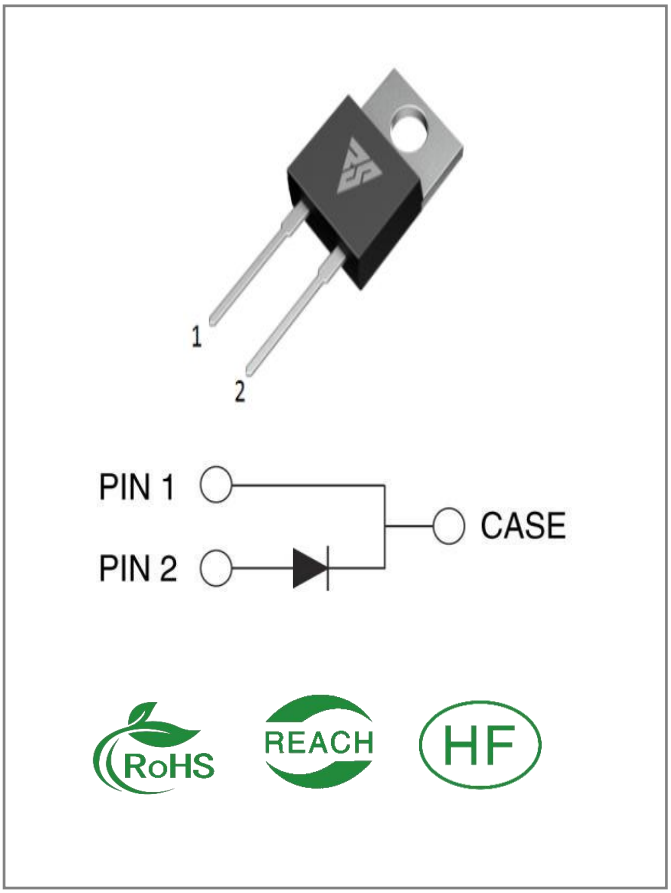
VRRM	IF (TC≤125℃)	QC
1200V	12A	33nC



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.
RSS06120A	TO-220-2	RSS06120A	Tube	50 PCS

Maximum Ratings (TJ= 25℃ unless otherwise specified)

Symbol	Parameter	Value	Unit	Test Conditions	Note
VRRM	Repetitive Peak Reverse Voltage	1200	V	TC = 25℃	
VRSM	Surge Peak Reverse Voltage	1200	V	TC = 25℃	
VR	DC Blocking Voltage	1200	V	TC = 25℃	
IF	Forward Current	23 12 6	A	TC ≤ 25℃ TC ≤ 125℃ TC ≤ 154℃	Fig.3
IFSM	Non-Repetitive Forward Surge Current	48	A	TC = 25℃, tp = 10ms, Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	40	A	TC = 25℃, tp = 10ms, Half Sine Wave	
Ptot	Power Dissipation	150	W	TC = 25℃	Fig.4
TC	Maximum Case Temperature	160	℃		
TJ,TSTG	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	1.45 2.0	1.7 -	V	IF = 6A, TJ = 25℃ IF = 6A, TJ = 175℃	Fig.1
IR	Reverse Current	2 3	60	μA	VR = 1200V, TJ = 25℃ VR = 1200V, TJ = 175℃	Fig.2
C	Total Capacitance	349 31 25	/	pF	VR = 1V, TJ = 25℃, f = 1MHz VR = 400V, TJ = 25℃, f = 1MHz VR = 800V, TJ = 25℃, f = 1MHz	Fig.5
QC	Total Capacitive Charge	33	/	nC	VR =800V,	Fig.5
Ec	Capacitance Stored Energy	10		uJ	VR =800V,	Fig.7

Thermal Characteristics (TJ= 25℃ unless otherwise specified)

Symbol	Parameter	Typ.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	1.0	℃/W	Fig.8

