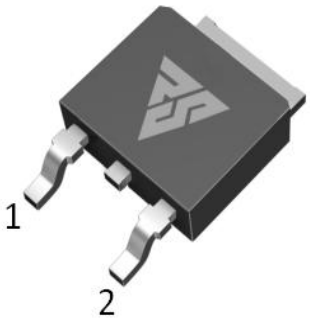
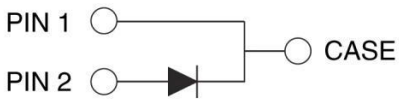
VRRM	IF (TC≤135℃)	QC
1200V	5A	12nC





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.
RSS02120D	TO-252	RSS02120D	Tape&reel	2500 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	115 52	A	TC ≤ 25℃ TC ≤ 135℃ TC ≤ 165℃	Fig. 3
IFSM	Non-Repetitive Forward Surge Current	1914	A	TC = 25℃, tp = 10ms, Half Sine Wave TC = 110℃, tp = 10ms, Half Sine Wave	
IFRM	Repetitive Peak Forward Surge Current	18	A	TC = 25℃, tp = 10ms, Half Sine Wave	
Ptot	Power Dissipation	108	W	TC = 25℃	Fig. 4
TC	Maximum Case Temperature	165	℃		
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	1.382.0	1.6-	V	IF = 2A, TJ = 25℃ IF = 2A, TJ = 175℃	Fig.1
IR	Reverse Current	14	50-	μA	VR = 1200V, TJ = 25℃ VR = 1200V, TJ = 175℃	Fig.2
C	Total Capacitance	125 129	/	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	12	/	nC	VR =800V,	Fig.6
Ec	Capacitance Stored Energy	3.7		uJ	VR =800V,	Fig.7

Thermal Characteristics (TJ= 25℃ unless otherwise specified)

Symbol	Parameter	Typ.	Unit	Note
RθJC	Thermal Resistance from Junction to Case	1.388	℃/W	Fig.8

