

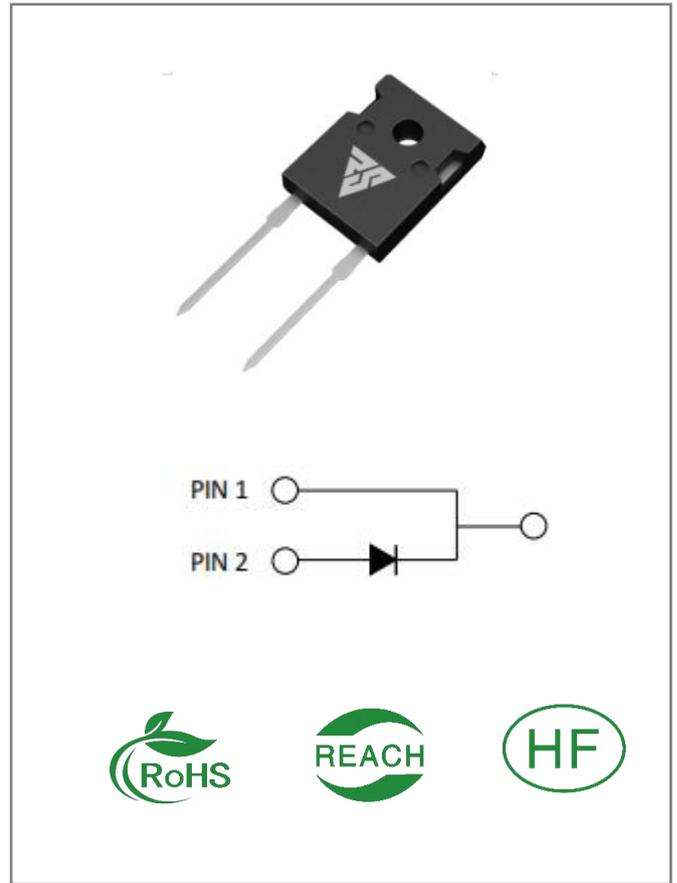
VRRM	IF (TC=145°C)	QC
650V	40A	101nC

**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.
RSS40065W	TO-247-2	RSS40065W	Tube	30 PCS

**Maximum Ratings** (T<sub>J</sub>= 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	Forward Current	105 83 40	A	TC=25°C TC=75°C TC=145°C	Fig.8
IFSM	Non-Repetitive Forward Surge Current	255	A	TC = 25°C, tp = 10ms Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	204	A	TC = 25°C, tp = 10ms Half Sine Wave	
P <sub>tot</sub>	Power Dissipation	362	W	TC = 25°C TC = 175°C	Fig.7
T <sub>J</sub> ,T <sub>STG</sub>	Operating Junction and Storage Temperature	-55 to175	°C		

**Electrical Characteristics** (T<sub>J</sub>= 25°C unless otherwise specified)

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
V <sub>F</sub>	Forward Voltage	1.40 1.80	1.8 3.0	V	IF = 40A, T <sub>J</sub> = 25°C IF = 40A, T <sub>J</sub> = 175°C	Fig.1
I <sub>R</sub>	Reverse Current	1 6	10 100	μA	VR = 650V, T <sub>J</sub> = 25°C VR = 650V, T <sub>J</sub> = 175°C	Fig.2
C	Total Capacitance	1960 192 190	/	pF	VR = 0V, T <sub>J</sub> = 25°C, f = 1MHz VR = 200V, T <sub>J</sub> = 25°C, f = 1MHz VR = 400V, T <sub>J</sub> = 25°C, f = 1MHz	Fig.3
QC	Total Capacitive Charge	101	/	nC	VR = 400V, T <sub>J</sub> = 25°C	Fig.4
E <sub>c</sub>	Capacitance Stored Energy	25	/	μJ	VR = 400V	Fig.5

**Thermal Characteristics** (T<sub>J</sub>= 25°C unless otherwise specified)

Symbol	Parameter	Typ.	Unit	Note
R <sub>θJC</sub>	Thermal Resistance from Junction to Case	0.41	°C/W	Fig.6

