

## Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)
- Glass Passivated Chip
- Ultra Fast Switching For High Efficiency
- For Surface Mounted Applications
- High Current Capability
- Low Reverse Leakage Current
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Maximum Thermal Resistance: 30 °C/W Junction to Lead

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
US1AFL	US1A	50V	35V	50V
US1BFL	US1B	100V	70V	100V
US1CFL	US1C	150V	105V	150V
US1DFL	US1D	200V	140V	200V
US1GFL	US1G	400V	280V	400V
US1JFL	US1J	600V	420V	600V
US1KFL	US1K	800V	560V	800V
US1MFL	US1M	1000V	700V	1000V

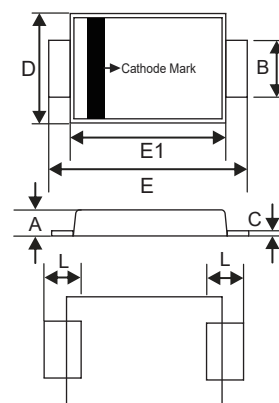
## Electrical Characteristics @ 25°C Unless Otherwise Specified

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 US1AFL-US1DFL US1GFL US1JFL-US1MFL	$V_F$	1.0V 1.4V 1.7V	$I_{FM}=1.0\text{A};$ $T_J=25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	10μA 100μA	$T_J=25^\circ\text{C};$ $T_J=100^\circ\text{C}$
Maximum Reverse Recovery Time US1AFL-US1GFL US1JFL-US1MFL	$t_{rr}$	50ns 75ns	$I_F=0.5\text{A}; I_R=1.0\text{A};$ $I_{RR}=0.25\text{A}$
Typical Junction Capacitance US1AFL-US1GFL US1JFL-US1MFL	$C_J$	20pF 17pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex Notes 7a.

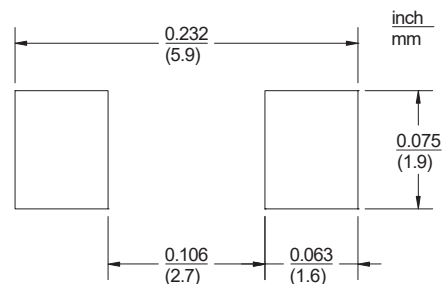
# 1 Amp Ultra Fast Rectifier 50 to 1000 Volts

## DO-221AC(SMA-FL)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.035	0.049	0.90	1.25	
B	0.049	0.065	1.25	1.65	
C	0.004	0.016	0.10	0.40	
D	0.089	0.116	2.25	2.95	
E	0.173	0.220	4.40	5.60	
E1	0.126	0.181	3.20	4.60	
L	0.020	0.059	0.50	1.50	

