



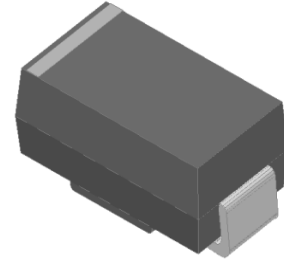
RS2A THRU RS2M

2.0 AMP Surface Mount Fast Recovery Rectifier

1. Features

- Glass passivated chip junction
- For surface mounted application.
- Low forward voltage drop.
- High current capability.
- Fast switching for fast recovery
- High reliability.
- Meets MSL level 1, per J-STD-020.

SMA(DO-214AC)



Cathode  Anode

2. Mechanical Data

- Case:Molded Plastic,SMA(DO-214AC) .
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750,Method-2026.
- Marking:marked on body.

3. Maximum Ratings and Electrical Characteristics

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	RS2A	RS2B	RS2D	RS2G	RS2J	RS2K	RS2M	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Average Rectified Output Current @T _L =100°C	I _{F(AV)}	2.0							A
Peak Forward Surge Current 8.3ms @T _j =25°C	I _{FSM}	60							A
Single half sine-wave superimposed @T _j =125°C on rated load (JEDEC Method)		48							
I ² t Rating for Fusing (t < 8.3ms)	I ² t	14.94							A ² S
Maximum Instantaneous Forward Voltage @IF=2A	V _{FM}	1.3							V
Maximum DC reverse current @T _j =25°C	I _R	5.0							uA
at rated DC blocking voltage @T _j =125°C		100							
Maximum Reverse Recovery Time (Note 1)	T _{RR}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C _j	18				12	10		pF
Typical Thermal Resistance (Note 3)	R _{θJA}	110							°C/W
	R _{θJL}	28							
	R _{θJC}	21							
Operating Temperature Range	T _j	-55 to+150							°C
Storage Temperature Range	T _{STG}	-55 to+150							°C

Note:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.
2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C



