

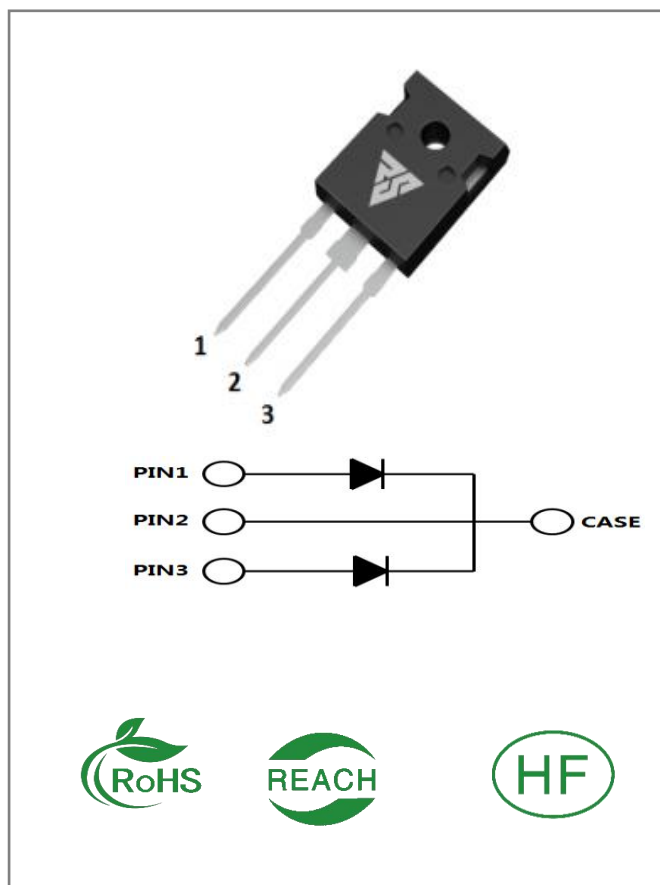
VRRM	IF (TC=150℃)	QC
1200V	10*A	50nC

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.
RSS20120K	TO-247-3	RSS20120K	Tube	30 PCS

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

Symbol	Parameter	Value	Unit	Test Conditions	Note
VRRM	Repetitive Peak Reverse Voltage	1200	V	TC = 25°C	
VRSM	Surge Peak Reverse Voltage	1200	V	TC = 25°C	
VR	DC Blocking Voltage	1200	V	TC = 25°C	
IF	Forward Current	10 [*] / 20 ^{**}	A	TC=150°C	
IFSM	Non-Repetitive Forward Surge Current	80 [*]	A	TC = 25°C, tp = 10ms, Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	50 [*]	A	TC = 25°C, tp = 10ms, Half Sine Wave	
IF,Max	Non-Repetitive Peak Forward Surge Current	600 [*]	A	TC = 25°C, tp = 10μs,pulse	
Ptot	Power Dissipation	153 [*] / 66 [*]	W	TC = 25°C TC = 110°C	
TJ,TSTG	Operating Junction and Storage Temperature	-55 to175	°C		

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

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
VF	Forward Voltage	1.5 2.2	1.8 3	V	IF = 10A, T _J = 25°C IF = 10A, T _J = 175°C	
IR	Reverse Current	10 20	50 100	μA	VR = 1200V, T _J = 25°C VR = 1200V, T _J = 175°C	
C	Total Capacitance	610 46 36	/	pF	VR = 0V, T _J = 25°C, f = 1MHz VR = 400V, T _J = 25°C, f = 1MHz VR = 800V, T _J = 25°C, f = 1MHz	
QC	Total Capacitive Charge	50	/	nC	VR =800V	
Ec	Capacitance Stored Energy	25		uJ	VR =800V	

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

Symbol	Parameter	Typ.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	0.98	°C/W	