Typical Feature Curve

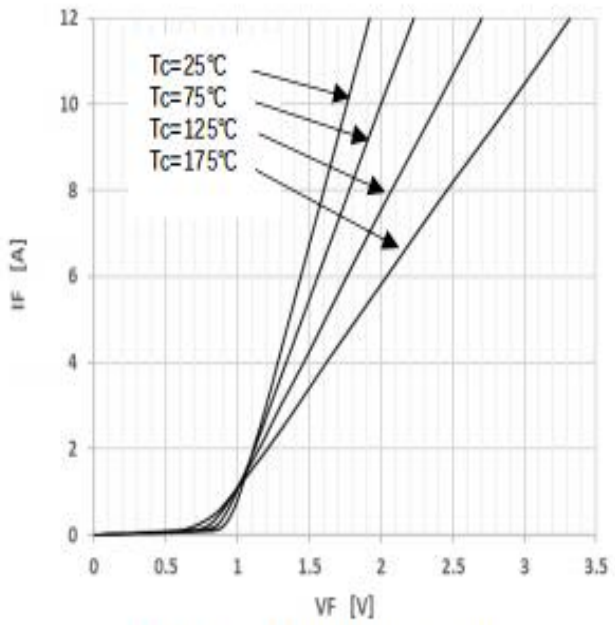


Figure 1 Forward Characteristics

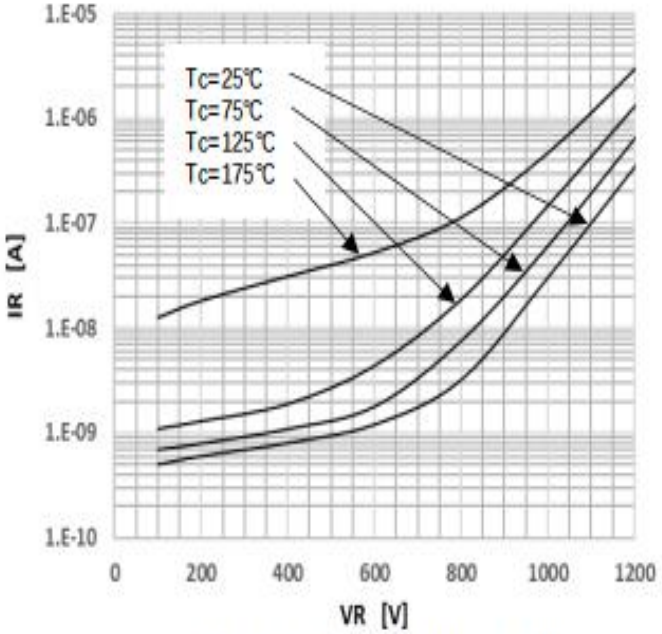


Figure 2 Reverse Characteristics

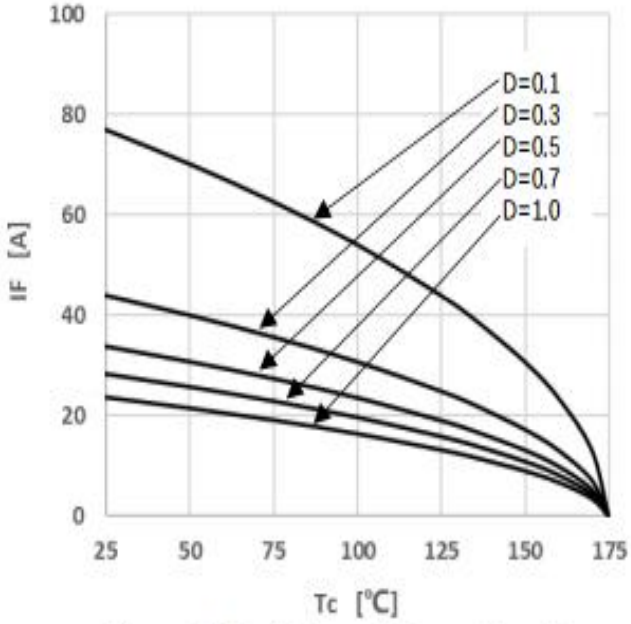


Figure 3 Peak Forward Current Derating

