

### Surface Mount Fast Recovery Rectifiers

**(Pb)** Lead(Pb)-Free

#### Features:

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Fast switching speed

#### Mechanical Data:

- \* Case : Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.063 grams

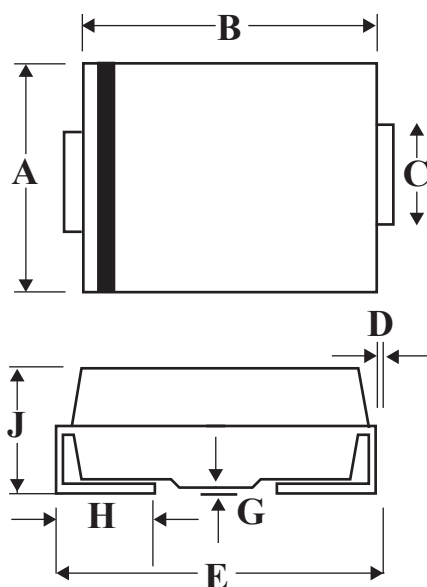
**REVERSE VOLTAGE**  
**50 TO 1000 VOLTS**  
**FORWARD CURRENT**  
**1.0 AMPERE**



**SMA(DO-214AC)**

### SMA Outline Dimension

Unit:mm



SMA		
Dim	Min	Max
A	2.20	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.48	5.59
G	0.10	0.20
H	0.76	1.52
J	1.70	2.62

## Maximum Ratings and Electrical Characteristics

Rating 25°C Ambient Temperature Unless Otherwise Specified.

Single Phase HalfWave, 60Hz , Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

Characteristics	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 .375"(9.5mm) Lead Length at $T_A = 50^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current,8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC)	$I_{FSM}$	30							A
Maximum Instantaneous At 1.0A DC	$V_F$	1.3							V
Maximum DC Reverse Current @ $T_a = 25^\circ\text{C}$ At Rated DC BlockingVoltage @ $T_a = 100^\circ\text{C}$	$I_R$	5.0 100							$\mu\text{A}$
Max Reverse Recovery Time <sup>1</sup>	$T_{rr}$	150				250	500		nS
Typical Junction Capacitance <sup>2</sup>	$C_J$	15							pF
OperatingTemperature Range	$T_J$	+175							$^\circ\text{C}$
StorageTemperature Range	$T_{STG}$	-65 to +175							$^\circ\text{C}$

Notes: 1.Reverse Recovery Time test condition:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .

