

## Features

- Halogen Free. "Green" Device (Note 1)
- AEC-Q101 Qualified
- Lead Free Finish/RoHS Compliant (Note2) ("P" Suffix Designates Compliant. See Ordering Information)
- For Surface Mount Applications
- Low Thermal Resistance
- High Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

# 3 Amp Silicon Rectifier 50 to 1000 Volts

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 47°C/W Junction to Ambient
- Maximum Thermal Resistance: 13°C/W Junction to Lead

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S3AHE3	S3A	50V	35V	50V
S3BHE3	S3B	100V	70V	100V
S3DHE3	S3D	200V	140V	200V
S3GHE3	S3G	400V	280V	400V
S3JHE3	S3J	600V	420V	600V
S3KHE3	S3K	800V	560V	800V
S3MHE3	S3M	1000V	700V	1000V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

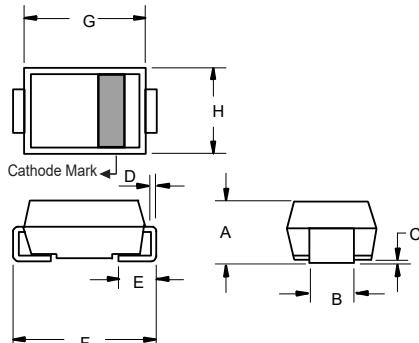
Power Dissipation	$P_D$	2.6W	
Average Forward Current	$I_{F(AV)}$	3.0A	$T_L=105^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	100A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	1.2V	$I_{FM}=3.0\text{A}; T_J=25^\circ\text{C}$ (Note 3)
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10 $\mu\text{A}$ 250 $\mu\text{A}$	$T_J=25^\circ\text{C}; T_J=125^\circ\text{C}$
Typical Junction Capacitance	$C_J$	60pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High Temperature Solder Exemptions Applied, See EU Directive Annex 7a.

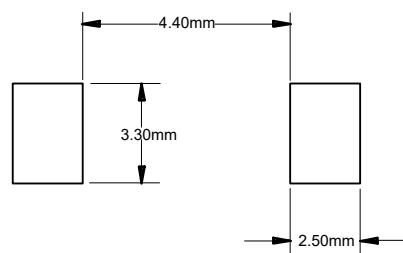
3. Pulse Test: Pulse Width 200  $\mu\text{sec}$ , Duty Cycle 2%

## SMC (DO-214AB)



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.108	0.128	2.75	3.25	
C	0.002	0.008	0.051	0.203	
D	0.006	0.012	0.152	0.305	
E	0.030	0.060	0.76	1.52	
F	0.305	0.320	7.75	8.13	
G	0.260	0.280	6.60	7.11	
H	0.220	0.245	5.59	6.22	

