

**S1A-F THRU S1M-F  
SURFACE MOUNT SUPER FAST RECTIFIER**

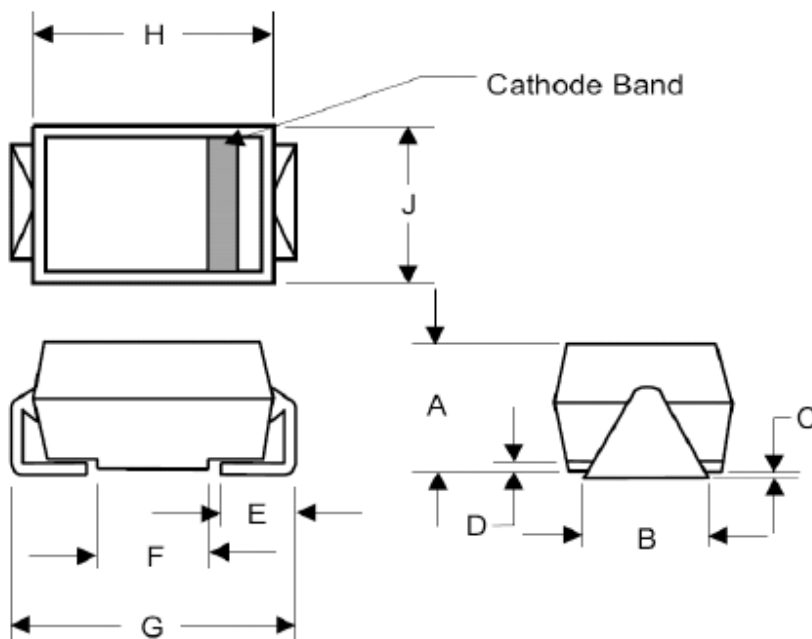
**Features:**

- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

**Mechanical Data:**

- Case: JEDEC SMA(DO-214AC) molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight:0.07 grams

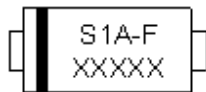
**Mechanical Dimensions: In mm/ Inches**



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	

**SMA**

**Marking Diagram:**



Where XXXXX is YYWWL

S1A-F = Part Name  
 YY = Year  
 WW = Week  
 L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
S1A-F THRU S1M-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.

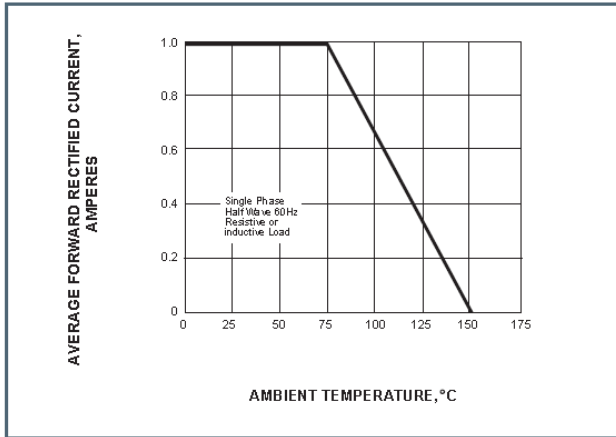
**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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%.

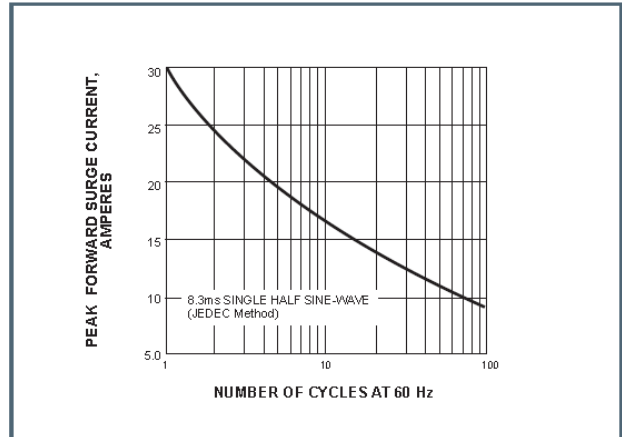
PARAMETER	SYMBOL	S1A-F	S1B-F	S1D-F	S1G-F	S1J-F	S1K-F	S1M-F	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_A=75\text{ }^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.1							Volts
Maximum DC reverse current $T_A=25\text{ }^\circ\text{C}$ at rated DC blocking voltage $T_A=100\text{ }^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Typical junction capacitance (NOTE 1)	$C_J$	15.0							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	75.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$

- Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

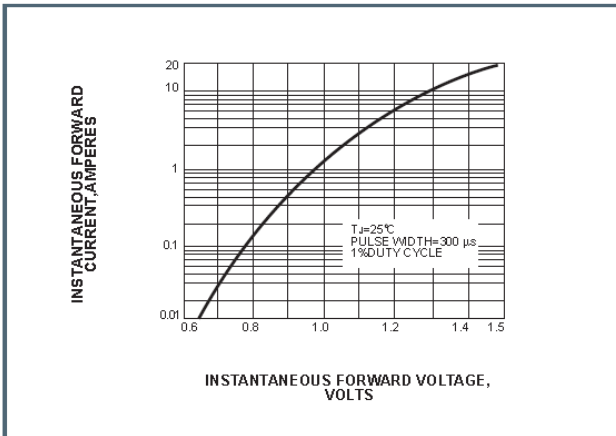
**FIG. 1- FORWARD CURRENT DERATING CURVE**



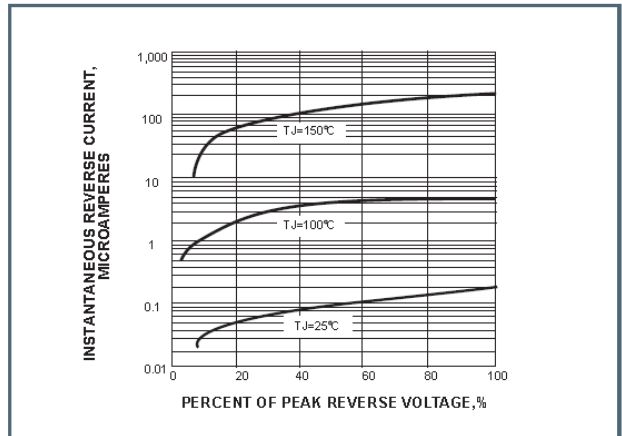
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



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