

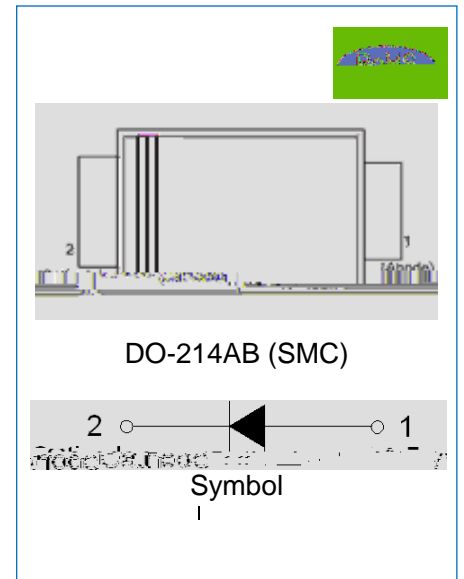


## RS3A~RS3M FAST RECOVERY RECTIFIER

Rev.2.4

### DESCRIPTION:

- Plastic package has underwriters laboratory flammability classification 94V-0
- For surface mounted applications in order to optimize board space
- Glass passivated junction
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Fast recovery time



### MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per J-STD-002
- Polarity: Color band denotes cathode end
- Weight: 0.26 gram

### ABSOLUTE MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

(Rating at 25 ambient temperature unless otherwise specified.)

Parameter	Symbol	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	
Maximum	RRM				repetitive				
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
Maximum average forward current at $T_L=95$	$I_{F(AV)}$	3.0							A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	100							A
Maximum forward voltage @ $I_F=3.0A$	$V_F$	1.3							V
Maximum DC reverse current at rated DC blocking voltage	$T_j=25$	5.0							$\mu A$
	$T_j=150$	500							
Typical junction capacitance $V_R=4.0V, f=1MHz$	$C_J$	30							pF
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 to +150							
Maximum reverse recovery time $I_F=0.5A, I_R=1A, I_{rr}=0.25A$	$t_{rr}$	150				250	500	ns	



**THERMAL RESISTANCES**

Symbol	Parameter	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	Unit
R <sub>th(j-L)</sub>	Junction to lead(note1)	15							/W

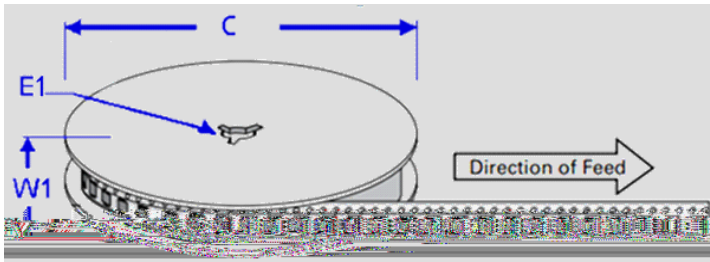
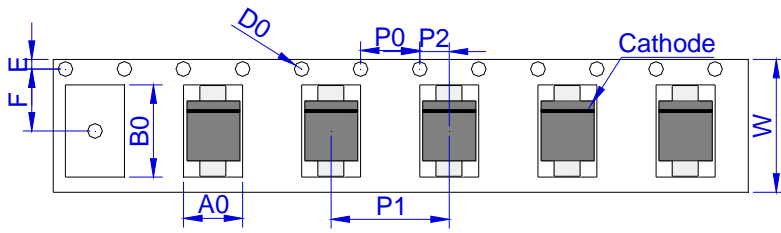
Note1 Thermal resistance from junction to lead mounted on P.C.B. with 8.0 mm x 8.0 mm copper pad areas.

**MARKING**

**PACKAGE MECHANICAL DATA**

Ref.	Dimensions			
	Millimeters		Inches	
	Min.			
A	5.75			
B	6.90			
C	2.75			
D	0.95			
E	7.70			
F	0.051			
G	0.15			

TAPE AND REEL SPECIFICATION-SMC



Ref.	Dimensions	
	Millimeters	Inches
A0	6.05 ± 0.3	
B0	8.31 ± 0.3	
C	330.0	
D0	1.55 ± 0.1	
E	1.75 ± 0.2	
E1	13.3 ± 0.3	
F	7.50 ± 0.2	
P0	4.00 ± 0.2	
P1	8.00 ± 0.2	
P2	2.00 ± 0.2	
W	16.0 ± 0.2	
	19.7 ± 2.0	

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	0.26	3,000	48,000	330

CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics (25 )	FIG.2: Typical reverse characteristics
<p><math>I_F=30\mu A @ V_F=1.2V</math></p>	<p>25 <math>\Omega</math> 15<math>\mu A</math> 150 200<math>\mu A</math></p>
FIG.3: Maximum non-repetitive peak forward surge	