Typical Feature Curve

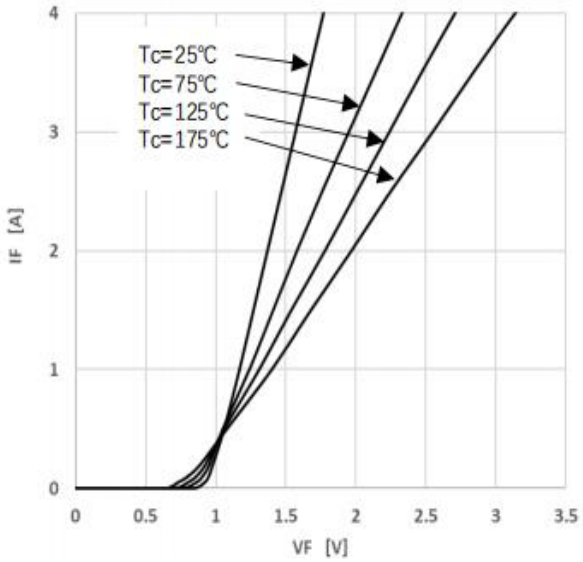


Figure 1 Forward Characteristics

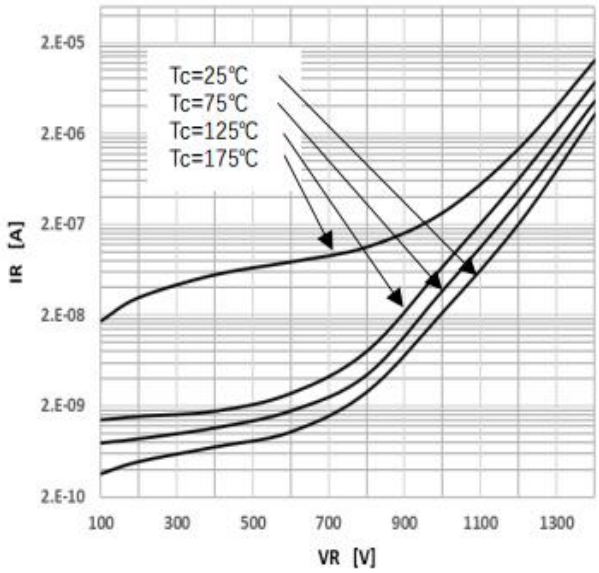


Figure 2 Reverse Characteristics

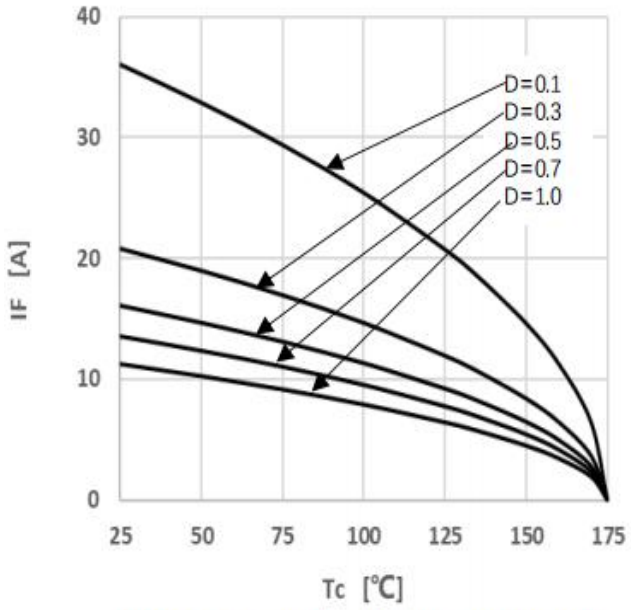


Figure 3 Peak Forward Current Derating

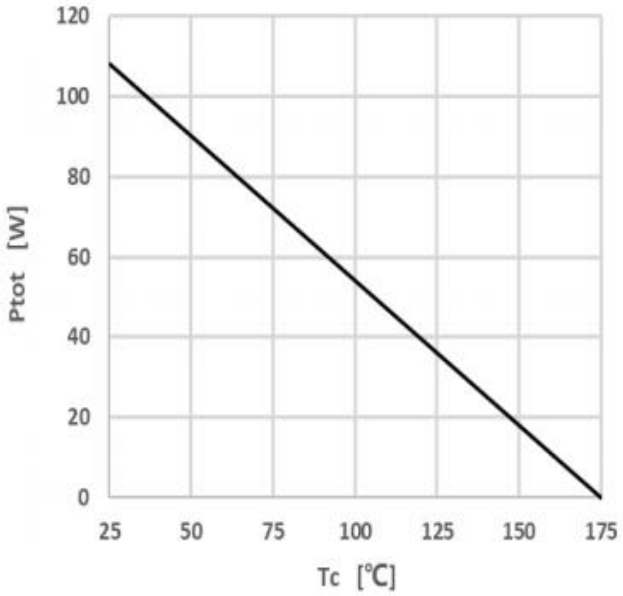


Figure 4 Power Dissipation

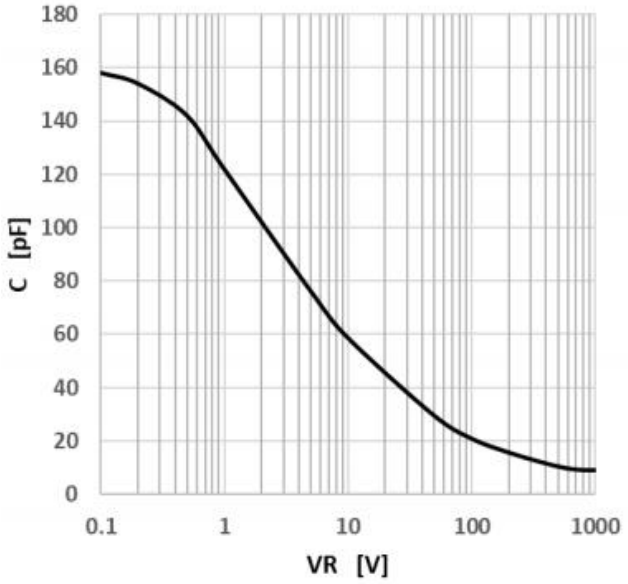


Figure 5 Capacitance vs. Reverse Voltage

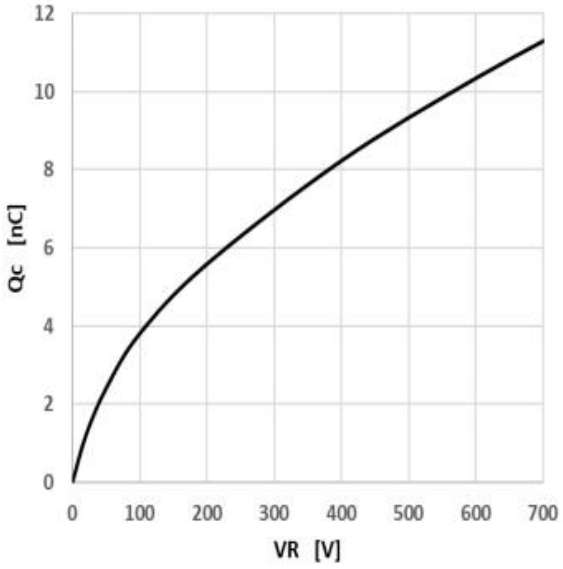


