

Silicon Rectifier

1A 50V~1KV DO-214AC SMAF

S1AF ~ S1MF

MERITEK

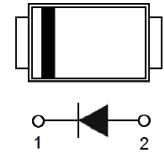
FEATURE

- Glass Passivated Chip Junction
- High Forward Surge Current Capability
- Built-in Strain Relief, Ideal for Automated Placement
- Low Reverse Leakage



MECHANICAL DATA

- Case: Molded Plastic, DO-214AC (SMAF)
- Epoxy: UL 94V-0 Rate Flame Retardant
- Terminals: Solder Plated, Solderable Per MIL-STD-750, Method 2026
- Polarity: Color Band Denotes Cathode End



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTIC

Parameter	Symbol	S1AF	S1BF	S1DF	S1GF	S1JF	S1KF	S1MF	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	$I_{F(AV)}$				1.0				A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rate load	I_{FSM}				30				A
Maximum Forward Voltage at $I_F = 1A$	V_F				1.1				V
Maximum Reverse Current at Rated DC Blocking Voltage	$T_J = 25^\circ C$				5.0				μA
	$T_J = 100^\circ C$				50				
Thermal Resistance from junction to ambient	$R_{\theta JA}$				55				$^\circ C/W$
Diode Junction Capacitance	$V_R = 4V, f = 1MHz$				15				pF
Operating Junction Temperature Range	T_J				-55 ~ +150				$^\circ C$
Storage Temperature Range	T_{STG}				-65 ~ +150				$^\circ C$

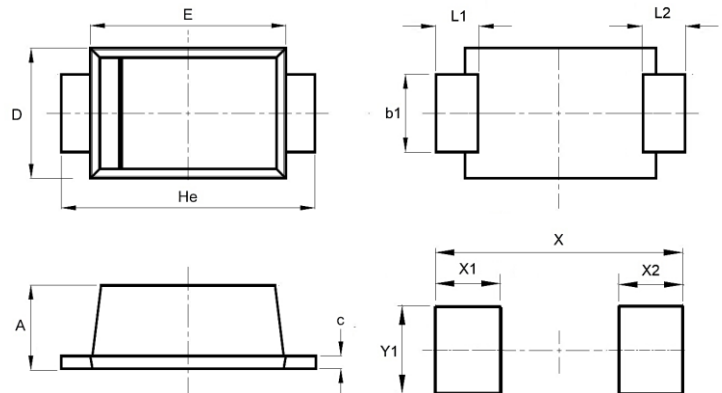
Notes:

1. $T_A = 25^\circ C$ unless otherwise specified

2. Thermal resistance from junction to lead mounted on P.C.B. with 0.2"x0.2" (5.0x5.0mm) copper pad areas.

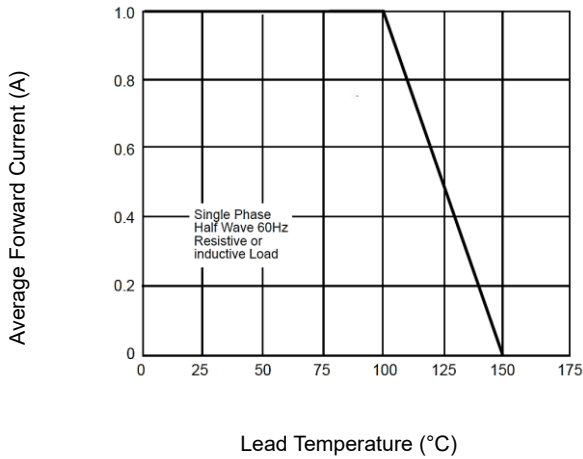
DIMENSIONS

Item	Min. (mm)	Max. (mm)
D	2.40	2.80
E	3.20	3.60
He	4.40	4.80
A	0.95	1.25
c	0.10	0.30
L1	0.70	1.20
L2	0.70	1.20
b1	1.35	1.65
X	5.90	
X1	1.60	
X2	1.60	
Y1	1.90	