**Typical Feature Curve**

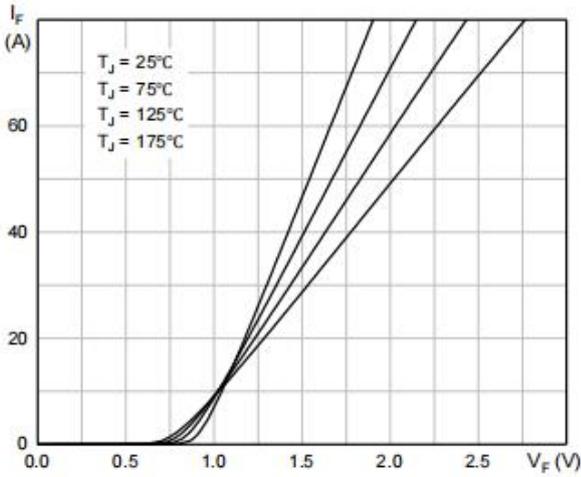


Figure 1. Typical Forward Characteristics

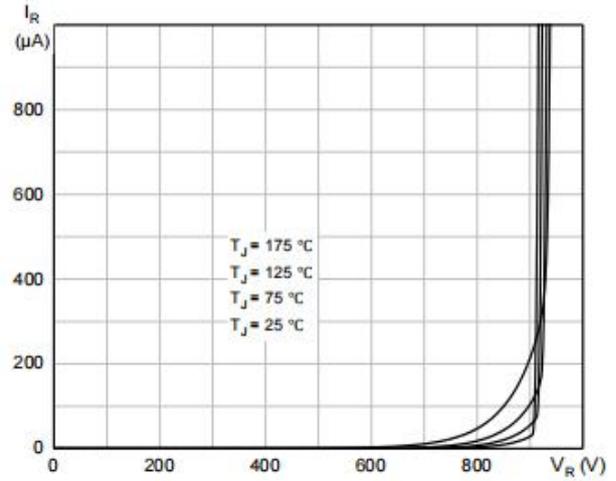


Figure 2. Typical Reverse Characteristics

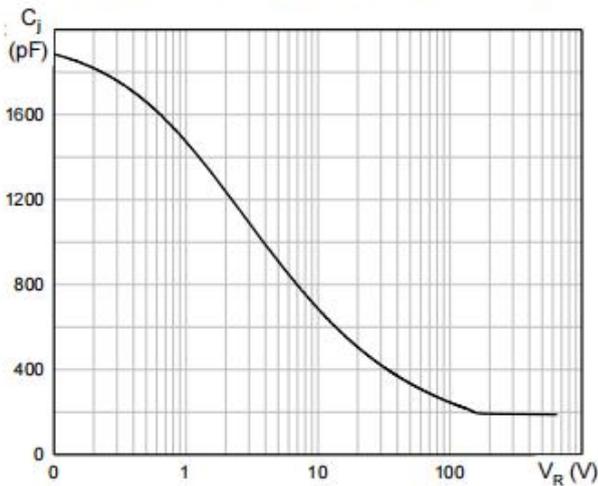


Figure 3. Typical Capacitance vs. Reverse Voltage