Figure 6 Capacitance Charge vs. Reverse Voltage

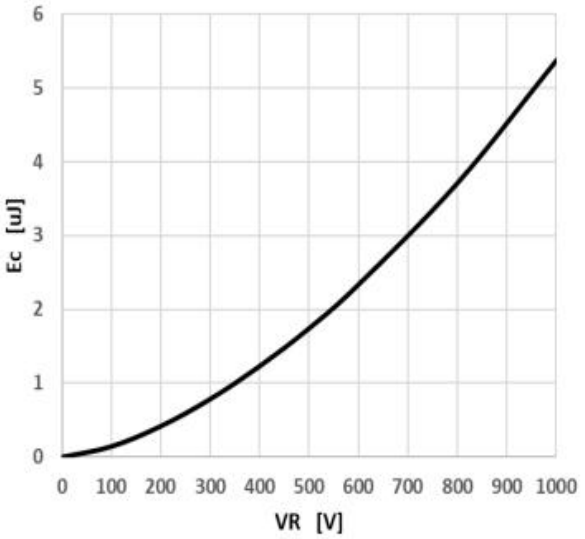


Figure 7 Capacitance Stored Energy

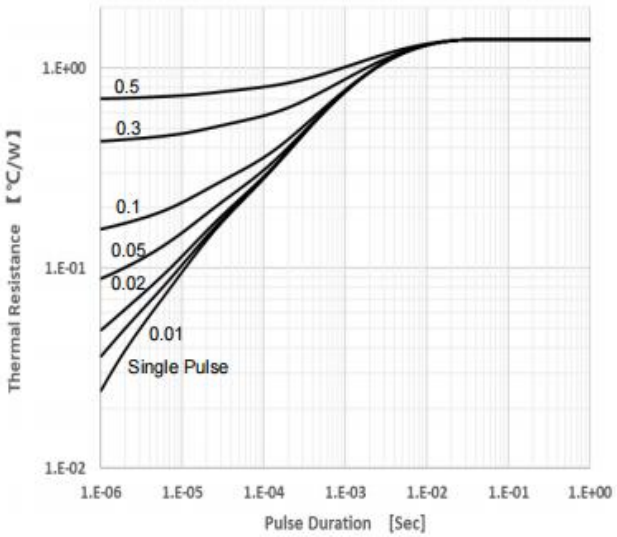
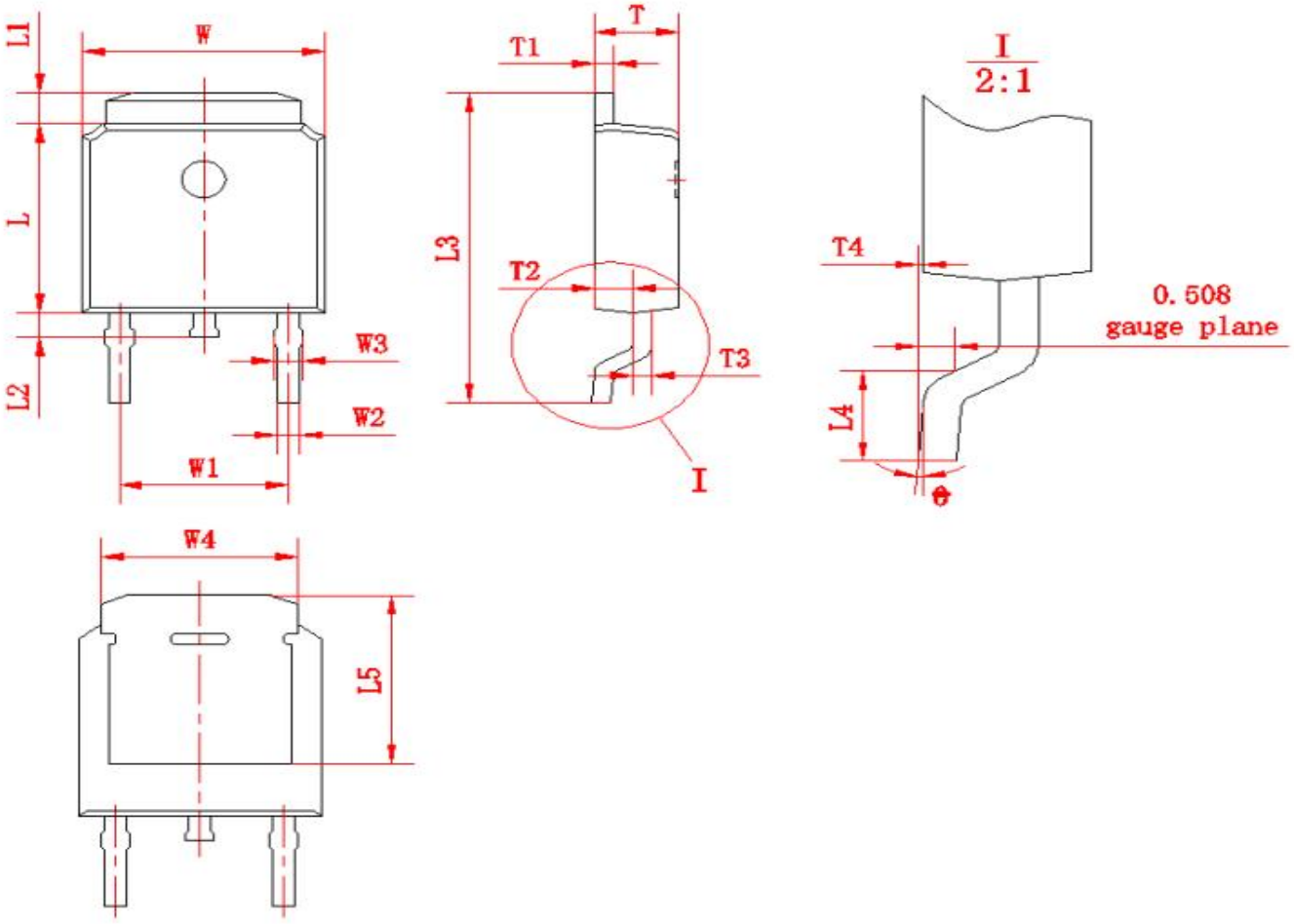


Figure 8 Transient Thermal Impedance

Package outline drawing(TO-252 Unit: mm)



符号	尺寸		符号	尺寸		符号	尺寸	
	Min	Max		Min	Max		Min	Max
W	6.50	6.70	L1	0.80	1.20	T1	0.48	0.58
W1	(4.572)		L2	0.60	1.00	T2	0.95	1.15
W2	0.6	0.8	L3	9.70	10.30	T3	0.48	0.58
W3	0.68	0.88	L4	1.30	1.70	T4	0.00	0.12
W4	(5.3)		L5	(5.20)		θ	0	8
L	6.00	6.20	T	2.20	2.40			

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2.A critical component is any component of a life support device or system whose failure to system whose failure to perform can be reasonably expected to cause the failure of the life support device or system,or to affect its safety or effectiveness.

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