4. Rating And Characteristic Curves

Fig. 1 Forward Current Derating Curve

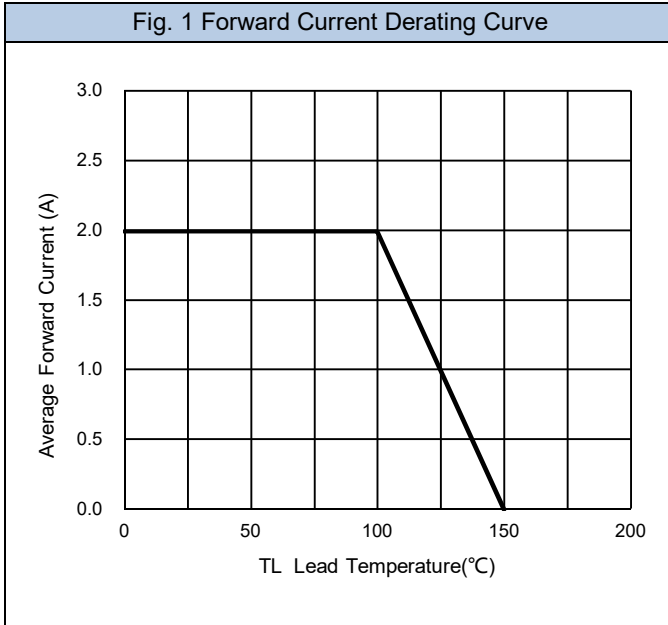


Fig. 2 Typical Forward Characteristics

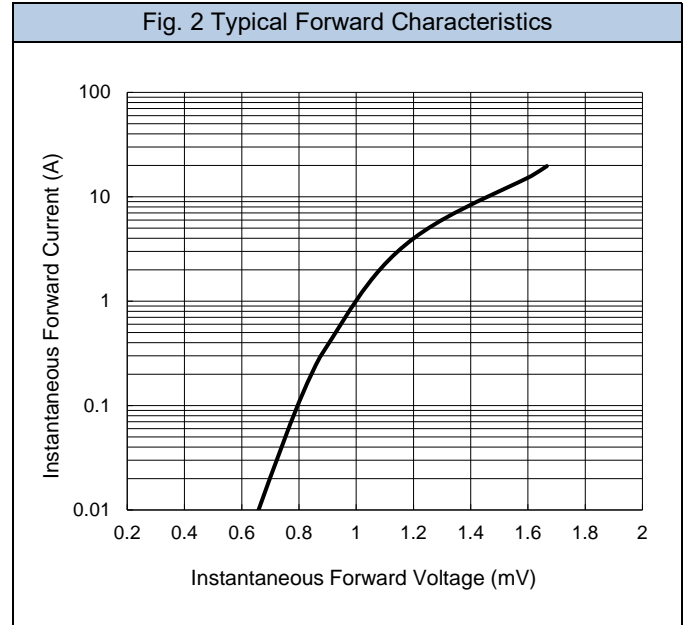


Fig. 3 Forward Surge Current Capability

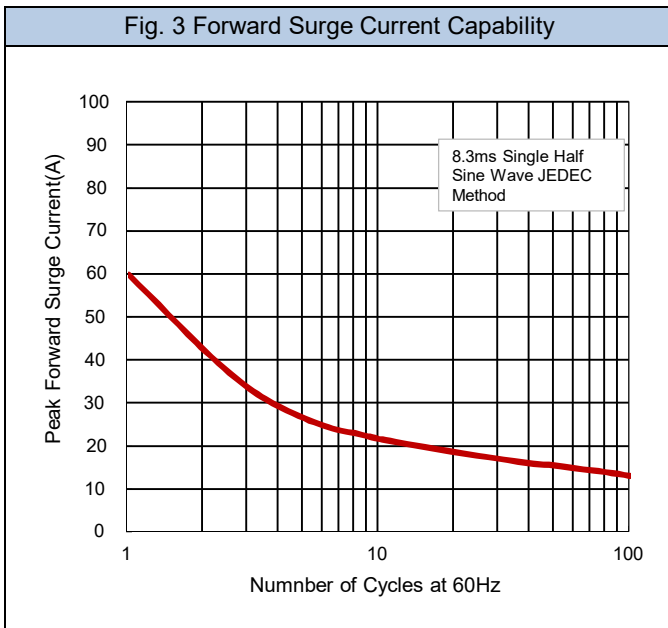
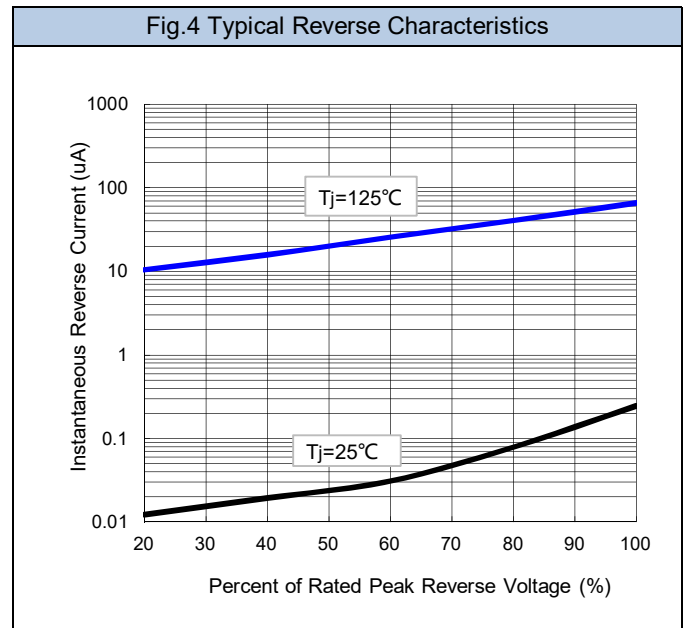


