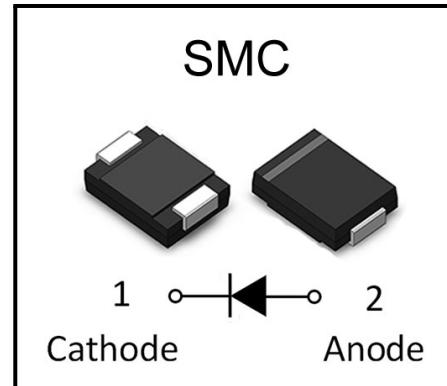


## Features

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

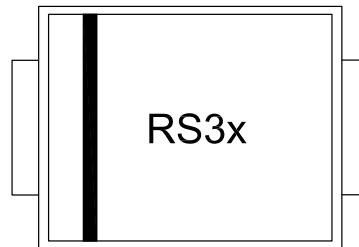
## Package



## 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						



# RS3A-RS3M

Fast Recovery  
Rectifier Diode

Maximum Ratings (@ $T_A=25^\circ\text{C}$  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, $T_j=25^\circ\text{C}$				200				A
$I^2t$	Current squared time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_j=25^\circ\text{C}$				41.5				$\text{A}^2\text{s}$
$V_F$	Maximum Forward Voltage @ $I_F=3.0\text{A}$				1.3				V
$I_R$	Maximum DC Reverse Current	$T_A = 25^\circ\text{C}$			5				$\mu\text{A}$
		$T_A = 125^\circ\text{C}$			100				
$t_{rr}$	Maximum Reverse Recovery Time <sup>(1)</sup>		150		250		500		nS
$C_J$	Typical Junction Capacitance@ $V_R=4.0\text{V}, f=1\text{MHz}$		40			30			$\text{pF}$
$R_{\theta JA}$	Typical Thermal Resistance <sup>(2)</sup>			48					$^\circ\text{C/W}$
$R_{\theta JL}$	Typical Thermal Resistance <sup>(2)</sup>			15					$^\circ\text{C/W}$
$R_{\theta JC}$	Typical Thermal Resistance <sup>(2)</sup>			12					$^\circ\text{C/W}$
$T_J$	Operating Junction Temperature Range			-55 to +150					$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range			-55 to +150					$^\circ\text{C}$

Notes:

