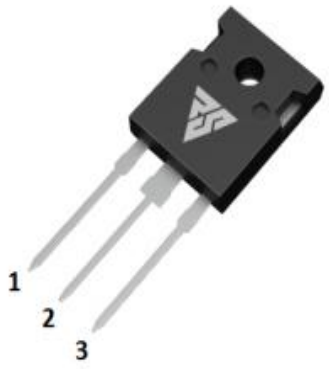
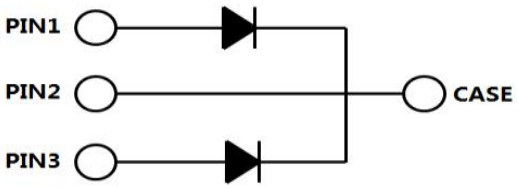
VRRM	IF (TC=150℃)	QC
1200V	15*A	78nC





Applications:

- Power Factor Correction
- Sever Mode Power Supplies
- Uninterruptible Power Supply

Features:

- Low Forward Voltage Drop
- High-Speed Switching
- Positive Temperature Coefficient
- Temperature-Independent Switching Behavior

Ordering Information

Part Number	Package	Marking	Packing	Qty.
RSS30120K	TO-247-3	RSS30120K	Tube	30 PCS

Maximum Ratings (TJ= 25℃ unless otherwise specified)

Symbol	Parameter	Value	Unit	Test Conditions	Note
VRRM	Repetitive Peak Reverse Voltage	1200	V		
VRSM	Surge Peak Reverse Voltage	1200	V		
VR	DC Blocking Voltage	1200	V		
IF	Forward Current	15*	A	TC =150℃	Fig.7
IFRM	Repetitive Peak Forward Surge Current	80*	A	TC = 25℃, tp =10ms, Half Sine Wave	
IFSM	Non-Repetitive Peak Forward Surge Current	120*	A	TC = 25℃, tp =10ms, Half Sine Wave	
IF,Max	Non-Repetitive Peak Forward Surge Current	850*	A	TC = 25℃, tp =10us,Pulse	
Ptot	Power Dissipation	283* 122*	W	TC = 25℃ TC = 100℃	Fig.6
TJ,TSTG	Operating Junction and Storage Temperature	-55 to175	℃		

Electrical Characteristics (TJ= 25℃ unless otherwise specified)

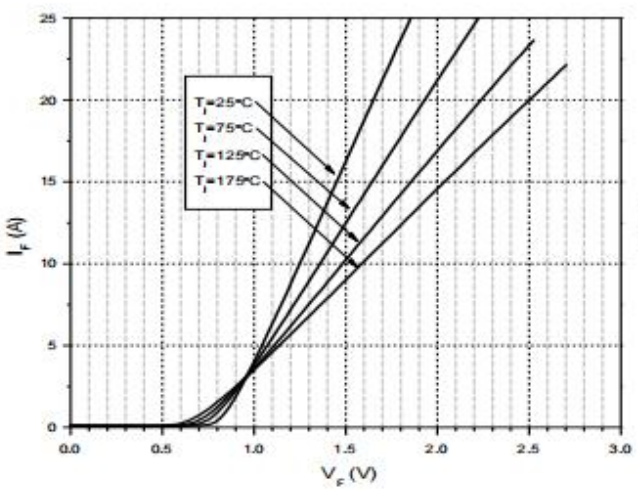
Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
VF	Forward Voltage	1.5 2.2	1.8 2.5	V	IF = 15A, TJ = 25℃ IF = 15A, TJ = 175℃	Fig.1
IR	Reverse Current	10 20	50 100	μA	VR = 1200V, TJ = 25℃ VR = 1200V, TJ = 175℃	Fig.2
C	Total Capacitance	1090 70 53	/	pF	VR = 1V, TJ = 25℃, f = 1MHz VR = 400V, TJ = 25℃, f = 1MHz VR = 800V, TJ = 25℃, f = 1MHz	Fig.3
QC	Total Capacitive Charge	78	/	nC	VR =800V	Fig.4
EC	Capacitance Stored Energy	40	/	μJ	VR =800V	Fig.5

