

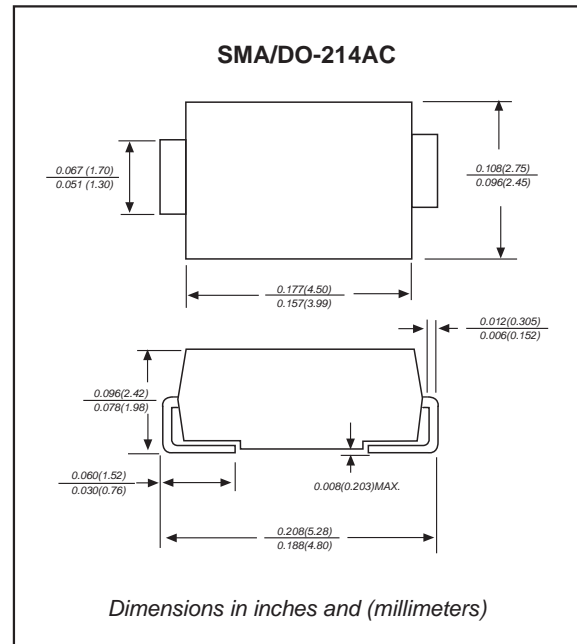
### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Glass passivated chip junction
- ◆ Compliant to RoHS Directive 2011/65/EU
- ◆ Compliant to Halogen-free

### Mechanical data

- ◆ **Case:** JEDEC DO-214AC molded plastic body
- ◆ **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- ◆ **Polarity:** Color band denotes cathode end
- ◆ **Mounting Position:** Any

### Package outline



### Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	$I_O$			1.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	$I_{FSM}$			30	A
Reverse current	$V_R = V_{RRM} \quad T_A = 25^\circ\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM} \quad T_A = 100^\circ\text{C}$				50	
Thermal resistance	Junction to ambient NOTE 1	$R_{\theta JA}$		50		$^\circ\text{C/W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_J$		15		pF
Storage temperature		$T_{STG}$	-65		+150	$^\circ\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	$t_{rr}^{*5}$ (ns)	Operating temperature $T_{Jr}$ ( $^\circ\text{C}$ )
RS1A-A	50	35	50	1.30	150	-55 to +150
RS1B-A	100	70	100			
RS1D-A	200	140	200			
RS1G-A	400	280	400		250	
RS1J-A	600	420	600			
RS1K-A	800	560	800			
RS1M-A	1000	700	1000	500		

- \*1 Repetitive peak reverse voltage
- \*2 RMS voltage
- \*3 Continuous reverse voltage
- \*4 Maximum forward voltage@ $I_F=1.0\text{A}$
- \*5 Maximum Reverse recovery time, note 2

**Note:** 1.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas  
2. Reverse recovery time test condition,  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

### Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

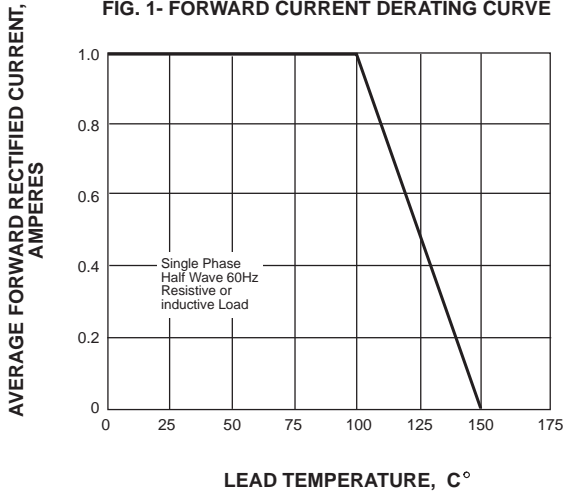


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

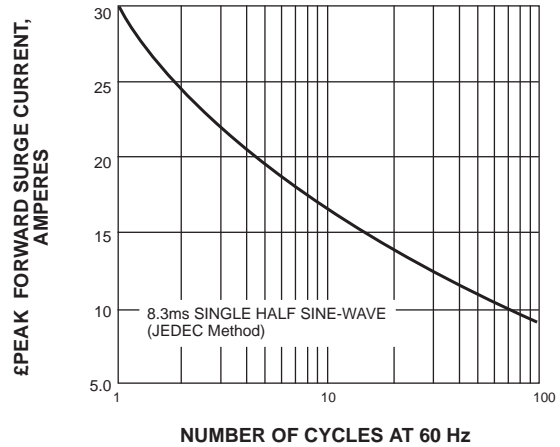


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

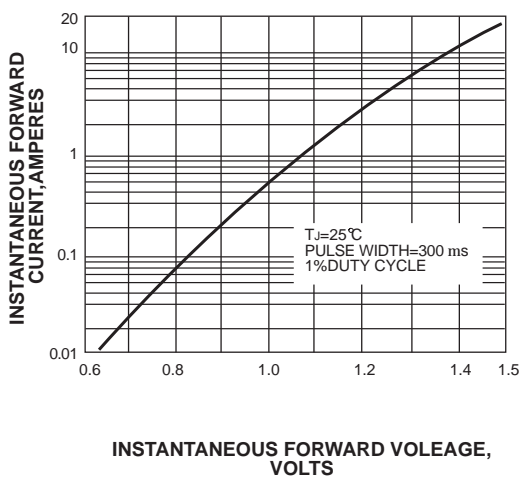


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

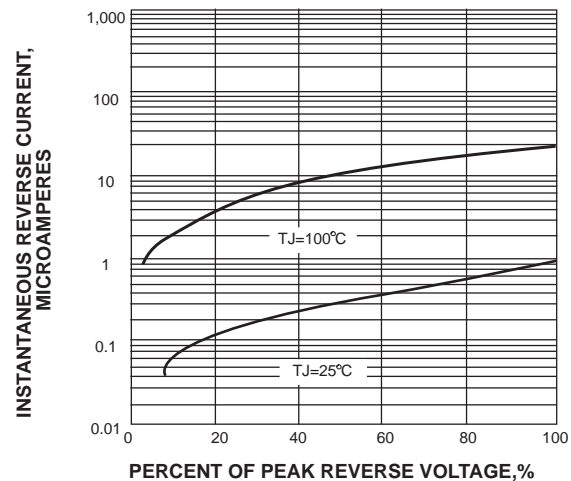


FIG. 5-TYPICAL JUNCTION CAPACITANCE

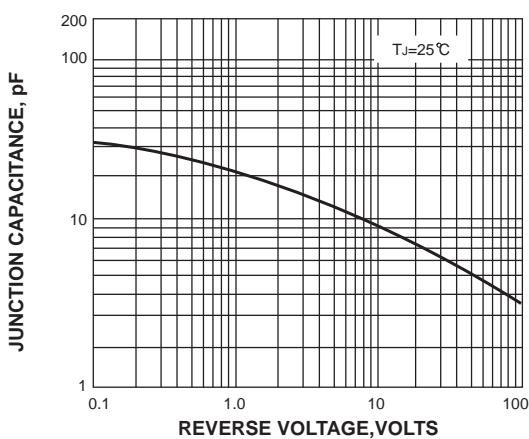
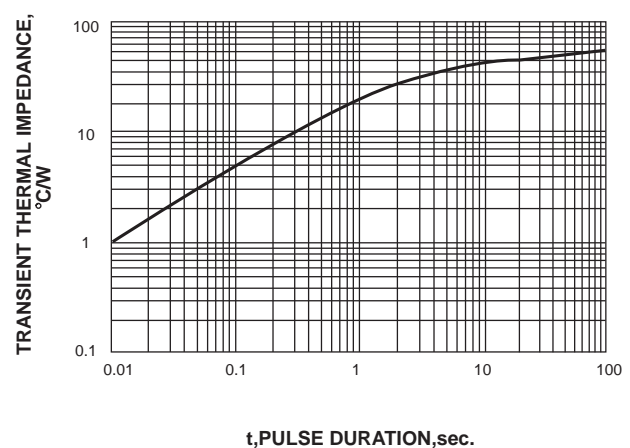




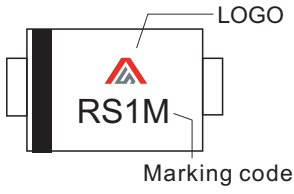
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



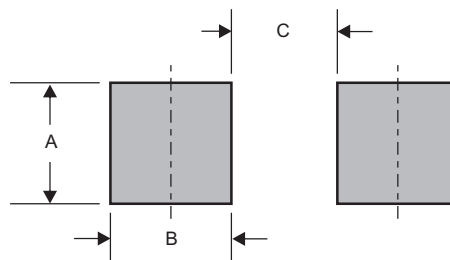
### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code	Example
RS1A-A	RS1A	
RS1B-A	RS1B	
RS1D-A	RS1D	
RS1G-A	RS1G	
RS1J-A	RS1J	
RS1K-A	RS1K	
RS1M-A	RS1M	

### Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMA	0.110 (2.80)	0.063 (1.60)	0.087 (2.20)