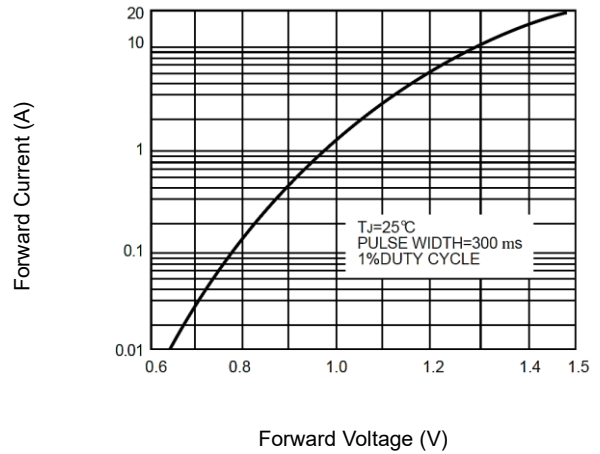


CHARACTERISTIC CURVES

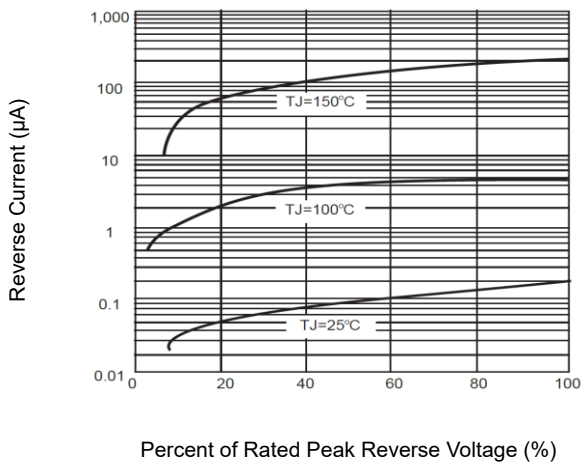
Forward Current Derating Curve



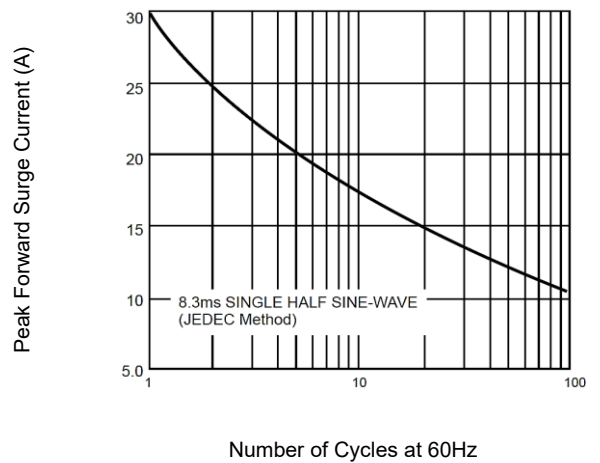
Typical Forward Characteristics



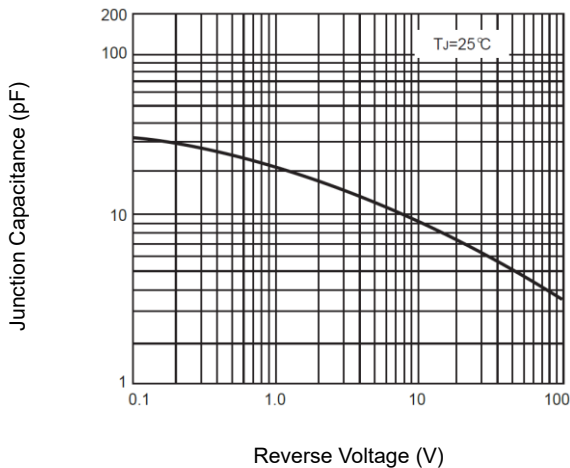
Typical Reverse Characteristics



Non-Repetitive Peak Forward Surge Current



Typical Junction Capacitance



Typical Transient Thermal Impedance

