

#### **Features**

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- · Glass Passivated Chip Junction
- Low Profile Package
- Halogen Free. "Green" Device (Note 2)
- AEC-Q101 Qualified

# **Maximum Ratings**

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Typical Thermal Resistance: 20°C/W Junction to Case(Note 3)
- Typical Thermal Resistance: 25°C/W Junction to Lead(Note 3)
- Typical Thermal Resistance: 65°C/W Junction to Ambient(Note 3)

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum	Maximum DC Blocking Voltage
UG1DPLQ	UG1D	200V	140V	200V

### Electrical Characteristics @ 25°C Unless Otherwise Specified

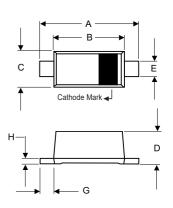
Average Rectified Forward Current	I <sub>F(AV)</sub>	1A	T <sub>L</sub> =110°C	
Peak Forward Surge Current	I <sub>FSM</sub>	30A	8.3ms,Hal	f Sine
Instantaneous Forward Voltage	V <sub>F</sub>	0.92V(Max.)	I <sub>F</sub> =1A; T	<sub>J</sub> =25°C
Reverse Current At Rated DC Blocking Voltage	I <sub>R</sub>	2uA(Max.) 20uA(Max.)	T <sub>J</sub> =25°C; T <sub>J</sub> =125°C	
Typical Junction Capacitance	CJ	15pF	Measured at 1.0MHz, V <sub>R</sub> =4.0V	
	t <sub>rr</sub>	25ns(Max.)	I <sub>F</sub> =0.5A; I <sub>R</sub> =1.0A; I <sub>RR</sub> =0.25A	
Reverse Recovery		25ns(Typ.)	I <sub>F</sub> =1A; di/dt=-50A/us; V <sub>R</sub> =30V	
Time		18ns(Typ.) 24ns(Typ.)	T <sub>J</sub> =25°C T <sub>J</sub> =125°C	
Peak recovery current	I <sub>RRM</sub>	2.4A(Typ.) 4.0A(Typ.)	T <sub>J</sub> =25°C T <sub>J</sub> =125°C	I <sub>F</sub> =1Α di/dt=-200Α/μs V <sub>R</sub> =100 V
Reverse recovery charge	Q <sub>rr</sub>	20nC(Typ.) 45nC(Typ.)	T <sub>J</sub> =25°C T <sub>J</sub> =125°C	VK 100 V

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

- 2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 3. Mounted on P.C.B With 3mm\*3mm Copper Pad Areas.

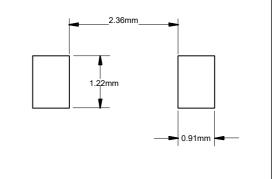
# 1 Amp Surface Mount Ultra Fast Recovery Rectifier 200 Volts

# SOD-123FL



DIMENSIONS						
DIM	INCHES		MM		NOTE	
DIIVI	MIN	MAX	MIN	MAX	NOTE	
Α	0.130	0.152	3.30	3.85		
В	0.100	0.122	2.55	3.10		
С	0.055	0.075	1.40	1.90		
D	0.035	0.053	0.90	1.35		
E	0.020	0.041	0.50	1.05		
G	0.010		0.25			
Н		0.010		0.25		

#### Suggested Solder Pad Layout



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## **Curve Characteristics**

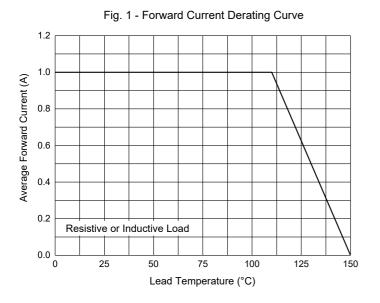


Fig. 3 - Typical Instantaneous Forward Characteristics

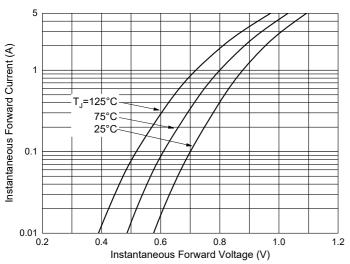
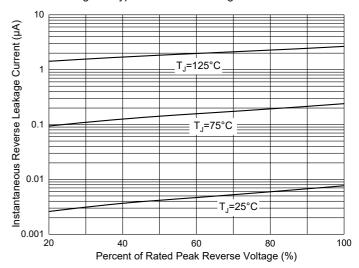


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge
Current

35
30
20
20
15
8.3 ms Single Half Sine-Wave
0
1 10 100
Number of Cycles at 60 Hz

Fig. 4 - Typical Reverse Leakage Characteristics





## **Ordering Information**

Device	Packing	
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel	

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