
- Industrial Power Supplies
- Solar Inverters

Features:

- Zero Reverse Recovery Current
- Zero Forward Recovery Voltage
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Positive Temperature Coefficient on VF



Ordering Information

Part Number	Package	Marking	Packing	Qty.
RSS30065W	TO-247-2	RSS30065W	Tube	30 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		
VDC	DC Blocking Voltage	650	V		
IF	Continuous Forward Current (Per Leg/ Per Device)	30	A	TC=150°C	
IFSM	Non-Repetitive Forward Surge Current	240	A	TC = 25°C, tp = 10ms, Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	200	A	TC = 25°C, tp = 10ms, Half Sine Wave	
IF,MAX	Non-Repetitive Peak Forward Surge Current	1600	A	TC=25°C, tP= 10 μs, Pulse	
Ptot	Power Dissipation	283	W	TC = 25°C	
		123		TC = 110°C	
TSTG	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	1.45 1.95	1.8 2.4	V	IF = 30A, T _J = 25°C IF = 30A, T _J = 175°C	
IR	Reverse Current	2 40	20 200	μA	VR = 650V, T _J = 25°C VR = 650V, T _J = 175°C	
C	Total Capacitance	2050 162 137	/	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	
QC	Total Capacitive Charge	85	/	nC	VR = 400V, T _J = 25°C	
Ec	Capacitance Stored Energy	21	/	μJ	VR = 400V	

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

Symbol	Parameter	Typ.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	0.53	°C/W	

Typical Feature Curve

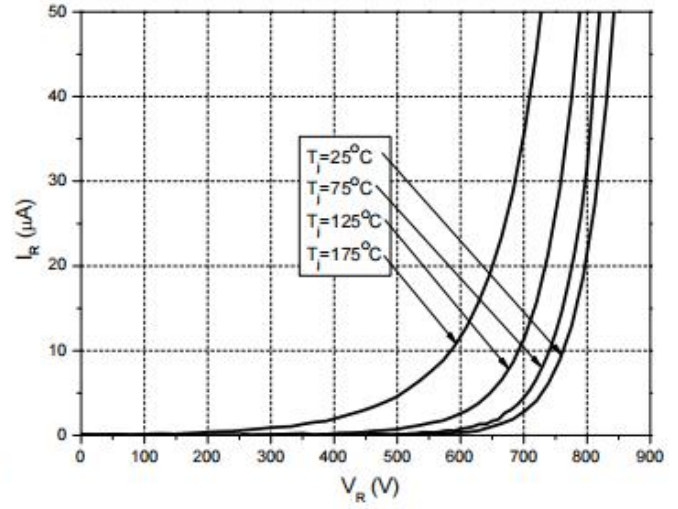
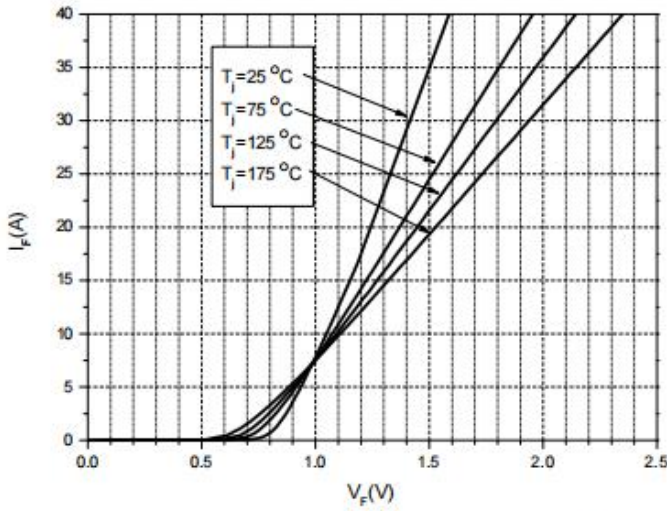