Thermal Characteristics (TJ= 25℃ unless otherwise specified)

Symbol	Parameter	Typ.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	0.53*	℃/W	Fig.8

Note: *Per Leg

Typical Feature Curve



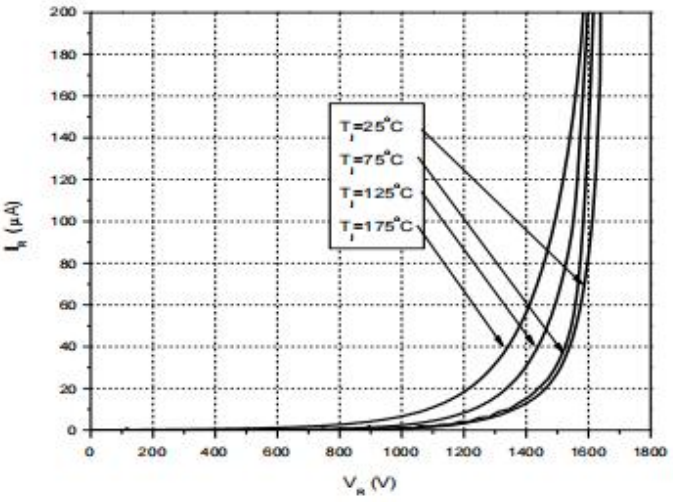
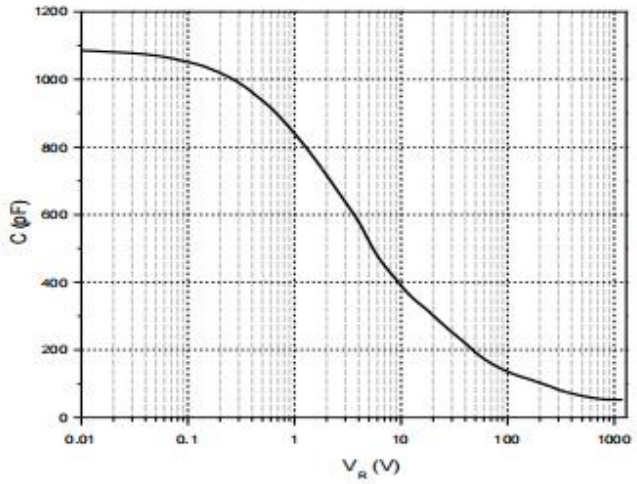


Figure 1.Forward CharacteristicsFigure2. Reverse Characteristics



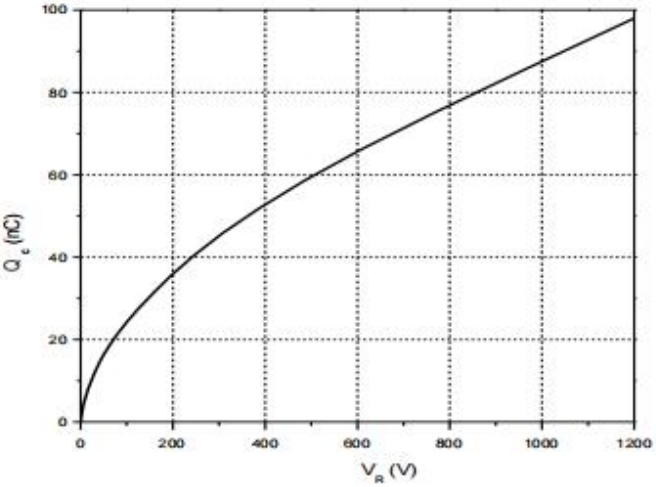
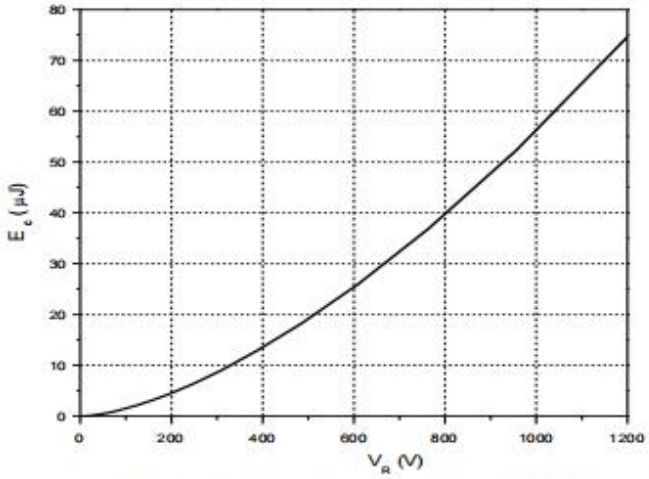