Note: *Per Leg, ** Per Device

Typical Feature Curve

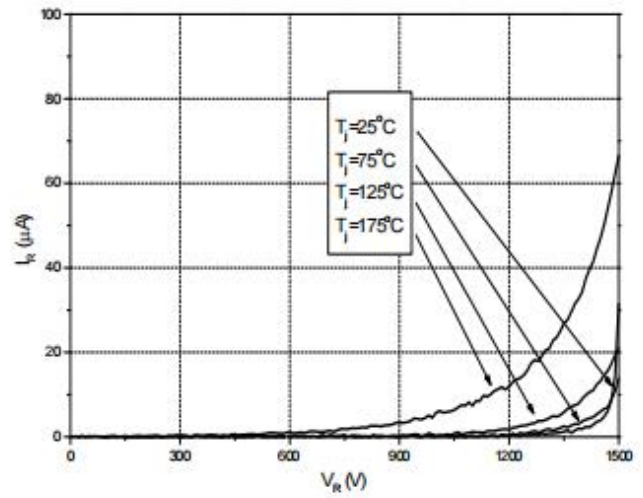
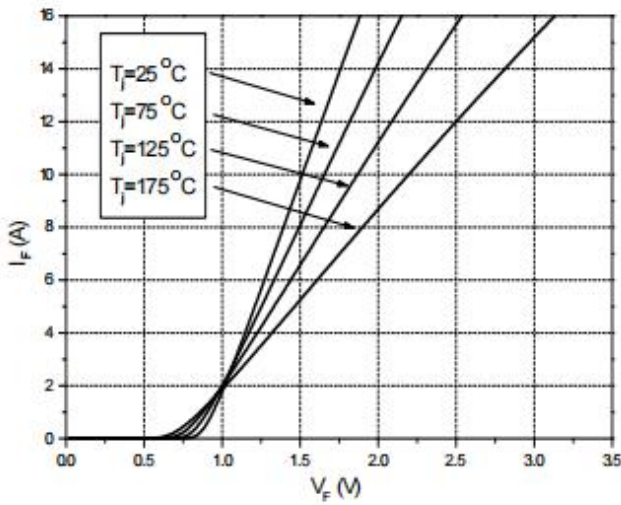


Figure 1. Forward Characteristics Figure 2. Reverse Characteristics

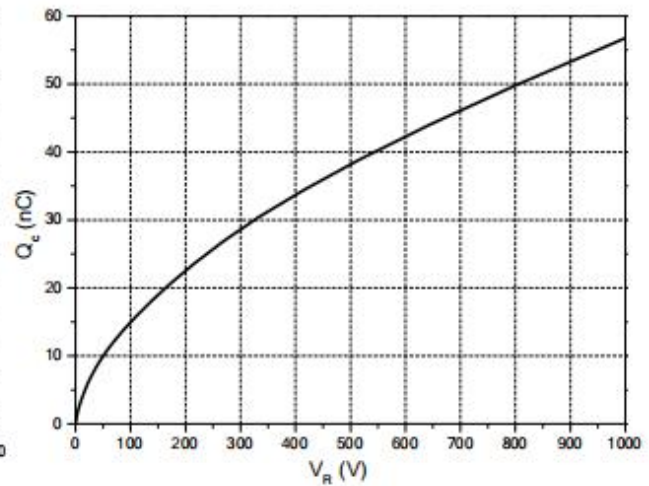
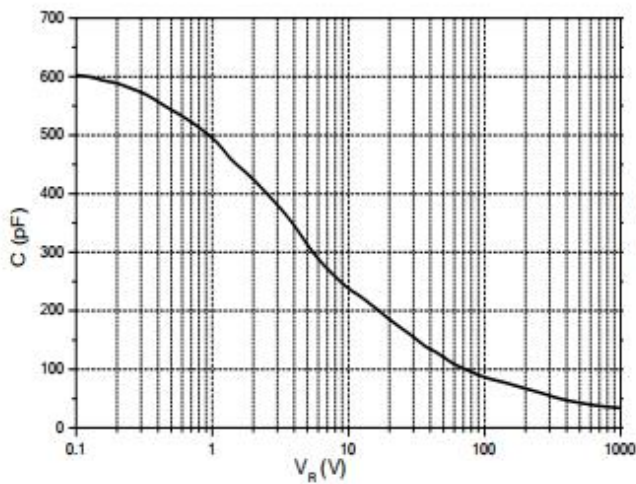


