

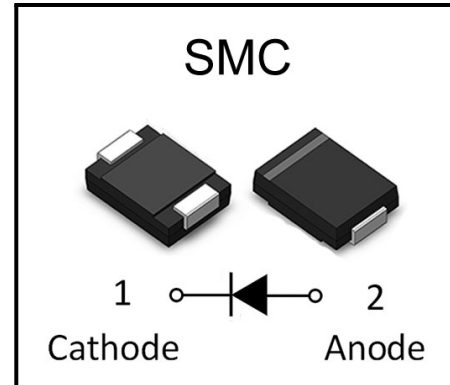
RS3A-RS3M

Fast Recovery
Rectifier Diode

Features

- Low reverse leakage
- High forward surge capability
- High reliability
- High temperature soldering guaranteed:
260°/10seconds
- Lead and body according with RoHS standard

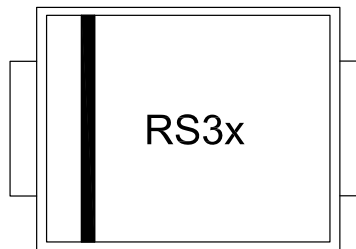
Package



General Description

- Case: molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode
- Lead: Pure tin plated, lead free
- Package: SMB Plastic Package

Making Code



Ordering information

Part Number	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M
Marking	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M
Base qty	3K	3K	3K	3K	3K	3K	3K



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Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Characteristics	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	Unit
V _{RRM}	Maximum Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V
V _{RMS}	Maximum RMS Voltage	35	70	140	280	420	560	700	V
V _{DC}	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
I _{F(AV)}	Maximum Average Forward Rectified Current	3.0							A
I _{FSM}	Non-repetitive Peak Forward Surge Current 8.3ms Single half-sine-wave	100							A
I _{FSM}	Non-repetitive Forward Surge Current @1ms, square wave, 1 cycle, T _j =25℃	200							A
I ² t	Current squared time @1ms≤t≤8.3ms T _j =25℃	41.5							A ² s
V _F	Maximum Forward Voltage @I _F =3.0A	1.3							V
I _R	Maximum DC Reverse Current	T _A = 25℃							uA
		T _A = 125℃							
t _{rr}	Maximum Reverse Recovery Time ⁽¹⁾	150				250	500		nS
C _J	Typical Junction Capacitance@V _R =4.0V,f=1MHz	40				30			pF
R _{θJA}	Typical Thermal Resistance ⁽²⁾	48							℃/W
R _{θJL}	Typical Thermal Resistance ⁽²⁾	15							℃/W
R _{θJC}	Typical Thermal Resistance ⁽²⁾	12							℃/W
T _J	Operating Junction Temperature Range	-55 to +150							℃
T _{STG}	Storage Temperature Range	-55 to +150							℃

Notes:

(1) Measured with I_F=0.5A, I_R=1A, I_{RR}=0.25A.

(2) Thermal resistance from junction to ambient and from junction to lead mounted on PCB. with 0.6" x 0.6" (16mm x 16mm) copper pad areas



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Typical Performance Characteristics($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Typical Forward Characteristics