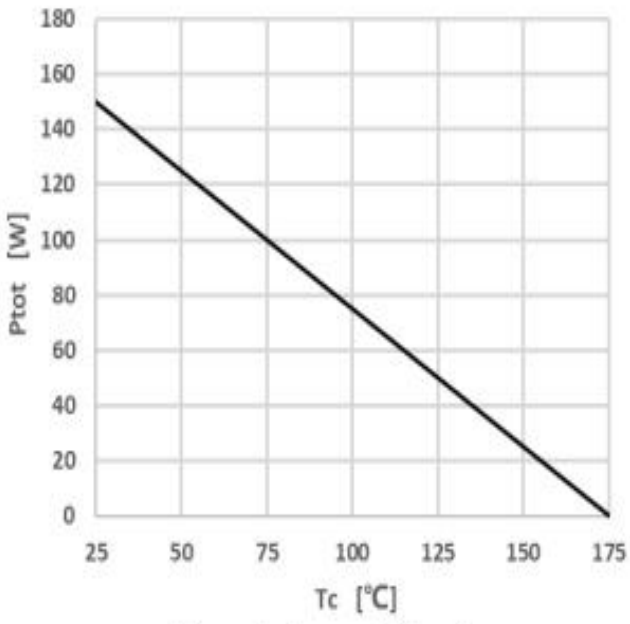


Figure 4 Power Dissipation

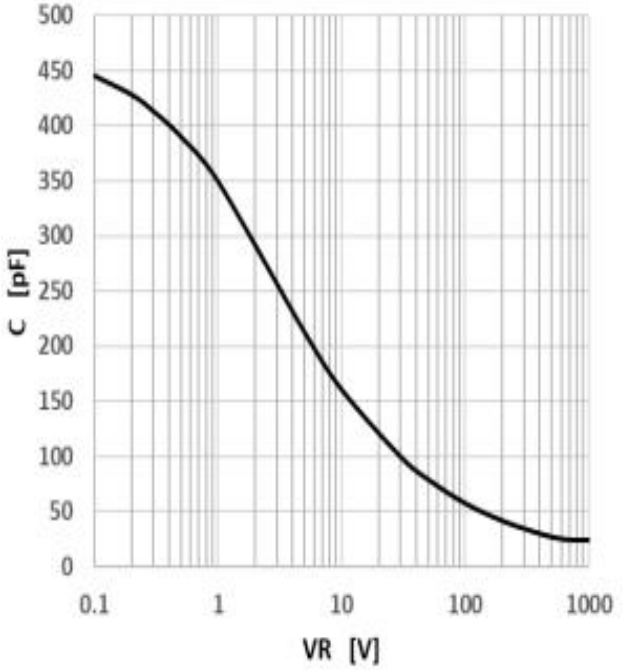


Figure 5 Capacitance vs. Reverse Voltage

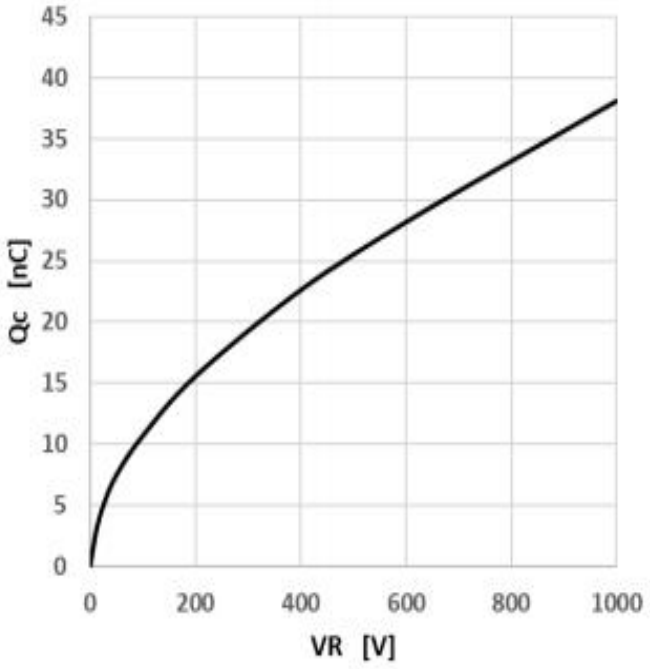


Figure 6 Capacitance Charge vs. Reverse Voltage

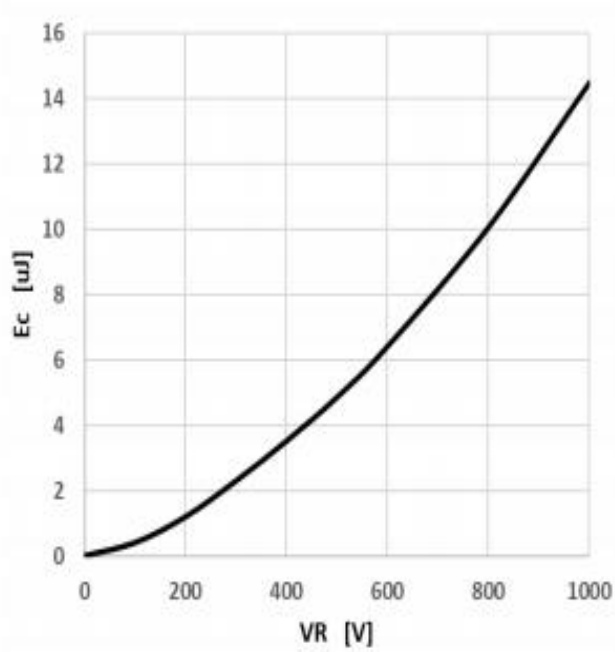