Figure 3. Capacitance vs. Reverse Voltage Figure 4. Total Capacitance Charge vs. Reverse Voltage

Typical Feature Curve

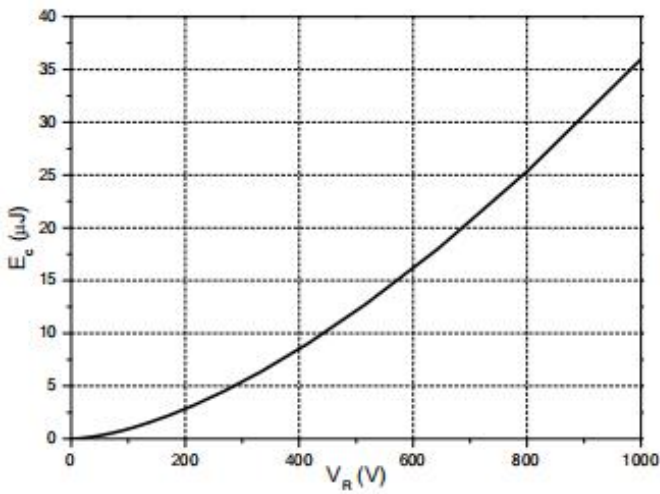


Figure 5. Capacitance Stored Energy

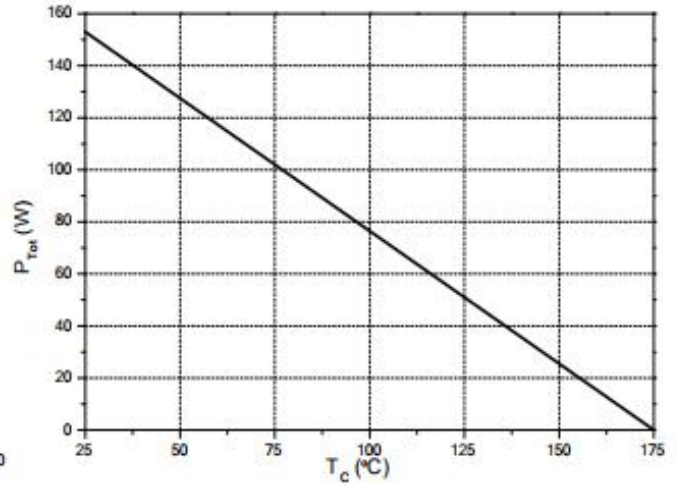


Figure 6. Power Derating

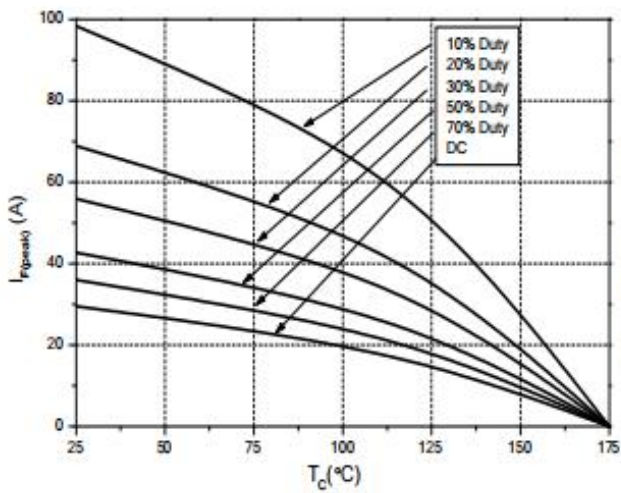


Figure 7. Current Derating

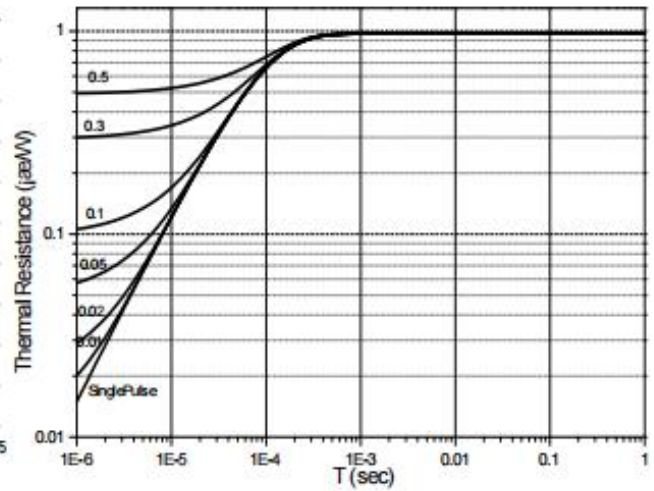
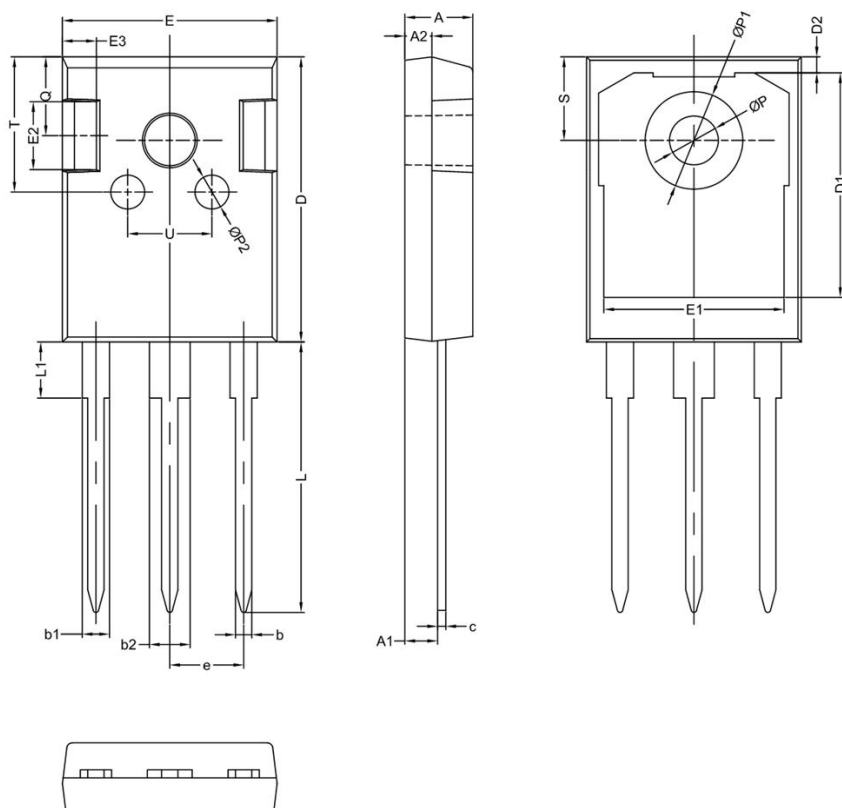


Figure 8. Transient Thermal Impedance

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


符号	机械尺寸/mm		
	最小值	典型值	最大值
A	4.80	5.00	5.20
A1	2.21	2.41	2.61
A2	1.90	2.00	2.10
b	1.10	1.20	1.35
b1		2.00	
b2		3.00	
c	0.55	0.60	0.75
D	20.80	21.00	21.20
D1		16.55	
D2		1.20	
E	15.60	15.80	16.0
E1		13.30	
E2		5.00	
E3		2.50	
e		5.44	
L	19.42	19.92	20.42
L1		4.13	
P	3.50	3.60	3.70
P1	-	-	7.40
P2		2.50	
Q		5.80	
S	6.05	6.15	6.25
T		10.00	
U		6.20	

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