Figure 3.Capacitance vs. Reverse Voltage Figure 4. Total Capacitance Charge vs. Reverse Voltage



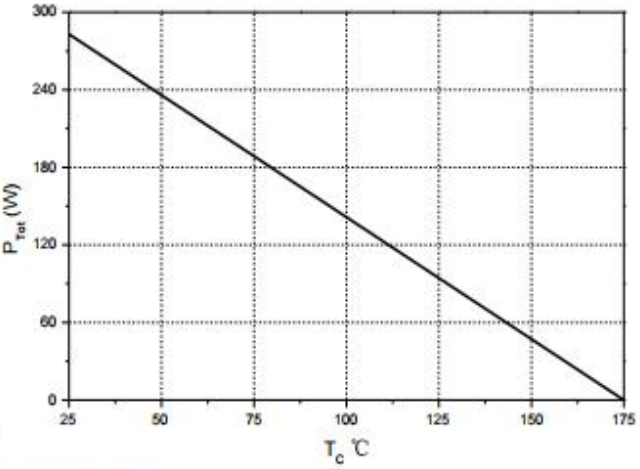
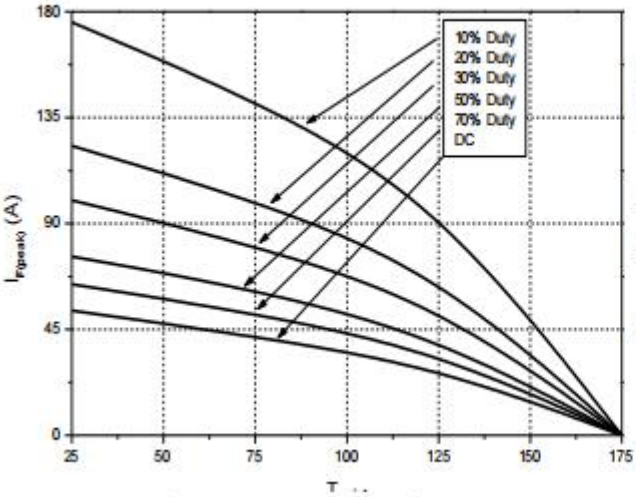