Figure 7 Capacitance Stored Energy

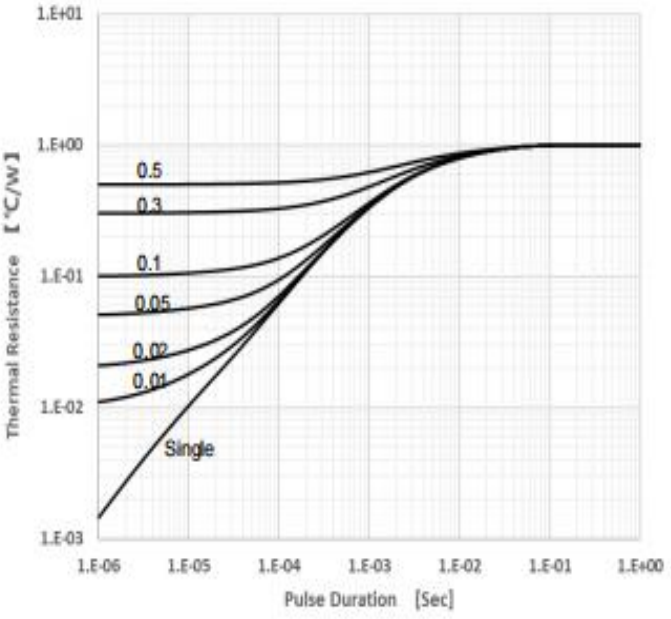
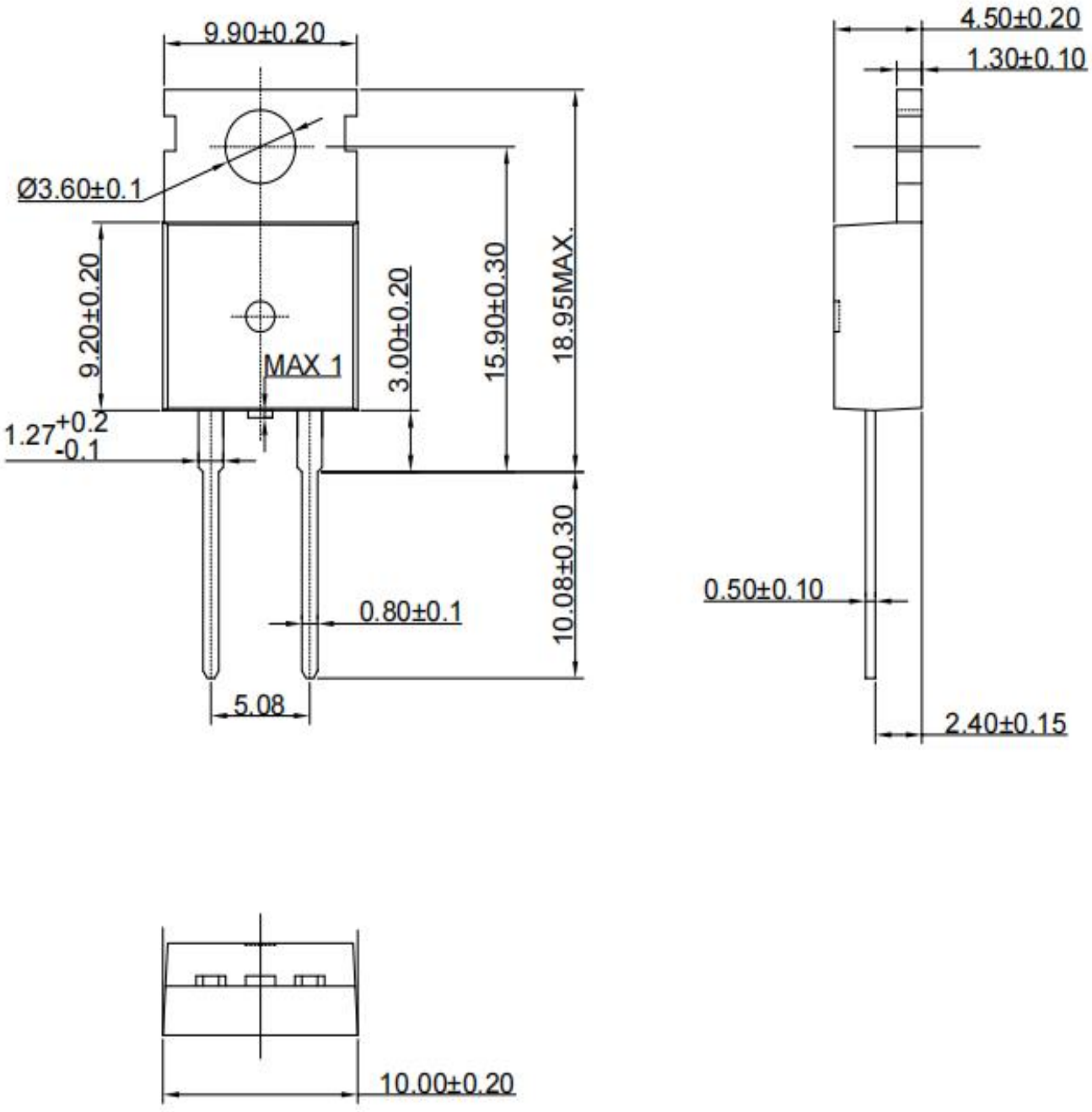


Figure 8 Transient Thermal Impedance

Package outline drawing(TO-220 Unit: mm)



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