

**RS1A-F THRU RS1M-F  
SURFACE MOUNT SUPER FAST RECTIFIER**

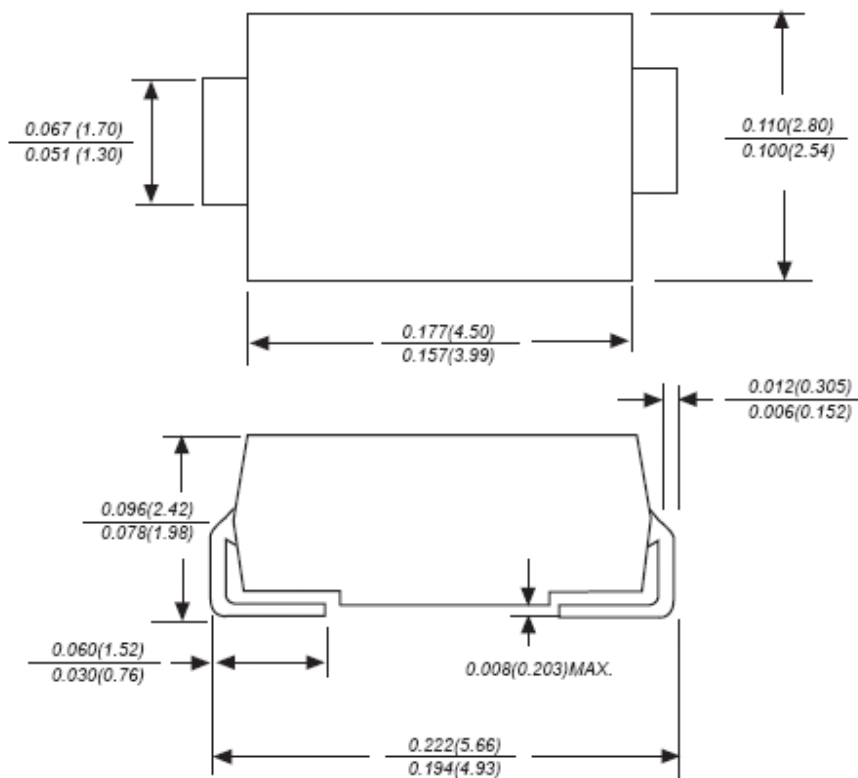
**Features:**

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Super fast switching for high efficiency
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250 C/10 seconds at terminals
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

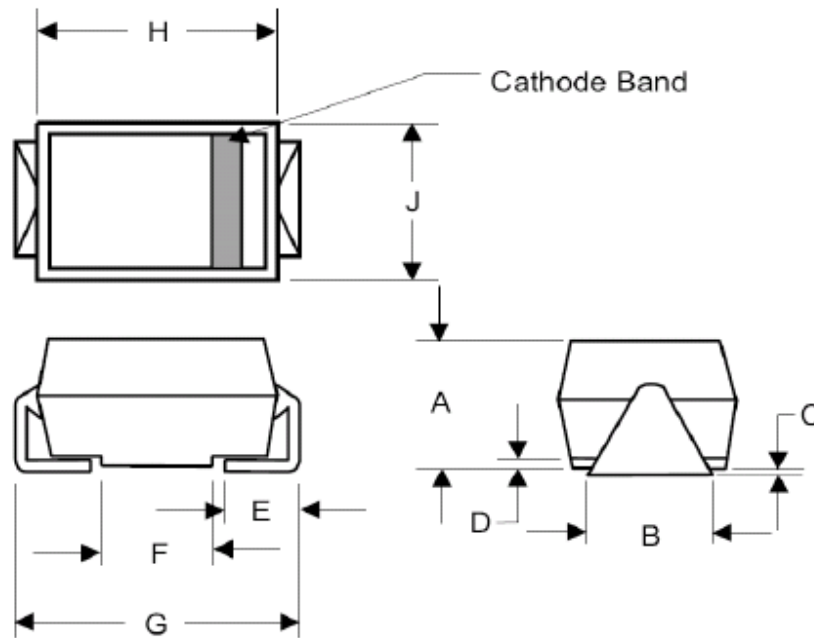
**Mechanical Data:**

- Case: JEDEC SMA(DO-214AC) molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position: Any
- Weight:0.002 ounce, 0.07 grams

**Mechanical Dimensions: In mm/ Inches**



**OPTION 1(XH)**

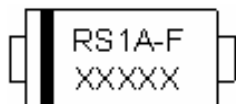


Dim.	DIMENSIONS			
	Min.	Max.	Min.	Max.
A	1.98	2.95	0.078	0.116
B	1.05	1.70	0.041	0.067
C	0.05	0.20	0.002	0.008
D	-	0.51	-	0.020
E	0.76	1.52	0.030	0.060
F	1.65	2.45	0.065	0.096
G	4.93	5.66	0.194	0.223
H	3.99	4.50	0.157	0.177
J	2.57	2.84	0.101	0.112
	In mm		In inch	