Figure 5. Capacitance Stored EnergyFigure 6. Power Derating



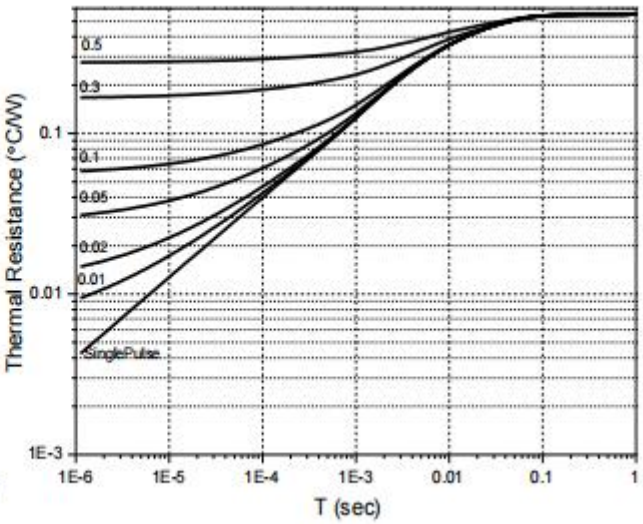
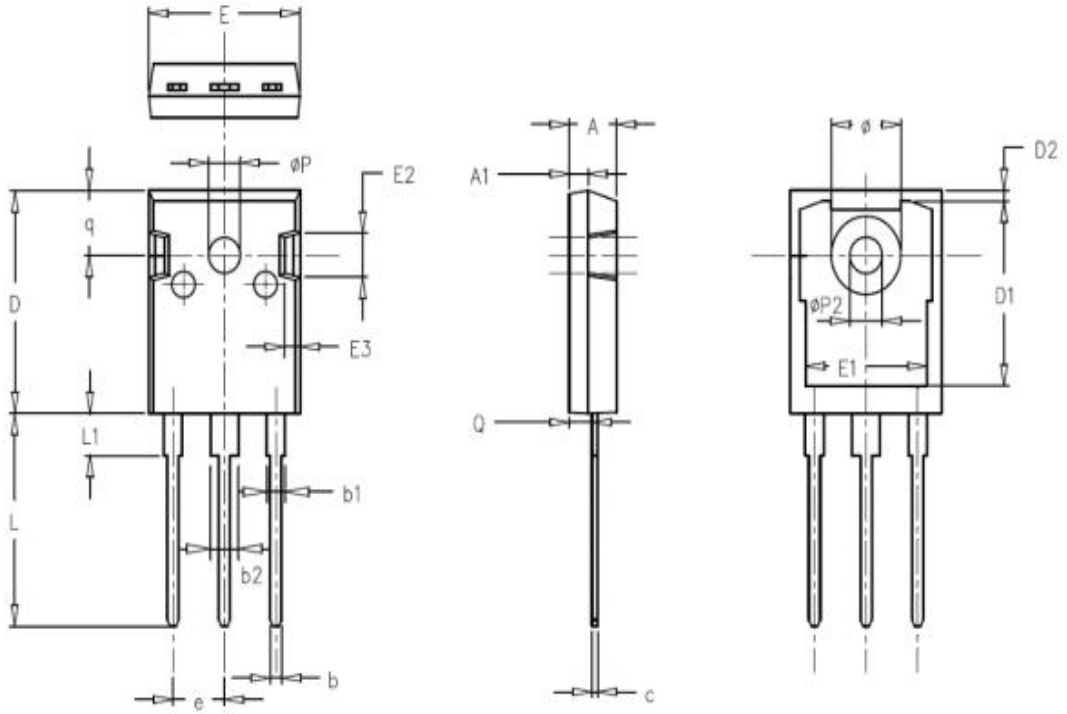


Figure 7. Current DeratingFigure 8. Transient Thermal Impedance

Package outline drawing(TO-247-3 Unit: mm)



SYMBOL	MILLIMETERS			NOTES	SYMBOL	MILLIMETERS			NOTES
	Normal	MIN.	MAX.			Normal	MIN.	MAX.	
A	4.98	4.68	5.36		øP	3.66	3.45	3.85	
A1	1.99	1.90	2.10		e	5.44	BSC		
Q	2.41	2.30	2.60		q	6.24	5.99	6.58	
c	0.60	0.48	0.72		øP2	3.45	3.24	3.64	
b	1.20	1.00	1.40		ø	7.14	7.10	7.30	
b1	2.07	1.90	2.30		D1	16.56	16.10	17.10	
b2	3.07	2.90	3.30		D2	0.98	0.80	1.36	
D	21.10	20.80	21.80		E1	13.30	13.00	13.52	
E	15.98	15.38	16.20		E2	5.64	5.10	6.10	
L	20.28	19.50	20.50		E3	2.33	1.90	2.70	
L1	4.01	3.75	4.35						

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