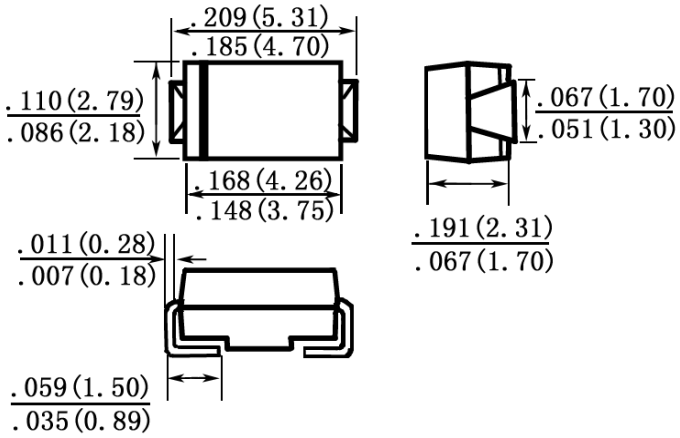
RS1A~RS1M

Surface Mount Fast Recovery Rectifiers

Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
V_{RRM}	50 V to 1000 V
I_{FSM}	30 A
t_{rr}	150nS, 250nS, 500nS
V_F	1.3 V
T_j max.	125 °C

DO-214AC(SMA)



Dimensions in inches and (millimeters)

Features

- Low profile package
- Ideal for automated placement
- Fast switching for high efficiency
- High forward surage capability
- High temperatrue soldering：
  260℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Date

- Case: JEDEC DO-214AC molded plastic
- Terminals: Solder plated, solderable per
  J-STD-002B and JESD22-B102D
- Polarity: Laser band denotes cathode end

Maximum Ratings & Thermal Characteristics & Electrical Characteristics

(TA = 25 °C unless otherwise noted)

	Symbol	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	UNIT
Maximum repetitive 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	$I_{F(AV)}$	1							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum instantaneous forwad voltage at 1.0A	V_F	1.3							V
Maximum DC reverse current T_A = 25 ℃	I_R	5.0							μA
at Rated DC blocking voltage T_A = 125℃		50							μA
Maximum reverse recovery time at I_F = 0.5 A , I_R = 1.0 A , I_{rr} = 0.25 A	t_{rr}	150				250	500		nS
Typical junction capacitance at 4.0 V ,1MHz	C_J	11					8		pF
Thermal resistance from junction to ambient	$R_{\theta JA}$	75							℃/ W
Operating junction and storage temperature range	T_J,T_{STG}	–55 to +125							℃

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

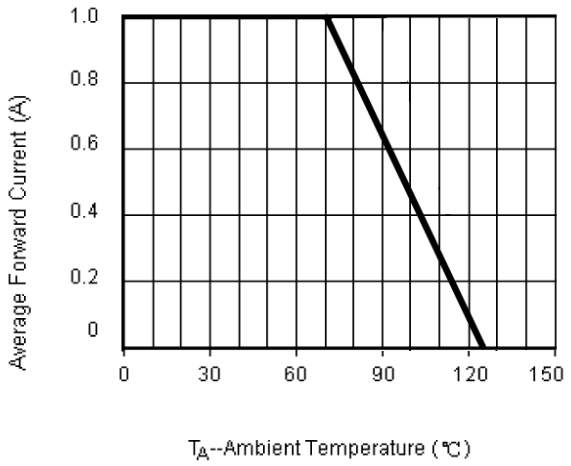


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

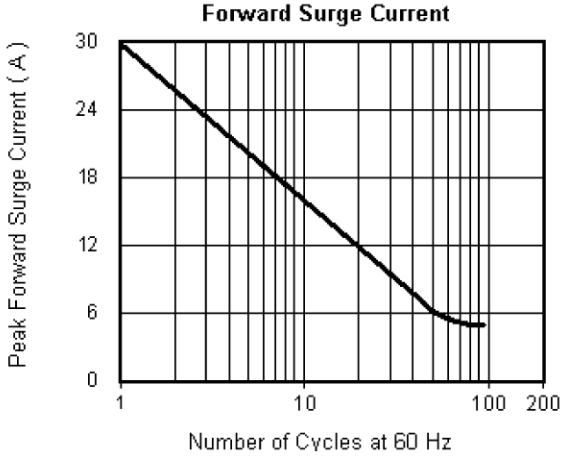


Fig.3 Typical Instantaneous Forward Characteristics

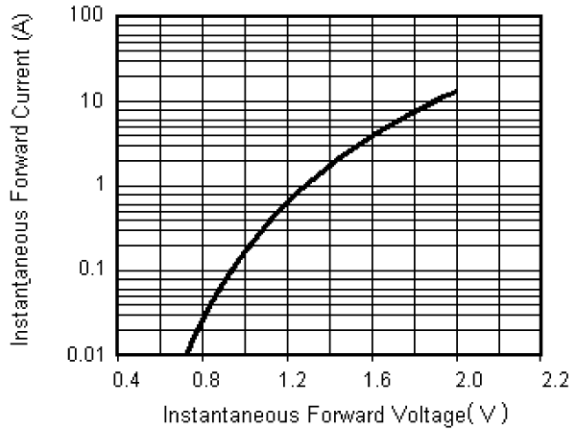


Fig.4 Typical Reverse Leakage Characteristics

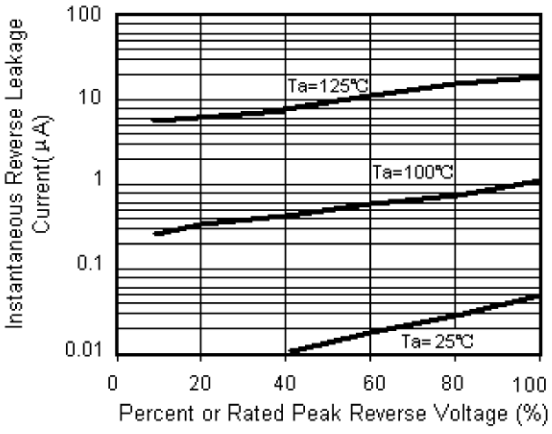


Fig.5 Typical Junction Capacitance

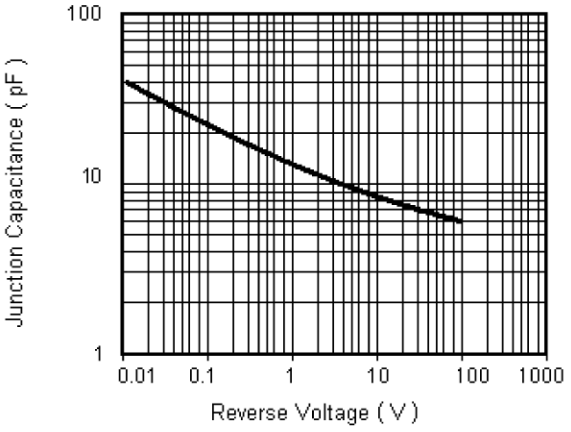


Fig.6 Transient Thermal Impedance