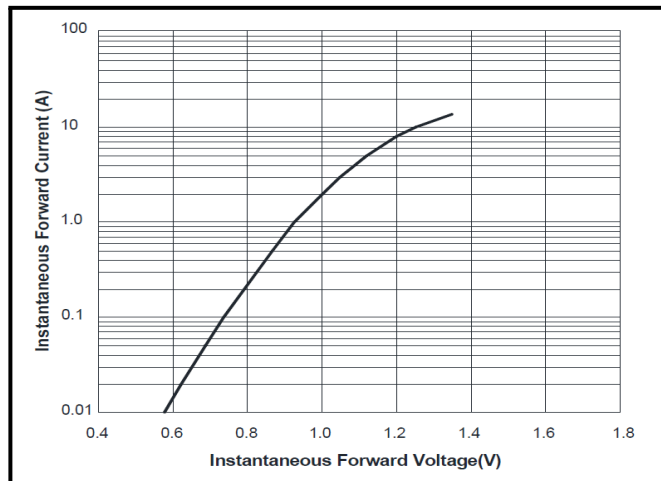


Figure 2: Forward Current Derating Curve

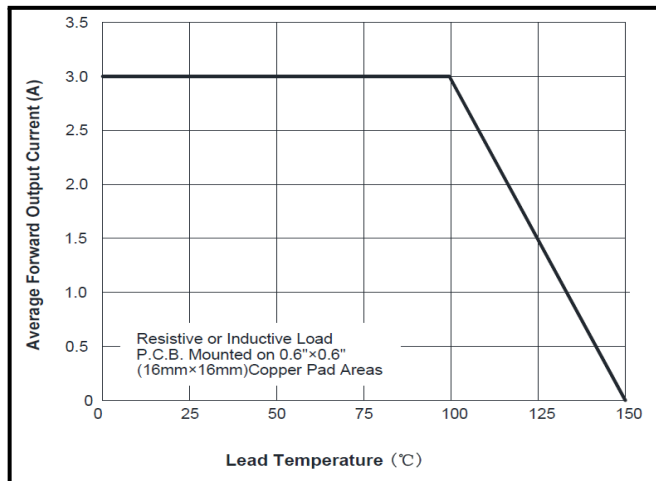


Figure 3: Maximum Non-Repetitive Peak Forward

Surge Current

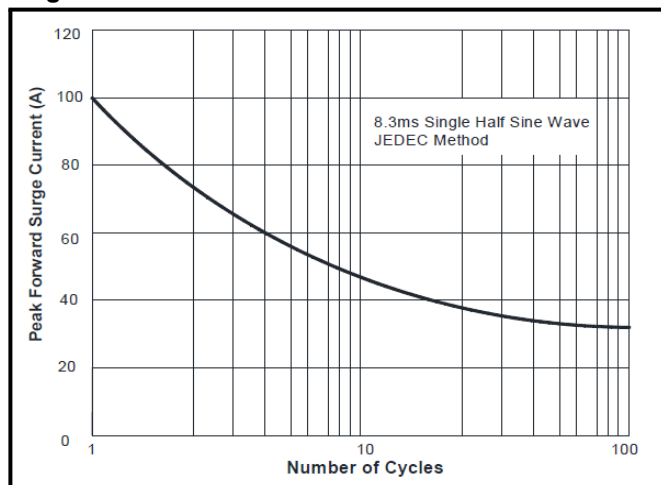
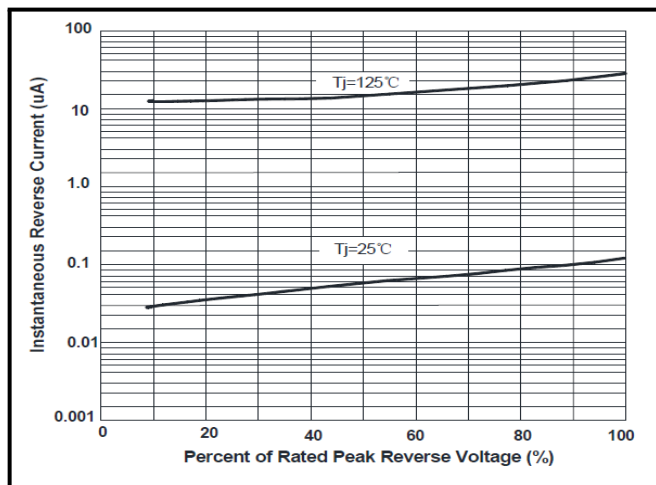