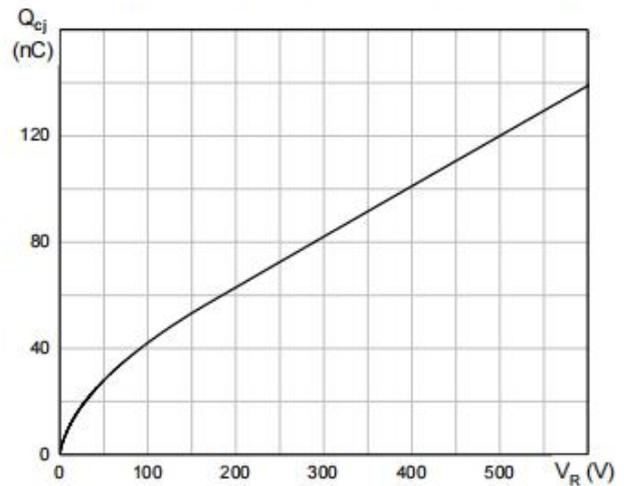


Figure 4. Total Recovery Charge vs. Reverse Voltage

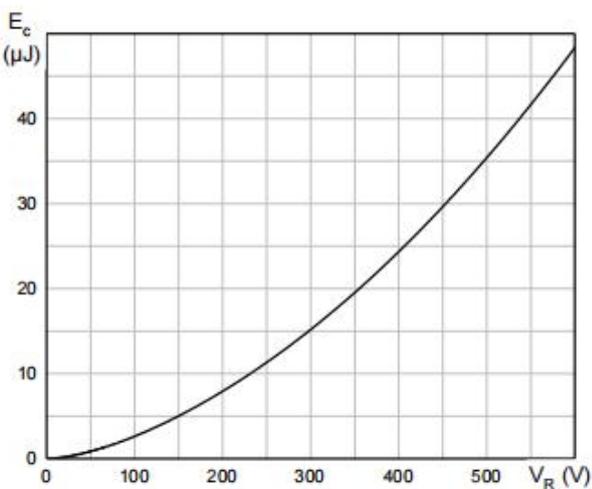


Figure 5. Typical Capacitance Stored Energy vs. Reverse Voltage

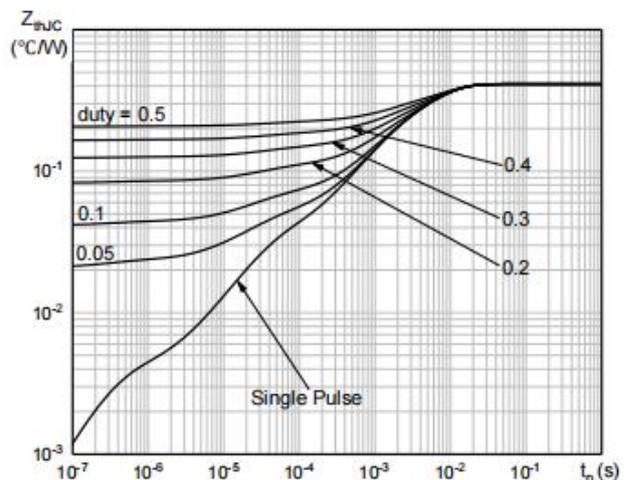


Figure 6. Typical Thermal Impedance Characteristics

