Features

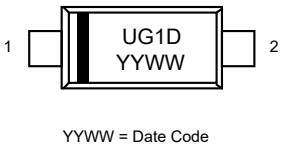
- AEC-Q101 Qualified
- Glass Passivated Junction
- Ultra Fast Switching For High Efficiency
- For Surface Mounted Applications
- Lead Free Finish/RoHS Compliant (Note 1)("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green"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

1 Amp Surface Mount Ultra Fast Recovery Rectifier 200 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	200	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	140	V
Average Rectified Forward Current @ T_L=115°C	$I_{F(AV)}$	1	A
Non−Repetitive Peak Surge Current @8.3ms Half Sine Wave	I_{FSM}	30	A
Current Squared Time @ 1ms≤t≤8.3ms	I^2t	3.735	A^2s

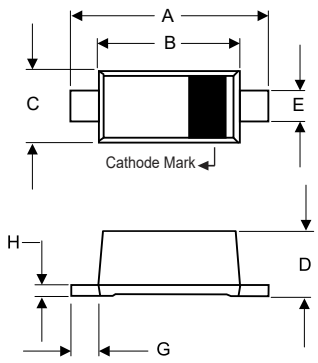
Internal Structure

Pin	Description	Simplified outline	Graphic symbol
1	cathode	 YYWW = Date Code	
2	anode		

Note:

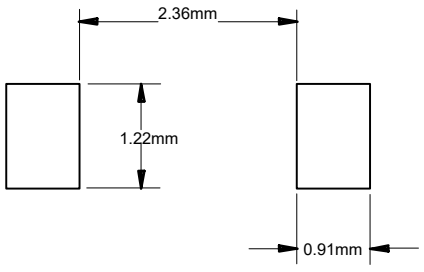
1. High temperature solder exemption applied, see EU directive annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

SOD-123FL



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.130	0.152	3.30	3.85	
B	0.100	0.122	2.55	3.10	
C	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	----	
H	----	0.010	----	0.25	

SUGGESTED SOLDER PAD LAYOUT



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$Rth_{(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		35		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		85		°C/W

Note:
1.Mounted on P.C.B. with 3mm*3mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=1A;T_J=25°C		0.86	0.92	V
Reverse Current	I_R	at Rated V_R;T_J=25°C at Rated V_R;T_J=125°C			2 20	uA
Junction Capacitance	C_J	V_R=4V;f=1MHz;T_J=25°C		15		pF

Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Reverse Recovery Time	t_{rr}	I_F=0.5A; I_R=1.0A;I_{RR}=0.25A;T_J=25°C				25	ns
		I_F=1A,di/dt=-50A/us,V_R=30V;T_J=25°C			25		
		I_F=1A di/dt=-200A/μs V_R=100 V	T_J=25°C		18		
			T_J=125°C		24		
Peak Recovery Current	I_{RRM}		T_J=25°C		2.4		A
			T_J=125°C		4.0		
Reverse Recovery Charge	Q_{rr}		T_J=25°C		20		nC
			T_J=125°C		45		

