Fast Recovery rectifiers

Features

Low profile package
Ideal for automated placement
Glass passivated chip junctions
Fast switching for high efficiency
High forward surge capability
High temperature soldering：
260℃/10 seconds at terminals
Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC

SMA (DO－214AC)

MARKING:RS1M

Mechanical Date

Case: JEDEC DO-214AC molded plastic body over glass passivated chip
Terminals: Solder plated, solderable per JESD22-B102
Polarity: Laser band denotes cathode end

Maximum Ratings & Thermal Characteristics

(T_A = 25 °C unless otherwise noted)

Items	Symbol	RS1M	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC blocking voltage	V_{DC}	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30	A
Thermal resistance from junction to lead (1)	$R_{\theta JL}$	35	℃/ W
Operating junction and storage temperature range	T_J ,T_{STG}	–55 to +150	℃

Note 1: Mounted on P.C.B. with 0.2 x 0.2” (5.0 x 5.0mm) copper pad areas.

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Items	Test conditions		Symbol	RS1M	UNIT
Instantaneous forward voltage	I_F=1.0 A(2)		V_F	1.3	V
Reverse current	V_R=V_{DC}	T_j=25℃	I_R	5	μA
		T_j=125℃		50	
Reverse recovery time	I_F = 0.5 A , I_R = 1.0 A , I_{rr} = 0.25 A		t_{rr}	500	nS
Typical junction capacitance	4.0 V ,1MHz		C_J	8	pF

Note 2: Pulse test:300μs pulse width,1% duty cycle.

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

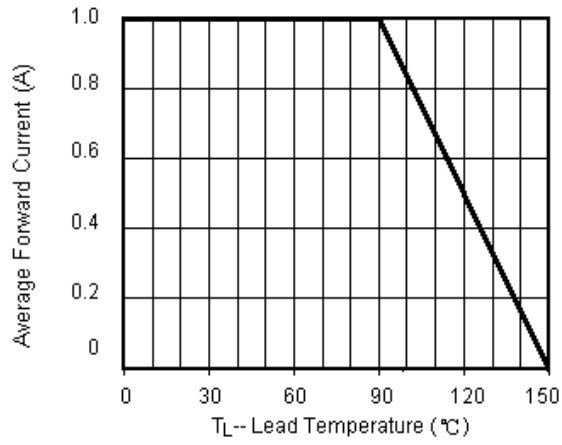


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

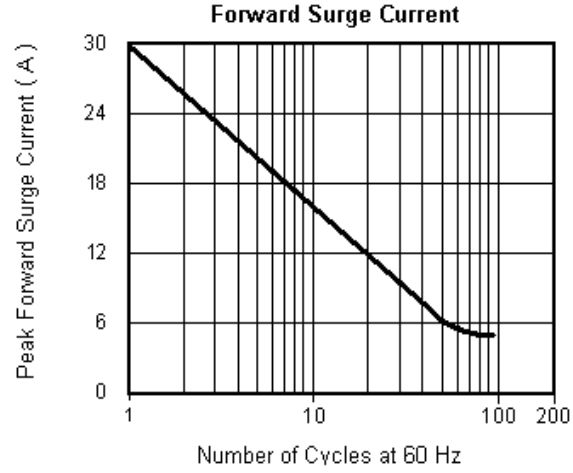


Fig.3 Typical Instantaneous Forward Characteristics

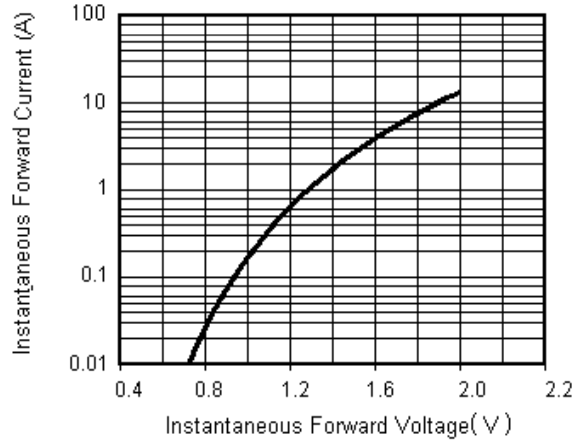
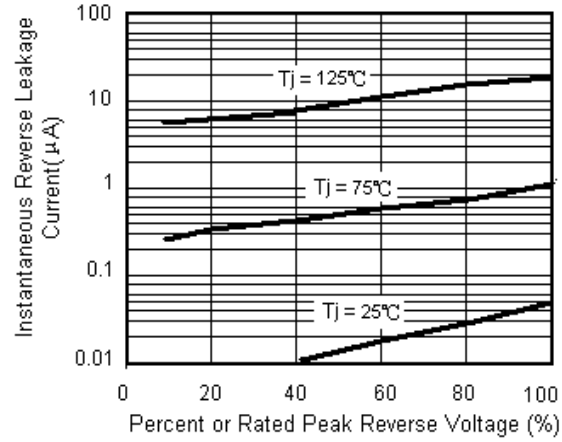
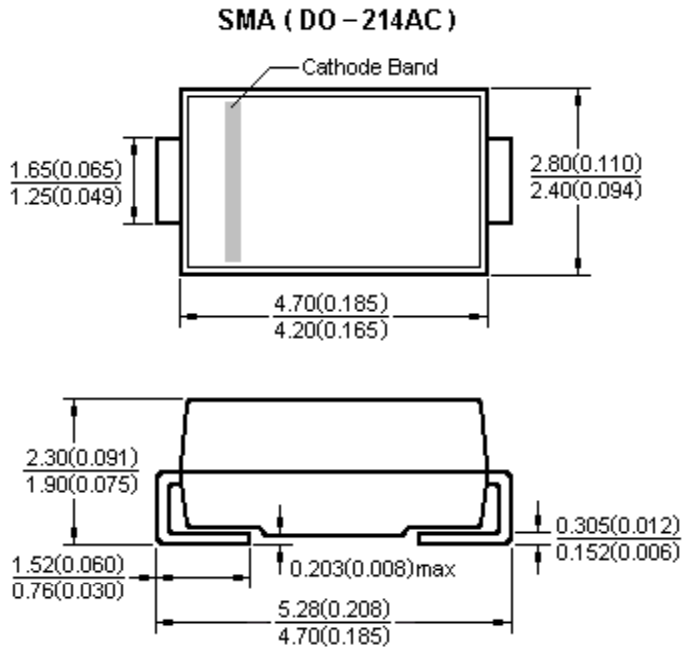


Fig.4 Typical Reverse Leakage Characteristics



Package Outline



Dimensions in millimeters and (inches)