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

(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



# RS3A-RS3M

Fast Recovery  
Rectifier Diode

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

Figure 1: Typical Forward Characteristics

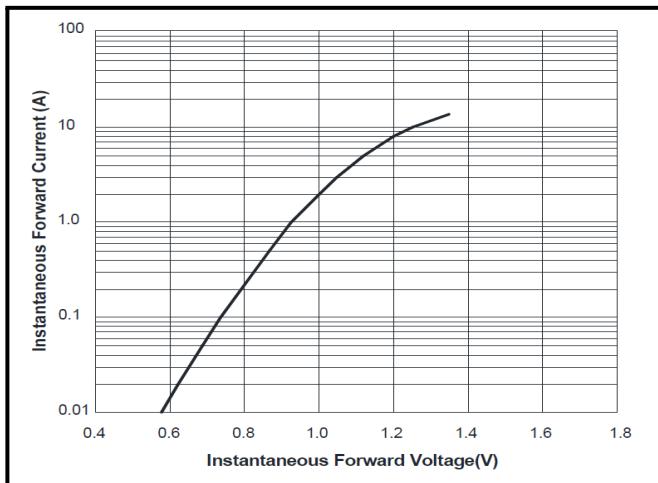


Figure 2: Forward Current Derating Curve

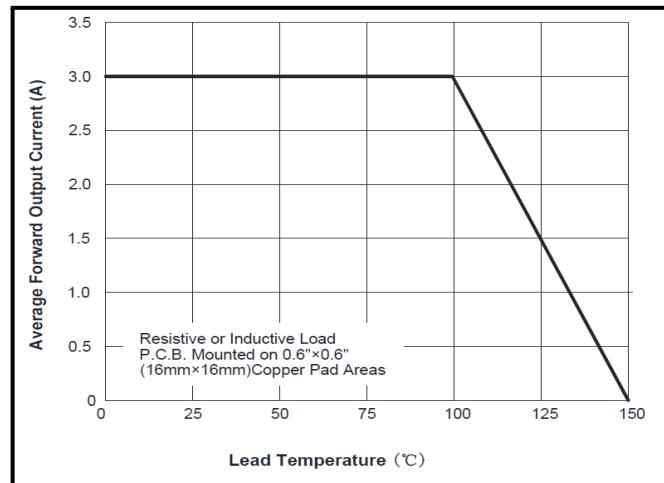


Figure 3: Maximum Non-Repetitive Peak Forward Surge Current

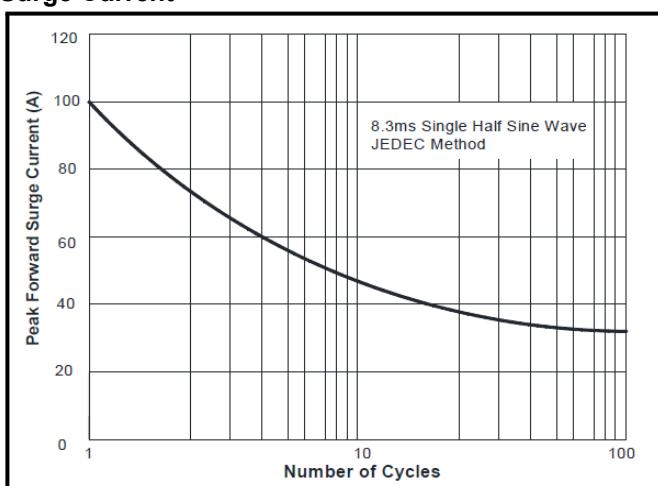
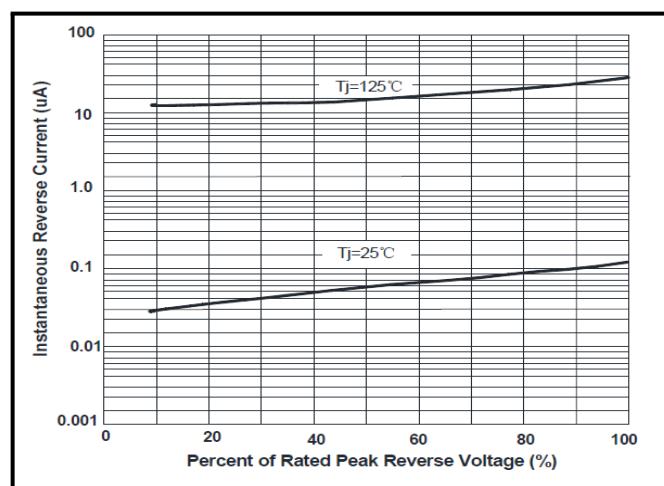


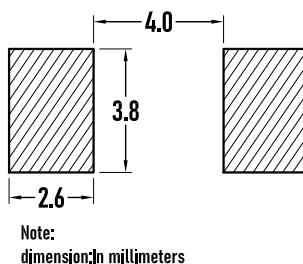
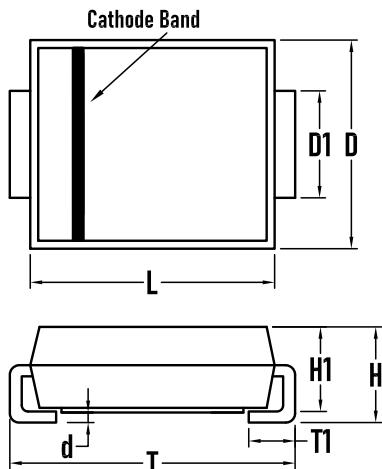
Figure 4: Typical Reverse Characteristics



# RS3A-RS3M

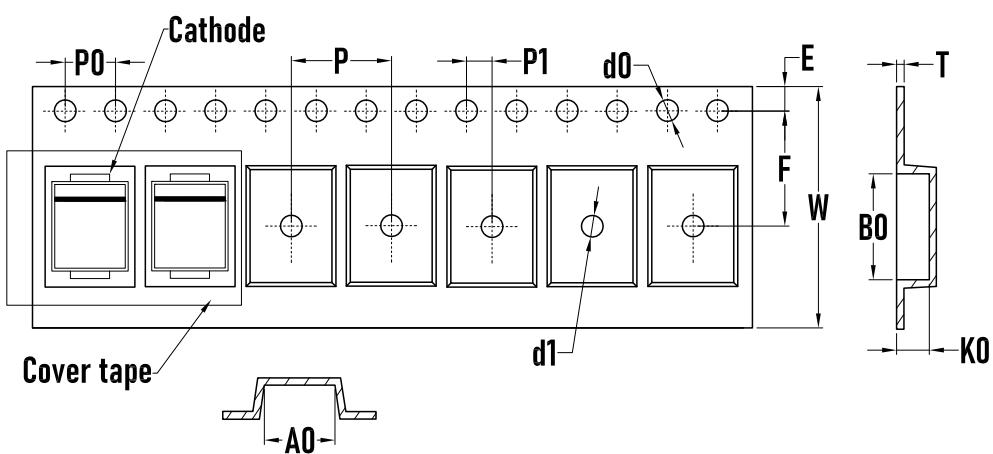
Fast Recovery  
Rectifier Diode

## Package Mechanical Data - SMC



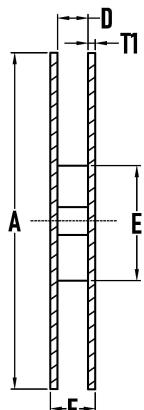
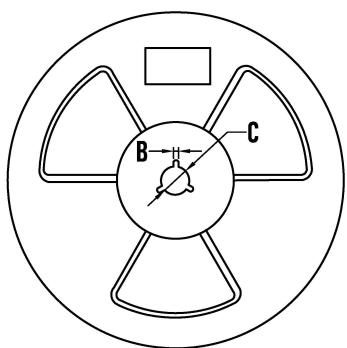
SYMBOL	MILLIMETER		Inches	
	MIN	MAX	MIN	MAX
D	5.5	6.1	0.217	0.240
D1	2.7	3.3	0.106	0.130
T	7.4	8.4	0.291	0.331
T1	0.8	1.6	0.031	0.063
d	—	0.3	—	0.012
H1	2.0	2.6	0.079	0.102
H	2.1	2.7	0.083	0.106
L	6.5	7.1	0.256	0.280

## 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. Revision: 2022-Jan-1-A

