

# Fast Recovery Rectifier 1.0A DO-214AC SMA

RS1x Series

MERITEK

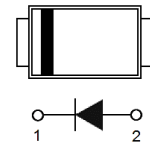
## FEATURES

- Reverse Voltage: 50V~1000V
- Surge Overload Rating to 30A Peak
- Low Profile Package with Built-in Strain Relief
- Glass Passivated Die Construction
- Fast Recovery Times for High Efficiency



## MECHANICAL DATA

- Case: DO-214AC, SMA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- UL Flammability Classification 94V-0
- Polarity: Color Band Denotes Cathode End



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

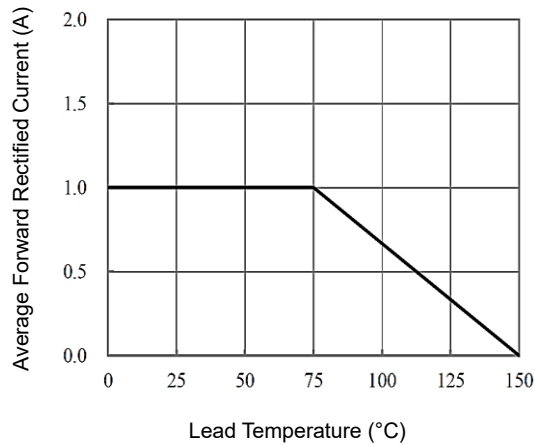
Parameter	Symbol	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Unit	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current, $T_L=75^\circ\text{C}$	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30								A
Maximum Forward Voltage at 1.0A	$V_F$	1.3								V
Maximum Reverse Current at Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	5.0								$\mu\text{A}$
	$T_J=125^\circ\text{C}$	200								
Typical Junction Capacitance	$C_J$	15								pF
Typical Thermal Resistance- Junction to Ambient	$R_{\theta JA}$	75								$^\circ\text{C/W}$
Maximum Reverse Recovery Time	$T_{RR}$	150				250	500			ns
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150								$^\circ\text{C}$

Note:

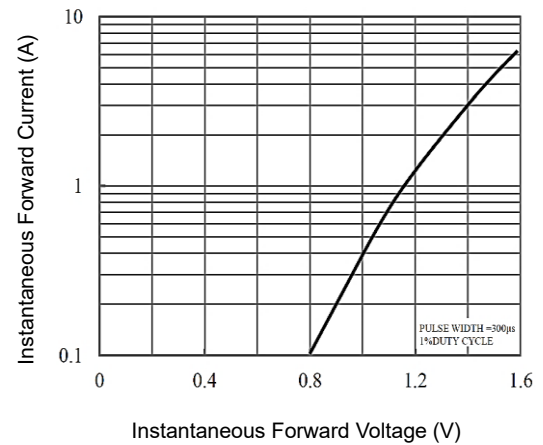
1. Ratings at 25°C ambient temperature unless otherwise specified.
2. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%
3. Thermal resistance from junction to lead mounted on P.C.B with 0.3" x 0.3" (8.0 x 8.0mm) copper pad areas.
4. Reverse Recovery Test Conditions :  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=0.25\text{A}$

### CHARACTERISTIC CURVES

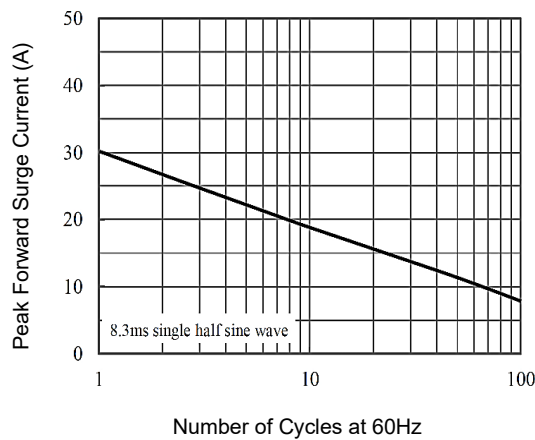
Typical Forward Current Derating Curve



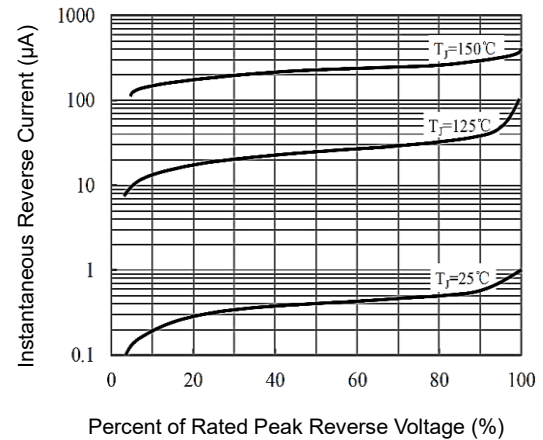
Typical Instantaneous Forward Characteristics



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristics



### DIMENSIONS

DO-214AC(SMA)	Min (mm)	Max (mm)
A	1.250	1.700
B	4.000	4.700
C	2.180	2.900
D	0.152	0.305
E	4.700	5.310
G	0.102	0.203
H	0.760	1.550
J	1.700	2.430
X	2.500	
X1	6.500	
X2	1.500	
Y	1.700	