Fig. 4 Typical Reverse Characteristics

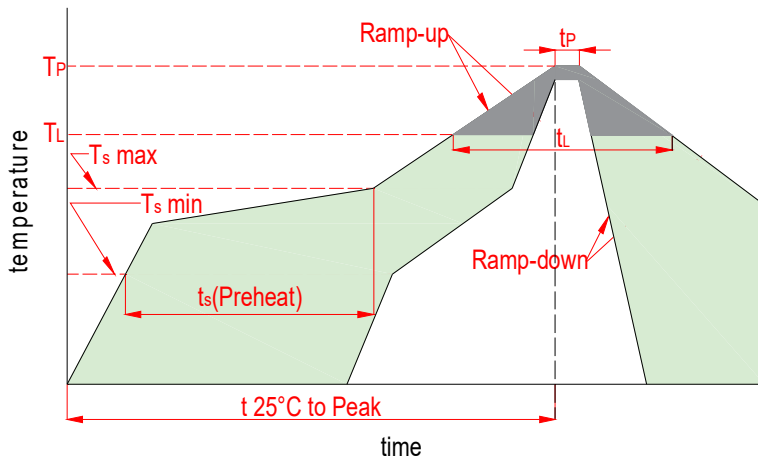




RS2A THRU RS2M

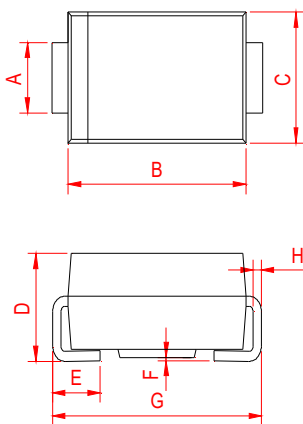
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5. Soldering Parameters



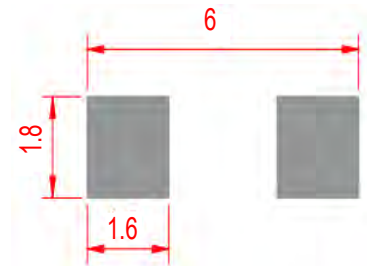
Reflow Condition		Lead-free
Pre Heat	Temp. min($T_s(\text{min})$)	150°C
	Temp. max($T_s(\text{min})$)	200°C
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3°C/s max
$T_s(\text{max})$ to T_L -Ramp-up Rate		3°C/s max
Reflow	Temp.(T_L)(Liquidus)	217°C
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_p)		260 ^{+0/-5} °C
Time within actual peak Temp.(t_p)		30s max
Ramp-down Rate		6°C/s max
Time 25°C to peak Tempe.(T_p)		8 minutes max
Do not exceed		260°C

6. Dimensions

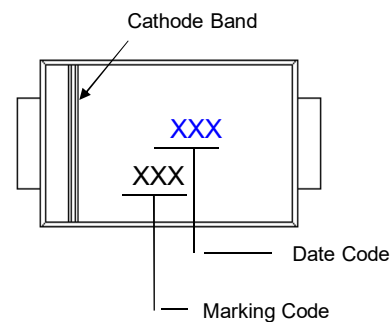
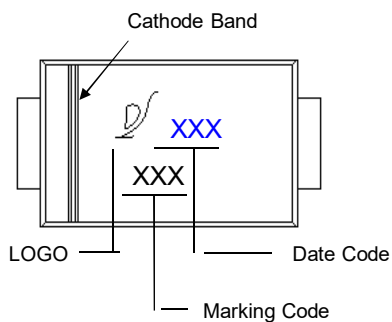


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.051	0.067	1.30	1.70
B	0.157	0.181	4.00	4.60
C	0.094	0.110	2.40	2.80
D	0.079	0.103	2.00	2.62
E	0.030	0.060	0.76	1.52
F	0.002	0.008	0.05	0.20
G	0.189	0.208	4.80	5.28
H	0.006	0.012	0.15	0.31

Mounting PAD Layout



7. Part Marking System



8. Package Information

Package	Tape Width (mm)	Reel Size		Quantity(pcs)
		mm	inch	
SMA(DO-214AC)	12	330	13	5000
SMA(DO-214AC)	12	330	13	7500



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