## SUGGESTED SOLDER PAD LAYOUT



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

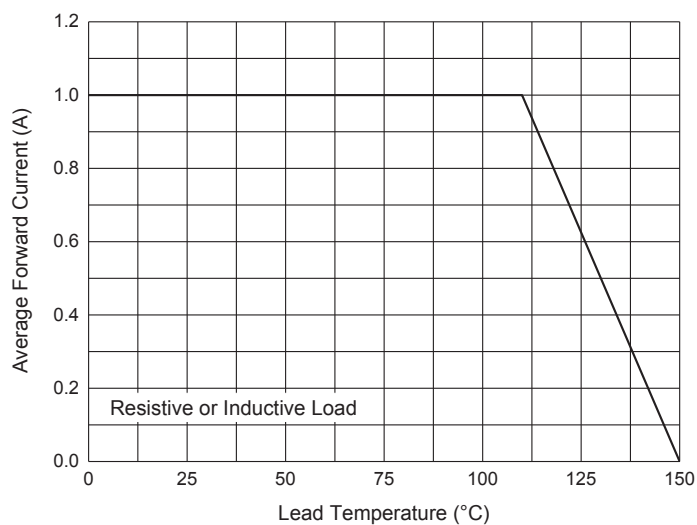


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

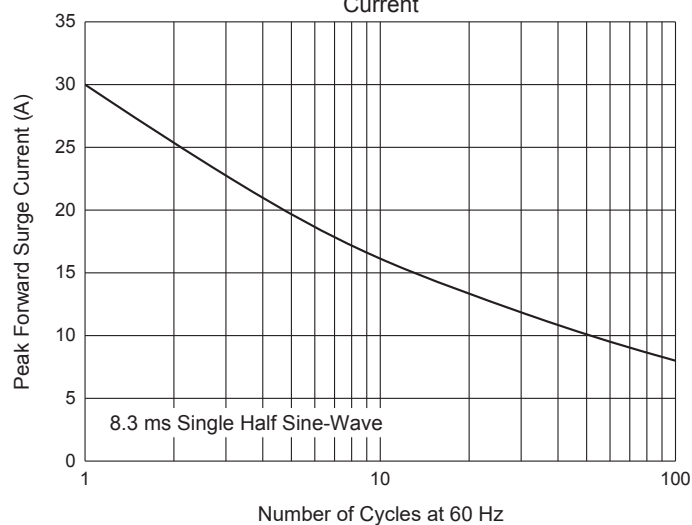


Fig. 3 - Typical Instantaneous Forward Characteristics

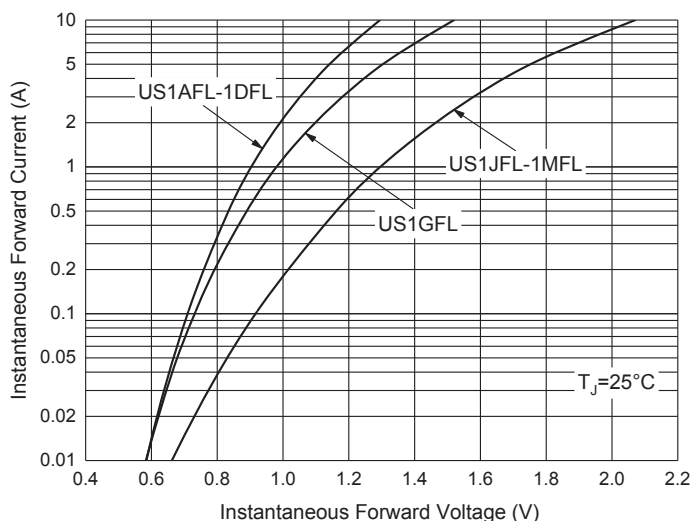
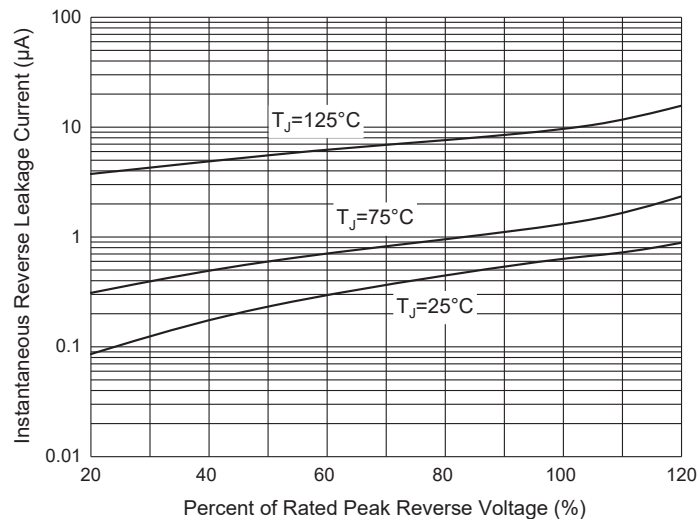


Fig. 4 - Typical Reverse Leakage Characteristics



### Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 10Kpcs/Reel

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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