

## Features

- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant(Note 2) ("P" Suffix Designates Compliant. See Ordering Information)
- Glass Passivated Chip
- Ultra Fast Switching For High Efficiency
- For Surface Mounted Applications
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- AEC-Q101 qualified

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 28°C/W Junction to Lead(Note 3)
- Thermal Resistance: 75°C/W Junction to Ambient(Note 3)

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
US1MHE3	US1M	1000V	700V	1000V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

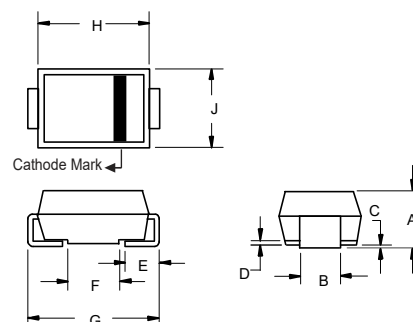
Average Forward Current	$I_{F(AV)}$	1.0A	$T_L=110^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	30A	8.3ms, Half Sine
Maximum Instantaneous Forward Voltage	$V_F$	1.7V	$I_{FM}=1.0\text{A}; T_J=25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	5 $\mu\text{A}$ 100 $\mu\text{A}$	$T_J=25^\circ\text{C};$ $T_J=125^\circ\text{C}$
Maximum Reverse Recovery Time	$t_{rr}$	75ns	$I_F=0.5\text{A}; I_R=1.0\text{A};$ $I_{rr}=0.25\text{A}$
Typical Junction Capacitance	$C_J$	10pF	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 Exemption Applied, see EU Directive Annex 7a.
3. Mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.

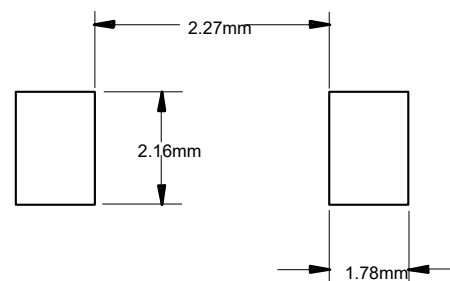
# 1 Amp Ultra Fast Rectifier 1000 Volts

## SMA (DO-214AC)



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	0.075	0.090	1.90	2.29	
B	0.050	0.064	1.27	1.63	
C	0.002	0.008	0.051	0.203	
D	---	0.020	---	0.51	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.189	0.220	4.80	5.59	
H	0.157	0.187	4.00	4.75	
J	0.090	0.115	2.25	2.92	

## SUGGESTED SOLDER PAD LAYOUT



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

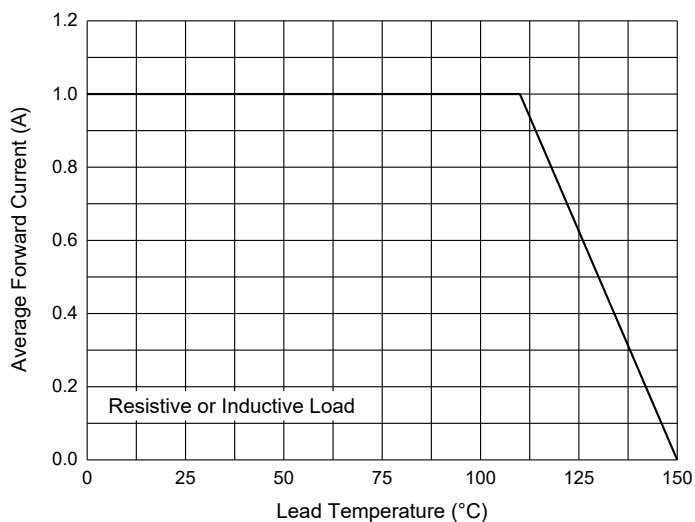


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

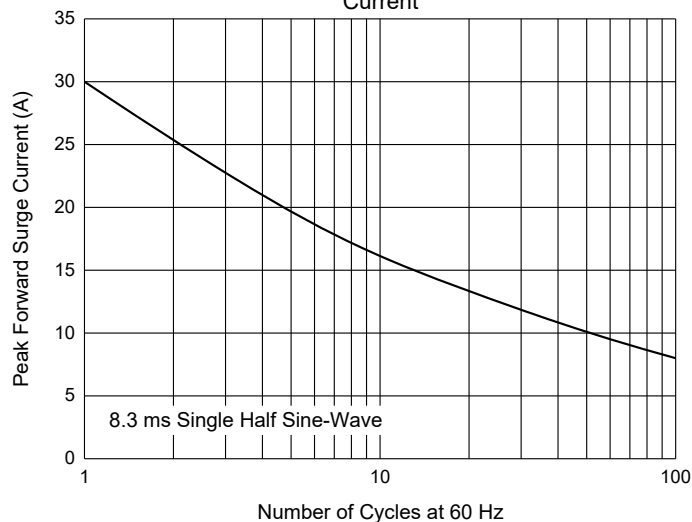


Fig. 3 - Typical Instantaneous Forward Characteristics

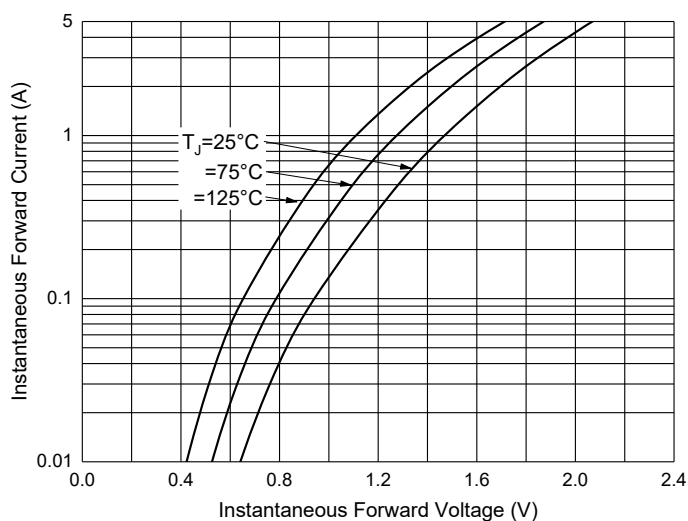
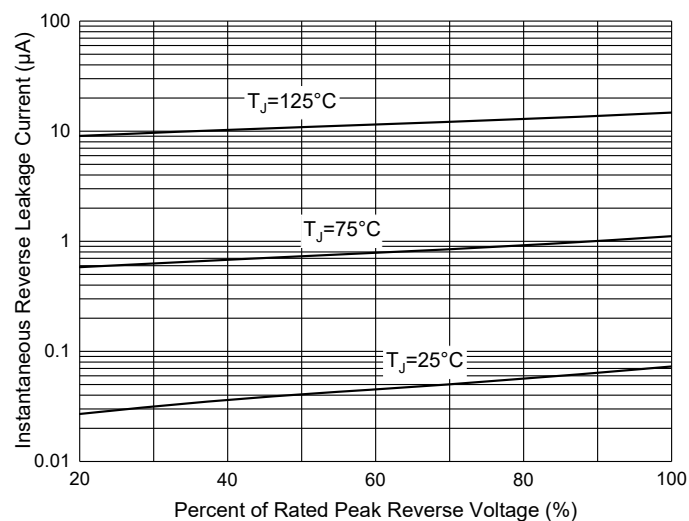


Fig. 4 - Typical Reverse Leakage Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 5Kpcs/Reel

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