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

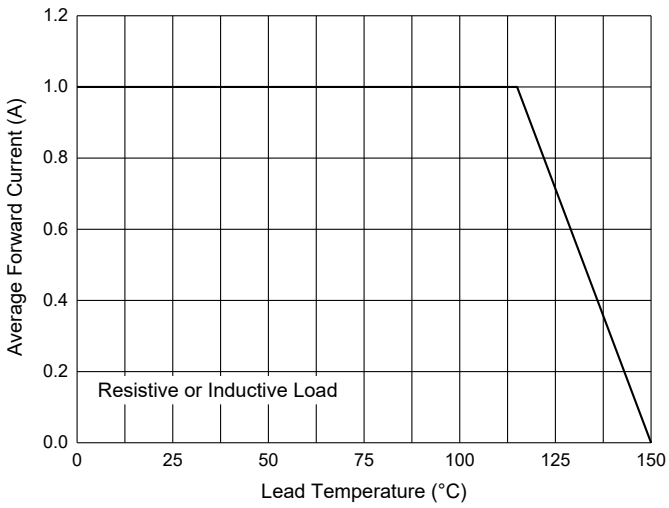


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

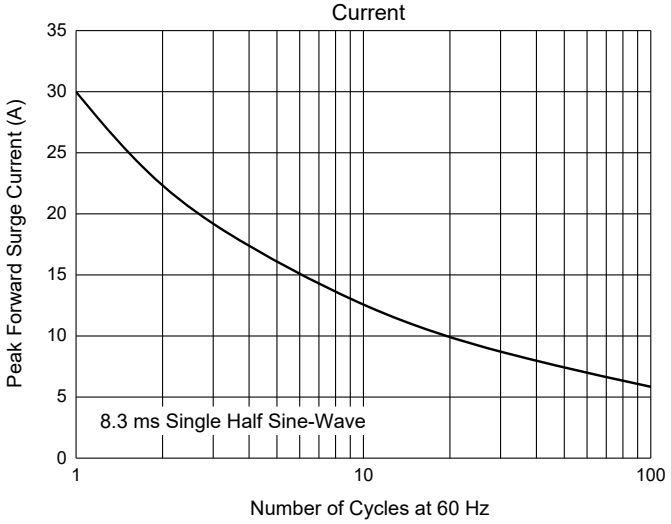


Fig. 3 - Typical Instantaneous Forward Characteristics

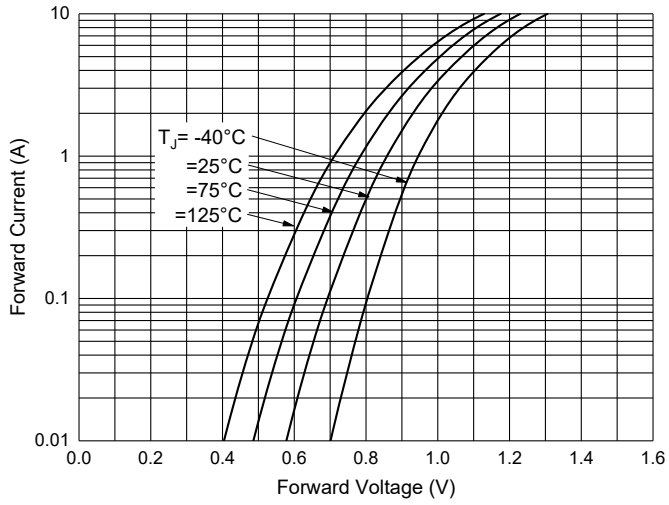


Fig. 4 - Typical Reverse Leakage Characteristics

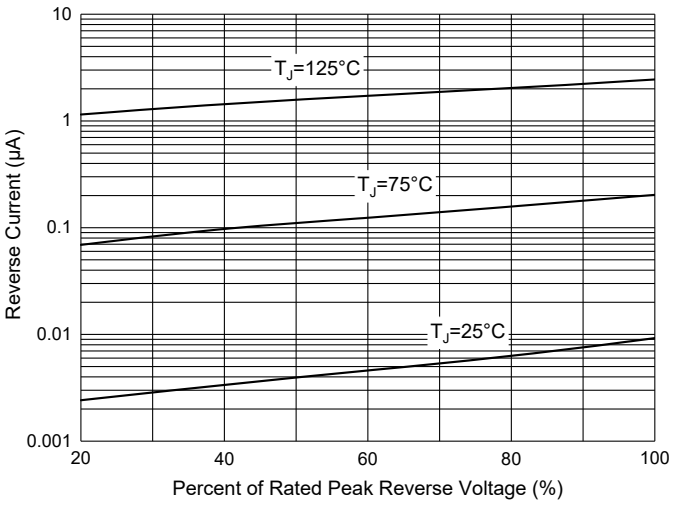
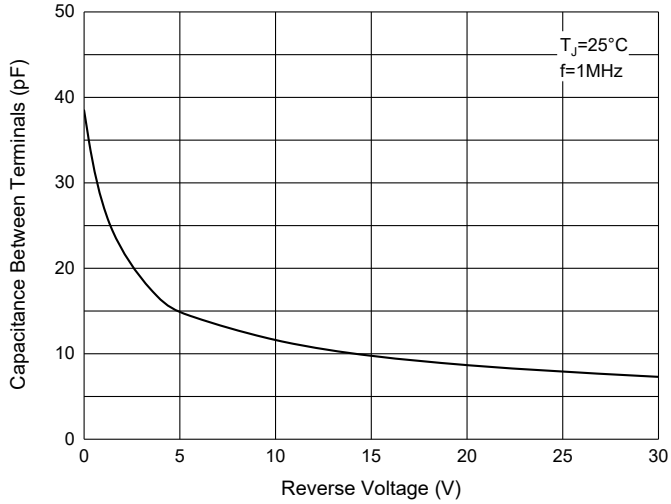


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

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

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