Figure 1. Forward Characteristics Figure 2. Reverse Characteristics

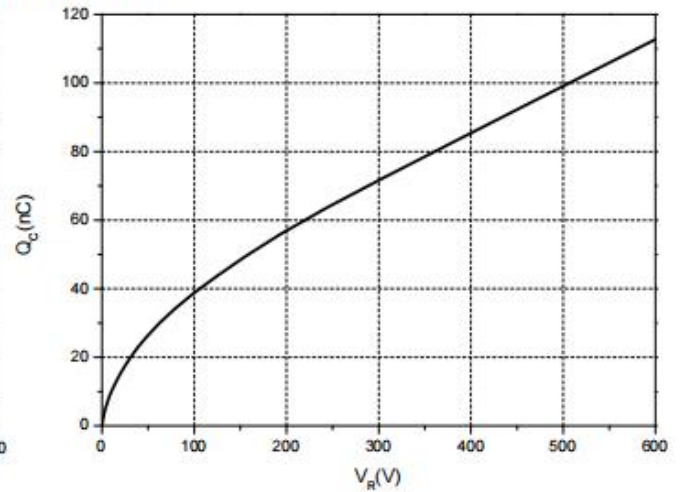
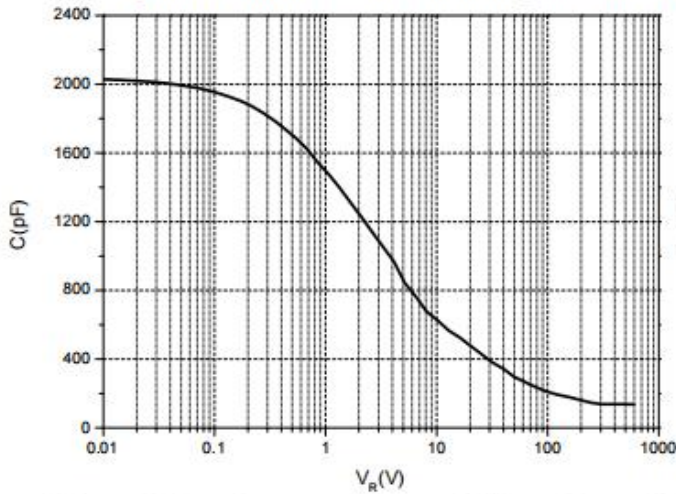


Figure 3. Capacitance vs. Reverse Voltage Figure 4. Total Capacitance Charge vs. Reverse Voltage

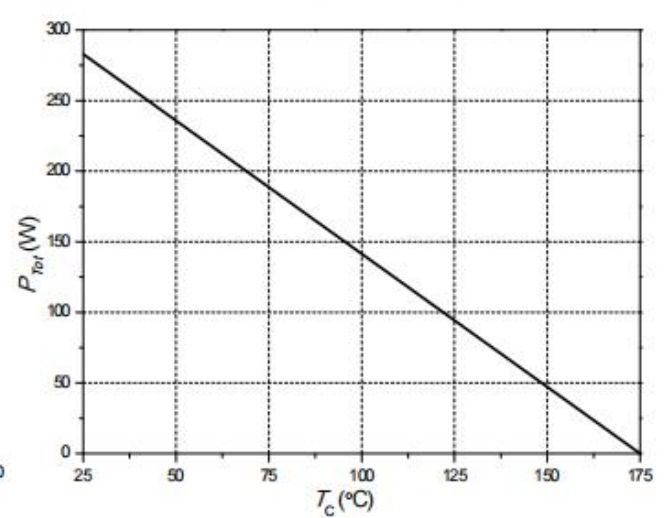
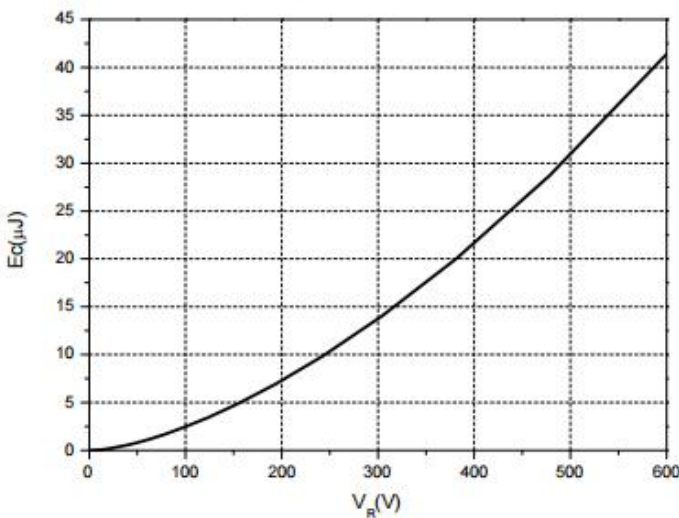