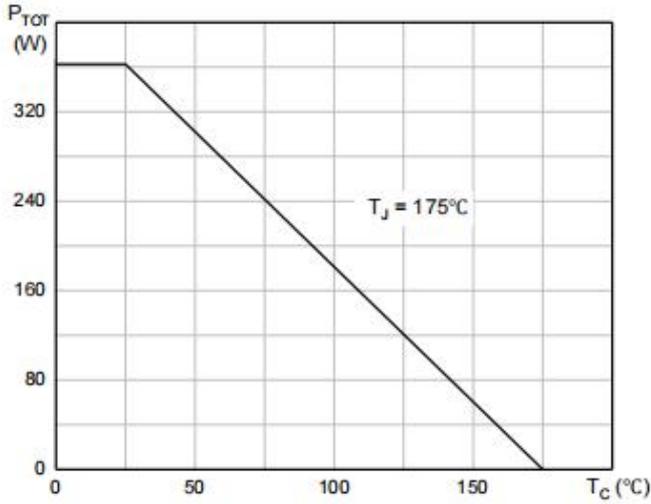


Figure 7. Total Power Dissipation

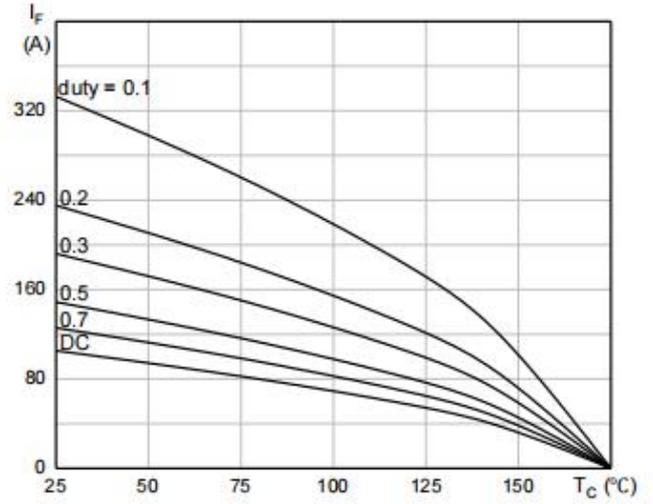
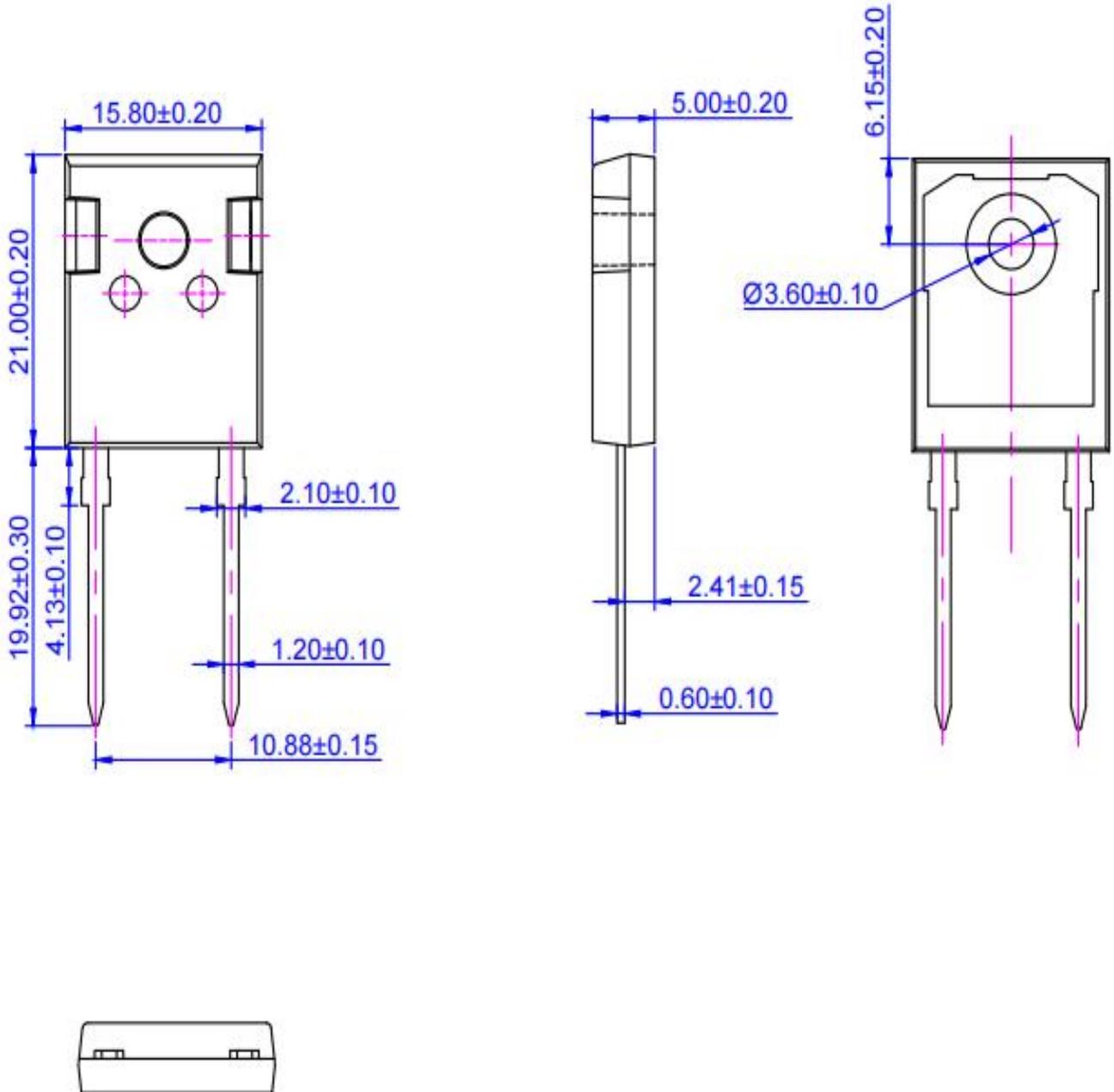


Figure 8. Current Derating

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



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