

## Features

- Glass Passivated Junction
- 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

## Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	600	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{RMS}$	420	V
Average Rectified Forward Current @ $T_L=125^\circ\text{C}$	$I_{F(AV)}$	1	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	35	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		60	
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	3.735	$\text{A}^2\text{s}$

## Internal Structure

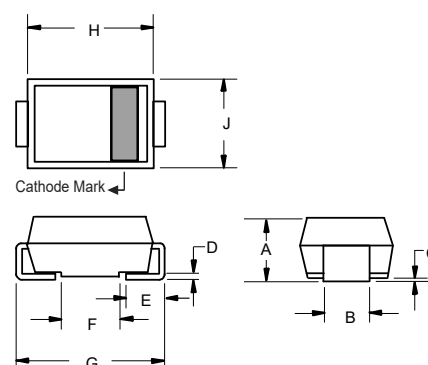
Pin	Description	Simplified outline	Graphic symbol
1	Cathode		
2	Anode		

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.

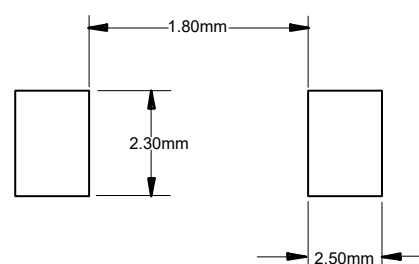
# 1 Amp Super Fast Recovery Rectifier 600 Volts

## SMB (DO-214AA)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.075	0.087	1.91	2.21	
C	0.002	0.008	0.05	0.20	
D	0.006	0.012	0.15	0.31	
E	0.030	0.060	0.76	1.52	
F	0.065	0.091	1.65	2.32	
G	0.200	0.220	5.08	5.59	
H	0.160	0.191	4.06	4.85	
J	0.130	0.155	3.30	3.94	

## 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
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		18		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		75		°C/W

Note:

1. Mounted on P.C.B. with 8mm\*8mm copper pad areas.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=1A; T_J=25^{\circ}C$			1.25	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=150^{\circ}C$			5 150	$\mu A$
Junction Capacitance	$C_J$	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		15		pF

## Dynamic Recovery Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =0.5A; I <sub>R</sub> =1.0A;I <sub>RR</sub> =0.25A;T <sub>J</sub> =25°C				50	ns
		I <sub>F</sub> =1A,di/dt=-50A/us,V <sub>R</sub> =30V;T <sub>J</sub> =25°C			49		
			T <sub>J</sub> =25°C		38		
			T <sub>J</sub> =125°C		59		
Peak Recovery Current	I <sub>RRM</sub>	I <sub>F</sub> =1A di/dt=-200A/μs V <sub>R</sub> =400 V	T <sub>J</sub> =25°C		3.5		A
			T <sub>J</sub> =125°C		5.5		
Reverse Recovery Charge	Q <sub>rr</sub>			T <sub>J</sub> =25°C		68	
			T <sub>J</sub> =125°C		160		