## Suggested Solder Pad Layout



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

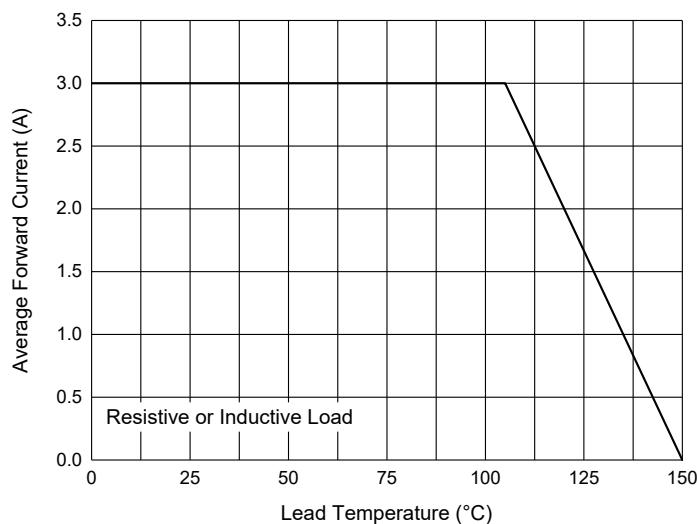


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

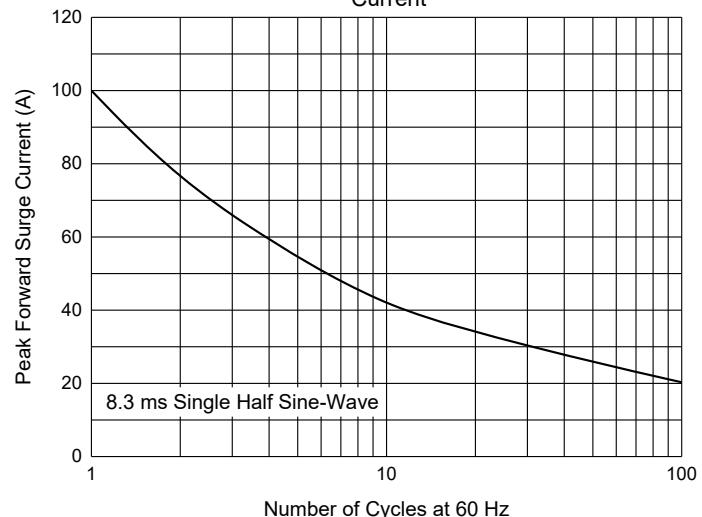


Fig. 3 - Typical Instantaneous Forward Characteristics

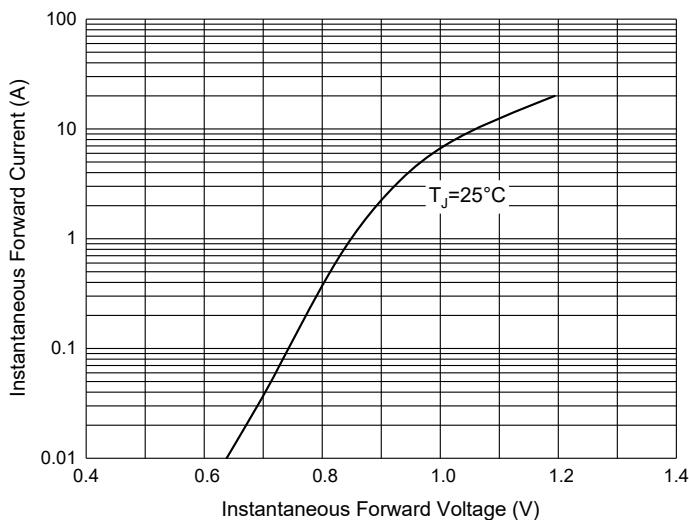
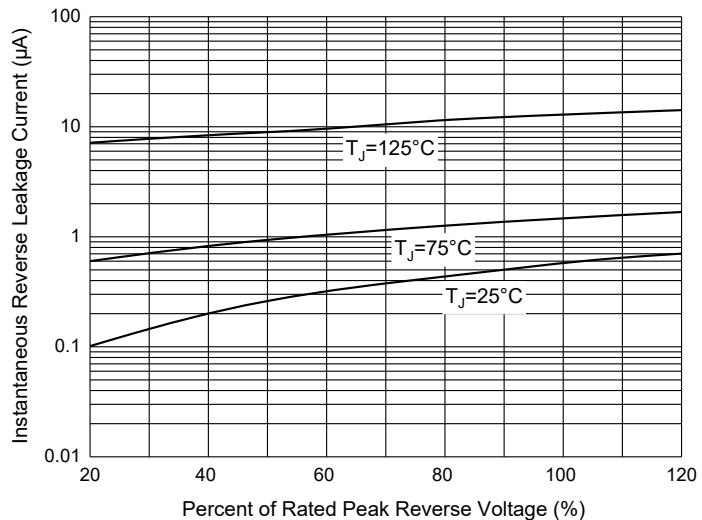


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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