



SURFACE MOUNT GLASS PASSIVATED RECTIFIER US3A ~ US3J

Surface Mount Glass Passivated Rectifier

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction
- High temperature soldering guaranteed 250°C/ 10 seconds
- Fast switching speed for high efficiency
- RoHS and REACH compliance



**RoHS
COMPLIANT**

**DO214AB
(SMC)**

Mechanical Data

Case:	DO-214AB(SMC), transfer molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Solder plated, solderable per MIL-STD 750, Method 2026
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.21 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

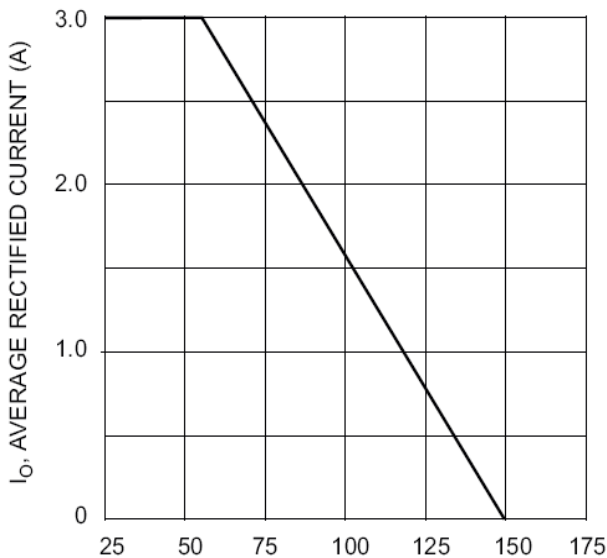
Symbol	Description	US3A	US3B	US3C	US3D	US3F	US3G	US3J	Unit	Conditions
V_{RRM}	Max Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V	
V_{RMS}	Max RMS Voltage	35	70	105	140	210	280	420	V	
V_{DC}	Max DC Blocking Voltage	50	100	150	200	300	400	600	V	
I_(AV)	Max Average Forward Rectified Current	3.0							A	TA=25°C
I_{FSM}	Peak Forward Surge Current	150							A	8.3ms single half sine-wave (JEDEC)
t_{rr}	Maximum Reverse Recovery Time	50						75	nS	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to +150							°C	

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

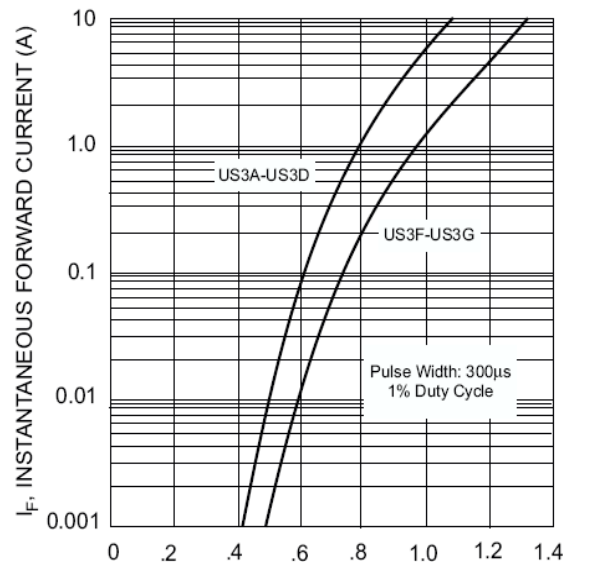
Symbol	Description	US3A	US3B	US3C	US3D	US3F	US3G	US3J	Unit	Conditions	
V_F	Max Instantaneous Forward Voltage	1.0			1.3				V	$I_{F(AV)}=3.0A$	
I_R	Max DC Reverse Current at Rated DC Blocking Voltage	5.0								μA	$T_A=25^{\circ}C$
		200									$T_A=125^{\circ}C$
C_j	Typical Junction Capacitance	80			50				pF	At 1MHz, reversed voltage of 4V	
$R_{\theta-JA}$	Typical Thermal Resistance	47								$^{\circ}C/W$	
$R_{\theta-JL}$		17									

Note:

- Unit mounted on PCB with 5.0mm2 (0.013mm thick) copper pads as heat sink.

Typical Characteristics Curves


T_T , TERMINAL TEMPERATURE ($^{\circ}C$)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics