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

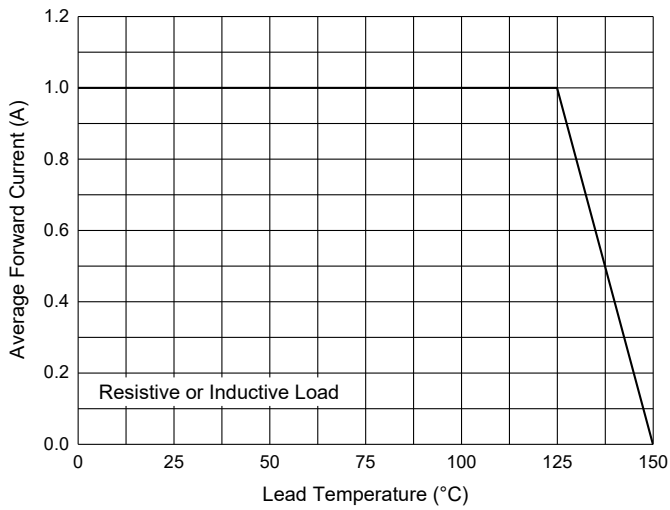


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

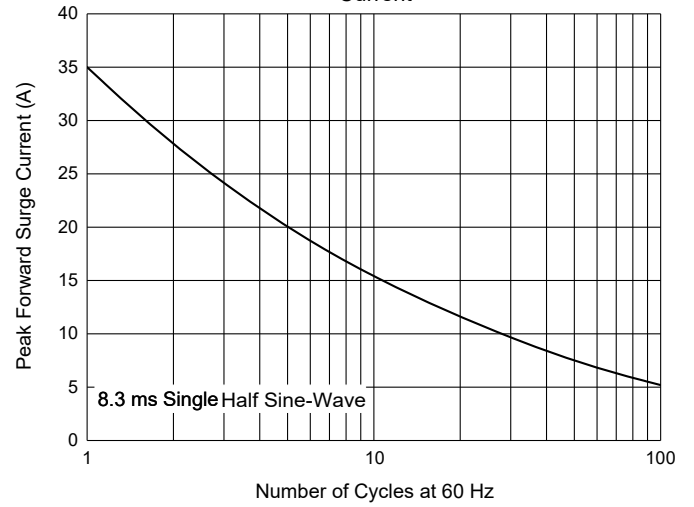


Fig. 3 - Typical Instantaneous Forward Characteristics

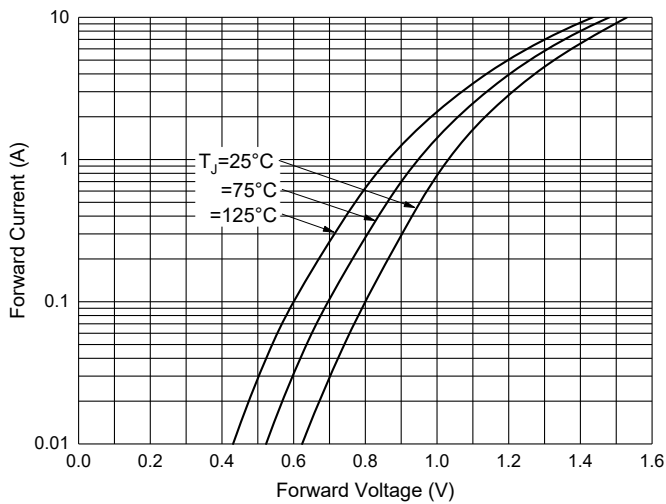


Fig. 4 - Typical Reverse Leakage Characteristics

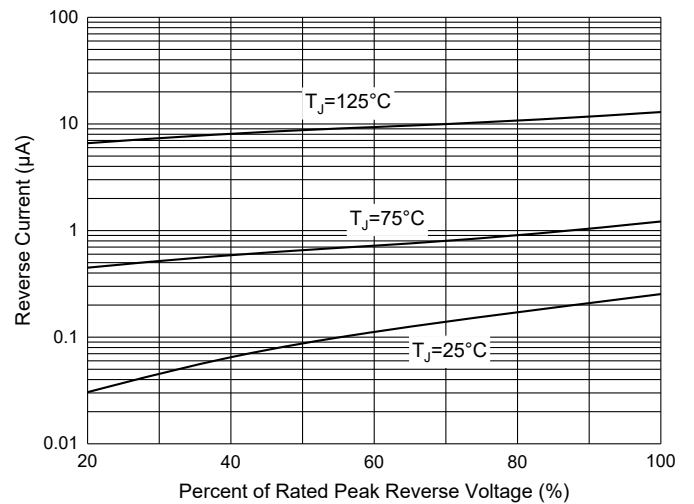
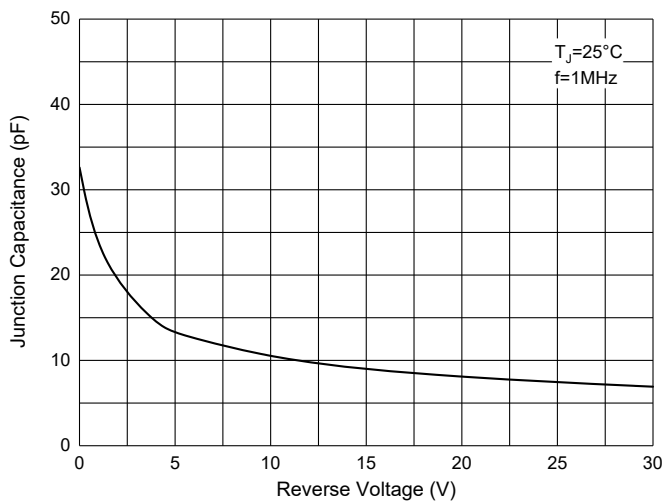


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

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

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