2.measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES

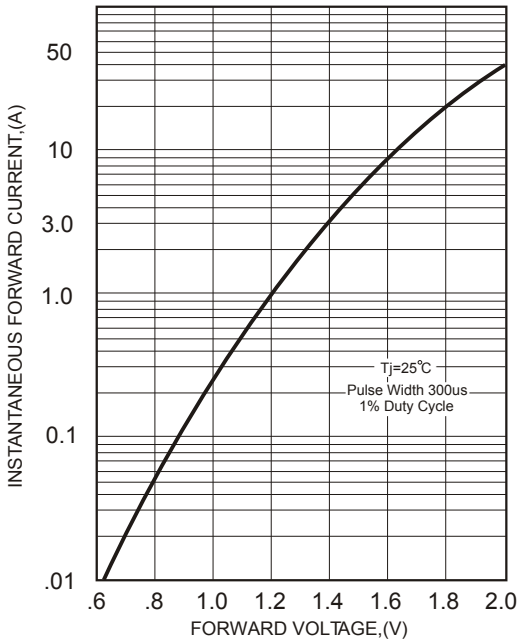


Fig.1 TYPICAL FORWARD CHARACTERISTICS

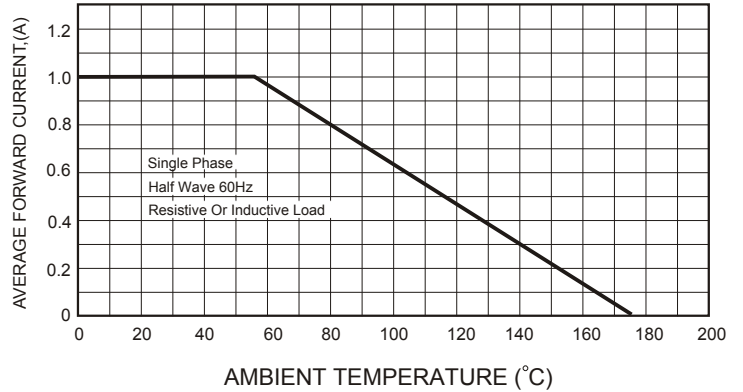
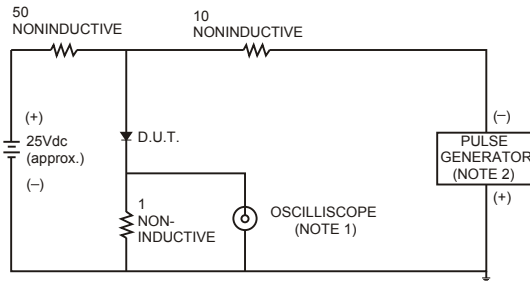


Fig.2 TYPICAL FORWARD CURRENT DERATING CURVE



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
 2. Rise Time= 10ns max., Source Impedance= 50 ohms.

Fig.3 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS

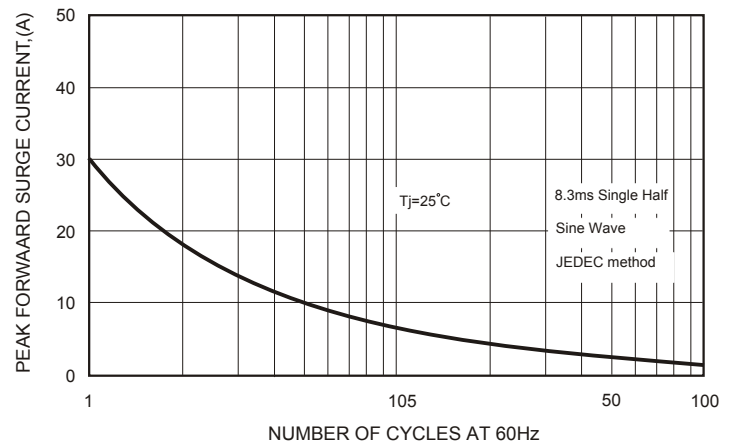
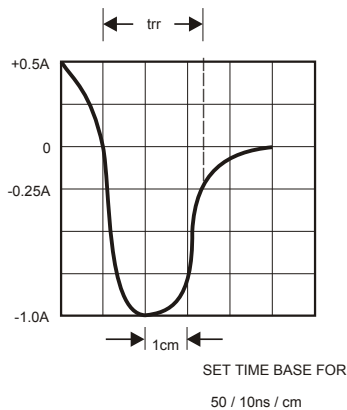


Fig.4 MAXIMUM NON-REPETITIVE FORWARDSURGE CURRENT

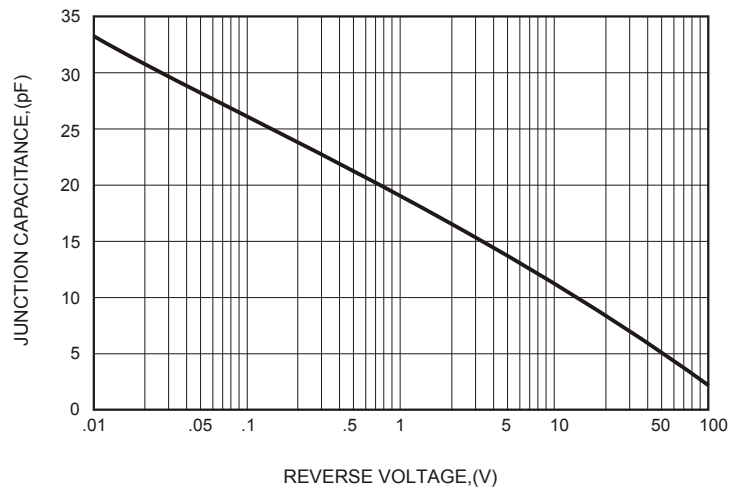


Fig.5 TYPICAL JUNCTION CAPACITANCE