

# SN1A - SN13

**PRV : 50 - 1300 Volts**

**Io : 1.0 Ampere**

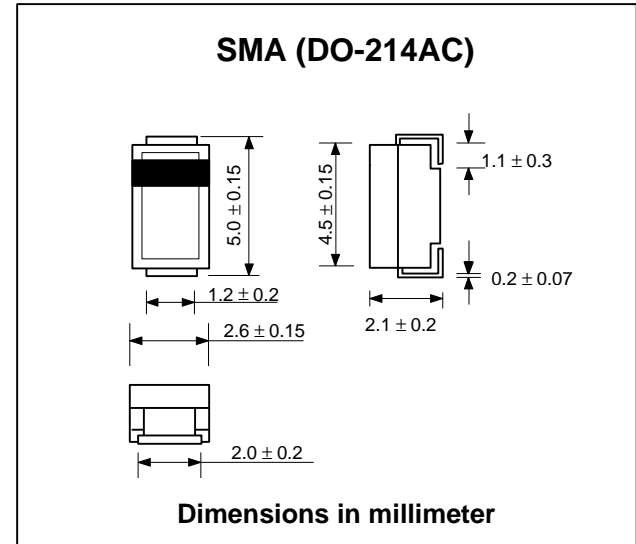
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.067 gram

## SURFACE MOUNT RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

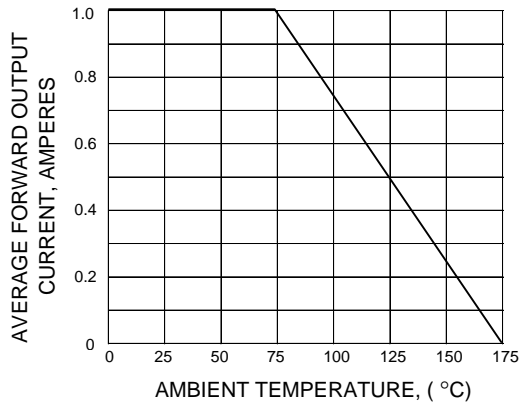
RATING	SYMBOL	SN1A	SN1B	SN1D	SN1G	SN1J	SN1K	SN1M	SN13	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1300	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	1000	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	1300	V
Maximum Average Forward Current $T_a = 75^\circ\text{C}$	$I_F$	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 $I_F = 1.0$ Amp.	$V_F$	1.0								V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at rated DC Blocking Voltage $T_a = 100^\circ\text{C}$	$I_R$	2.0								$\mu\text{A}$
	$I_{R(H)}$	50								$\mu\text{A}$
Typical Reverse Recovery Time ( $I_F = 0.5$ A, $I_R = 1.0$ A, $I_{rr} = 0.25$ A.)	$T_{rr}$	2.0								$\mu\text{s}$
Typical Junction Capacitance (Note1)	$C_J$	30								pF
Junction Temperature Range	$T_J$	- 65 to + 175								$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 175								$^\circ\text{C}$

### Note :

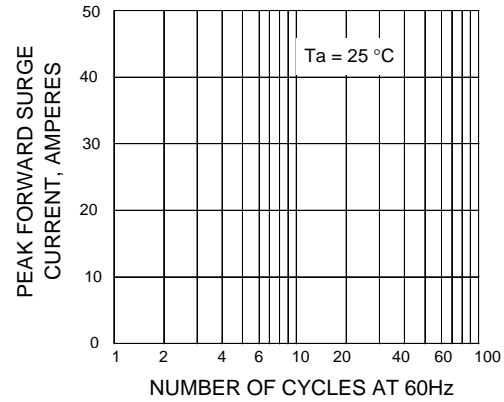
(1) Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc

## RATING AND CHARACTERISTIC CURVES ( SN1A - SN13 )

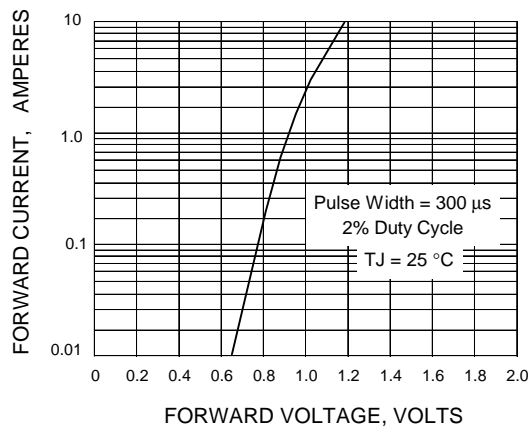
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