Figure 5. Capacitance Stored Energy Figure 6. Power Derating

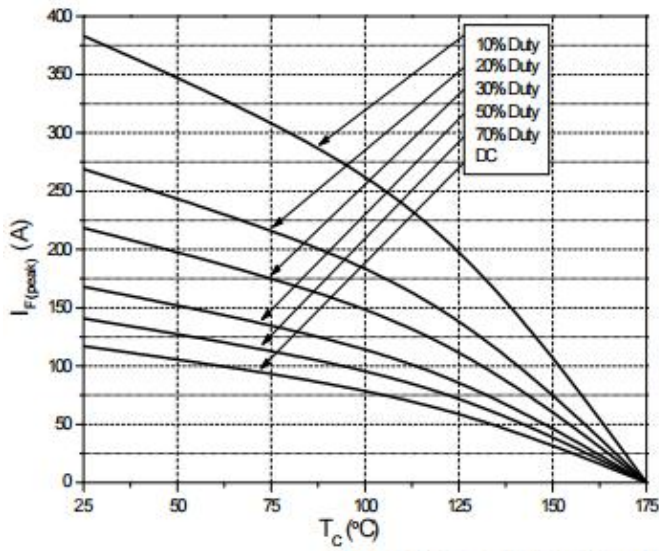


Figure 7. Current Derating

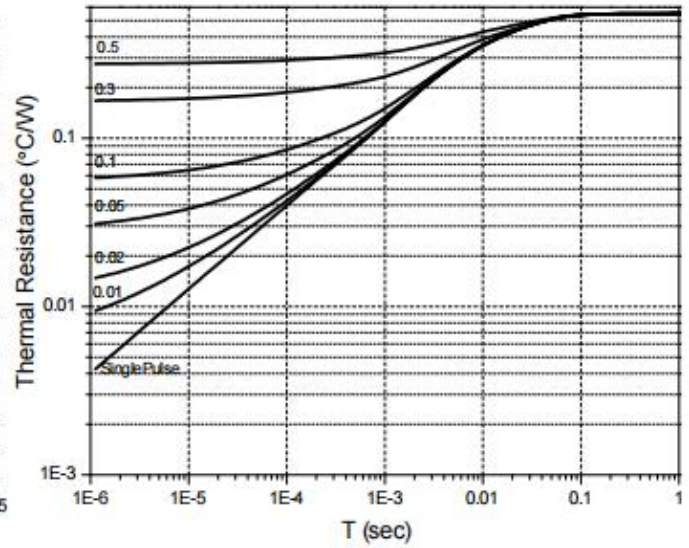
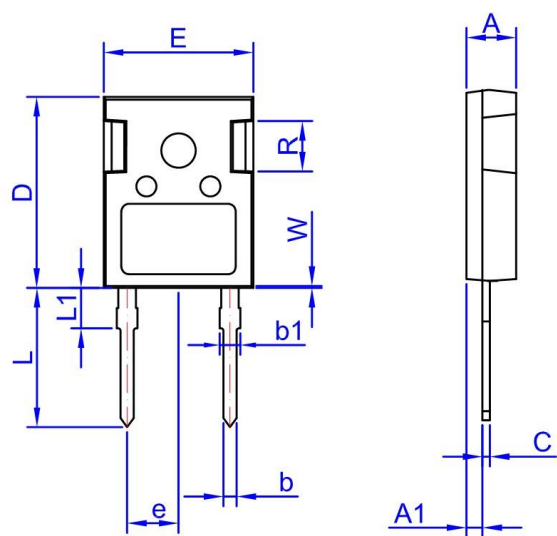


Figure 8. Transient Thermal Impedance

Package outline drawing(TO-247-2 Unit: mm)



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.7		5.31	0.185		0.209
A1	2.21		2.59	0.087		0.102
b	1.02		1.40	0.040		0.055
b1	1.65		2.23	0.065		0.088
C	0.41		0.79	0.016		0.031
D	20.80		21.46	0.819		0.845
E	15.49		16.26	0.61		0.640
e	5.46		5.46	0.215		0.215
L	19.81		20.32	0.78		0.80
L1	4.17		4.47	0.164		0.176
R	3.43		3.99	0.135		0.157
W	0.00		0.15	0.00		0.006

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