**OPTION 2(CR)  
SMA**



**Marking Diagram:**



Where XXXXX is YYWWL

RS1A-F = Part Name  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
RS1A-F THRU RS1M-F	SMA(DO-214AC) (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

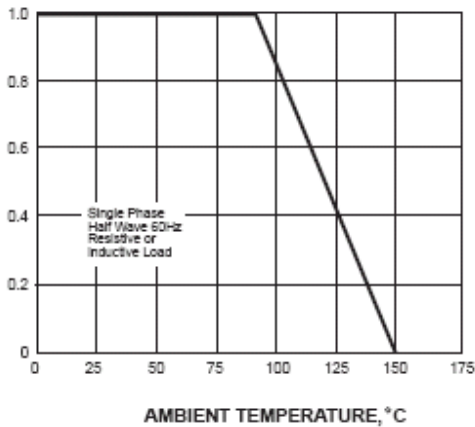
Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	RS1A -F	RS1B -F	RS1D -F	RS1G -F	RS1J -F	RS1K -F	RS1M -F	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3							Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	150				250	500		ns
Typical junction capacitance (NOTE 2)	$C_J$	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	50.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

Note: 1. Reverse recovery 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.  
3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

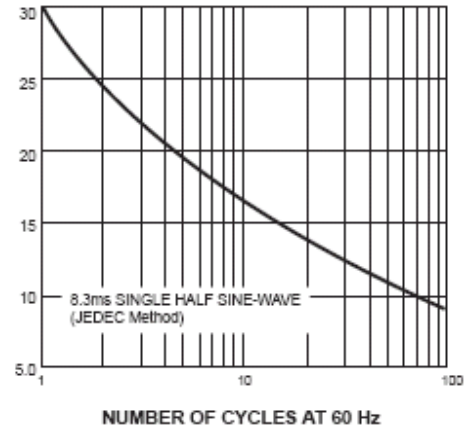
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



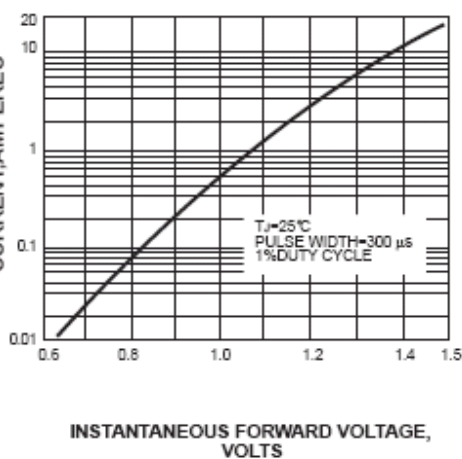
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



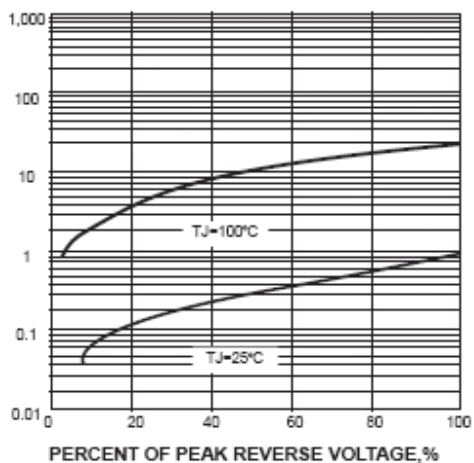
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



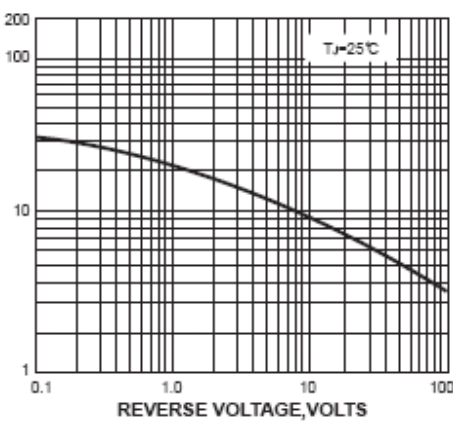
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



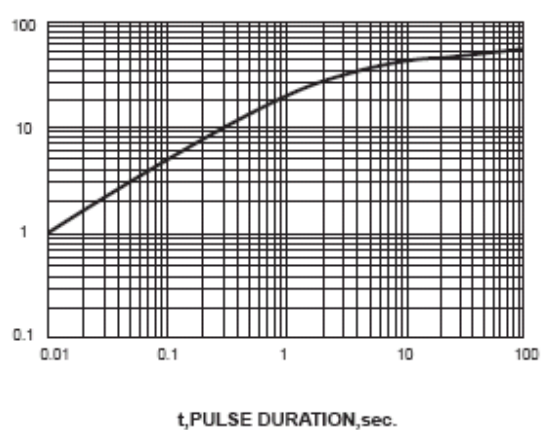
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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