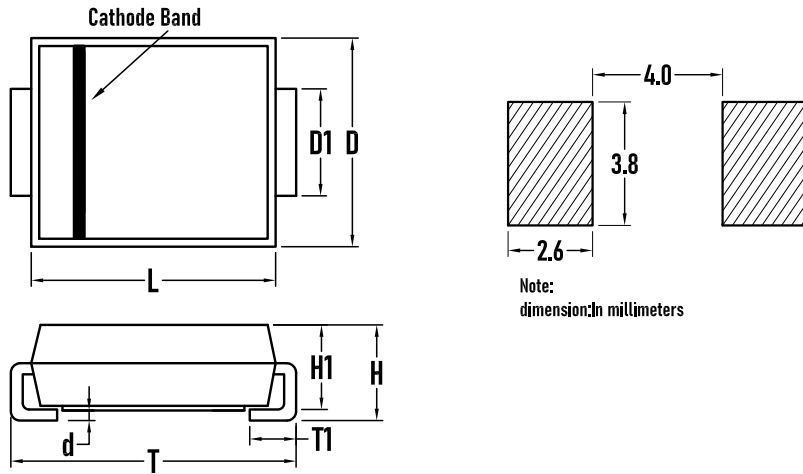
Figure 4: Typical Reverse Characteristics



RS3A-RS3M

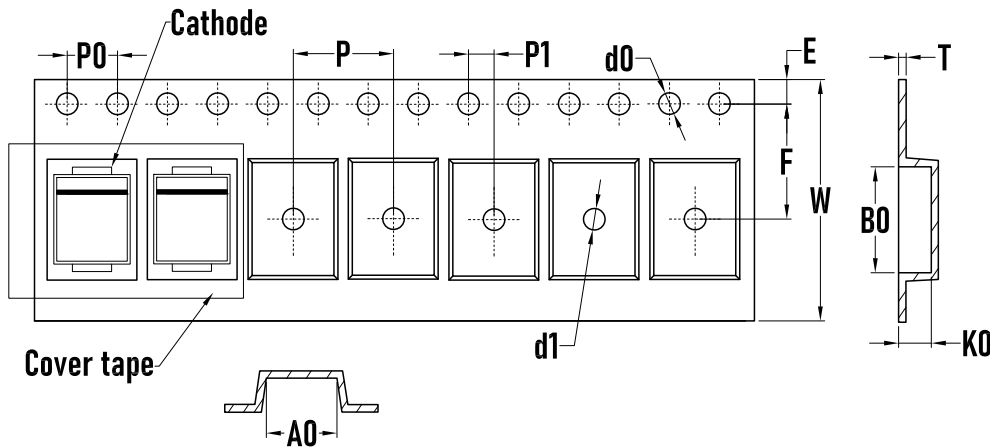
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Package Mechanical Data - SMC



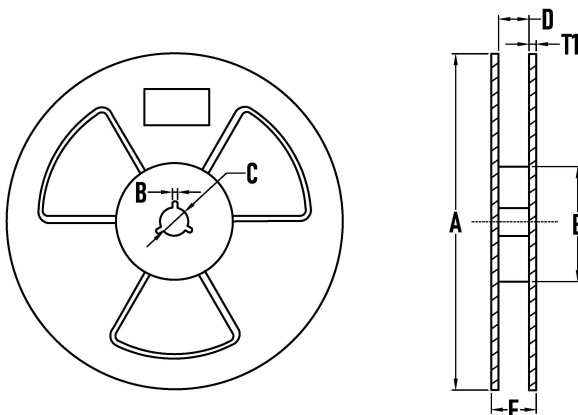
SYMBOL	MILLIMETER		Inches	
	MIN	MAX	MIN	MAX
D	5.5	6.1	0.217	0.240
D1	2.7	3.3	0.106	0.130
T	7.4	8.4	0.291	0.331
T1	0.8	1.6	0.031	0.063
d	—	0.3	—	0.012
H1	2.0	2.6	0.079	0.102
H	2.1	2.7	0.083	0.106
L	6.5	7.1	0.256	0.280

Packaging Tape - SMC



SYMBOL	MILLIMETER
A0	6.00±0.1
B0	8.25±0.02
d0	1.50±0.1
d1	1.50±0.1
E	1.75±0.1
F	7.50±0.1
K0	2.70±0.1
P	8.00±0.1
P0	4.00±0.1
P1	2.00±0.05
W	16.00±0.1
T	0.22±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	323±2
B	3.0±0.2
C	15.0±0.5
D	16±2
E	73±2
T1	2.2±0.2
Quantity	3000PCS

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

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