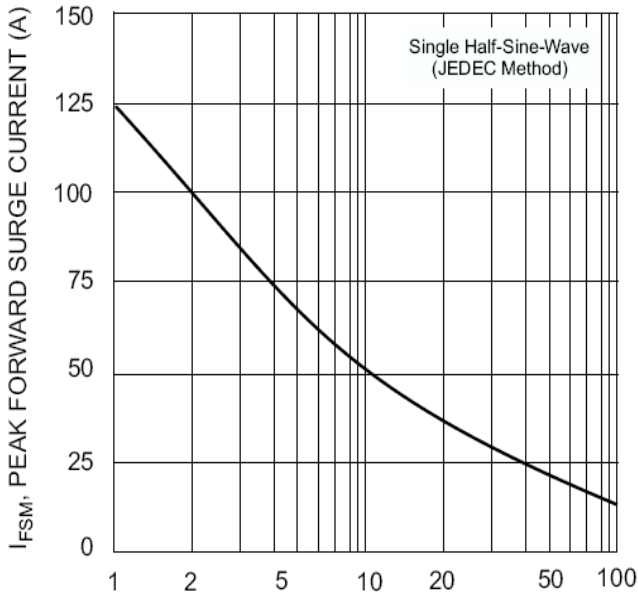


Fig. 3 Surge Current Derating Curve

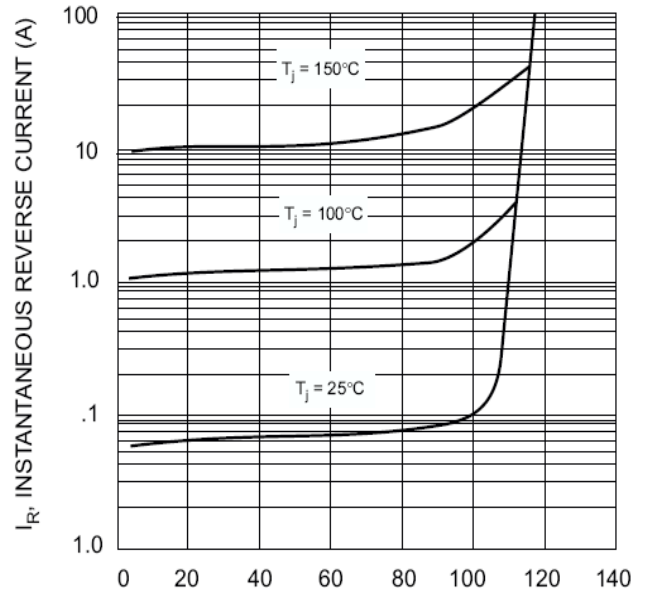
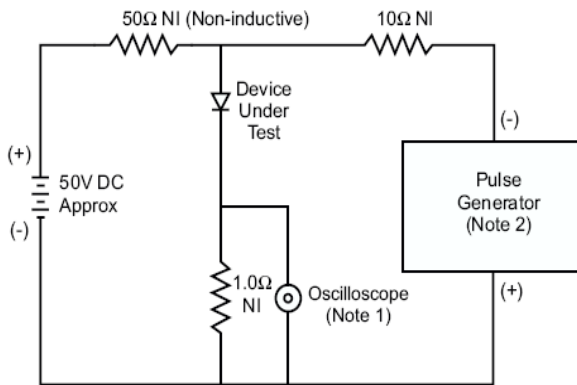
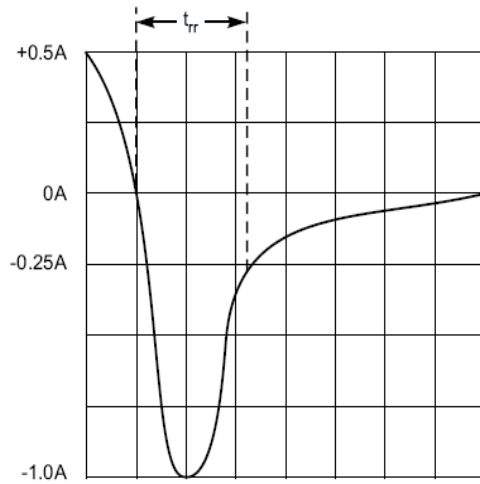


Fig. 4 Typical Reverse Characteristics



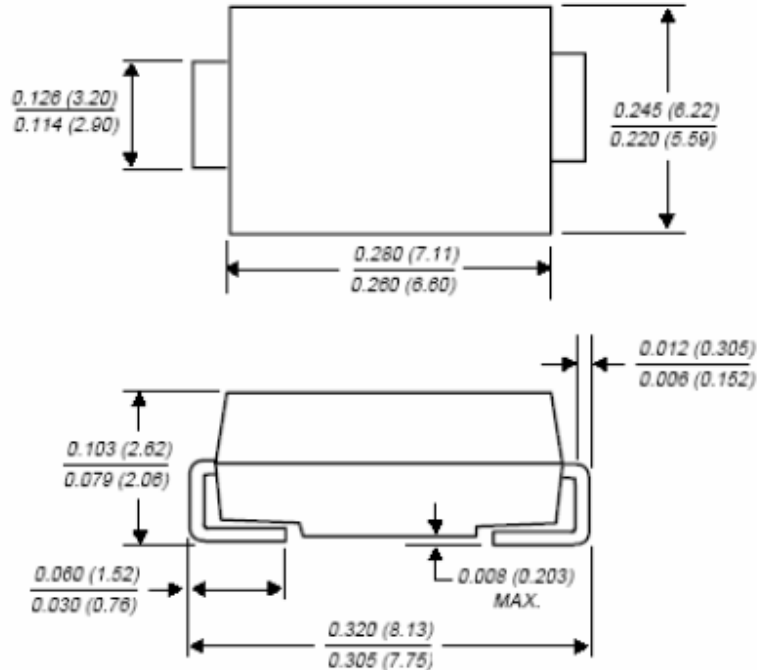
- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Dimensions in inch (mm)

**DO-214AB(SMC)**

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