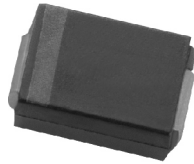


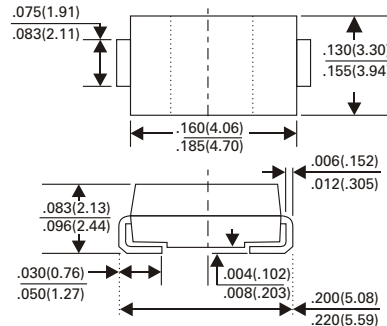
# US3AB thru US3MB

## SURFACE MOUNT REVERSE VOLTAGE 50 TO 1000 VOLTS

ULTRA FAST RECTIFIERS FORWARD CURRENT - 3.0 AMPERES



SMB/DO-214AA



Dimensions in inches and (millimeters)

### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability classification 94V-0
- Glass passivated junction
- High temperature soldering  
260°C/10seconds at terminals

### MECHANICAL DATA

Case : JEDEC DO-214AA molded plastic  
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity : Indicated by cathode band  
 Standard Packaging : 12mm tape (ELA-481)  
 Weight : 0.21grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified  
 Single phase, half wave, 60Hz, resistive or inductive load  
 For capacitive load, derate current by 20%

	SYMBOL	US3AB	US3BB	US3DB	US3FB	US3GB	US3JB	US3KB	US3MB	UNITS	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current @ $T_L = 100^\circ\text{C}$	$I_{(AV)}$	3.0								Amps	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) $T_A = 55^\circ\text{C}$	$I_{FSM}$	150								Amps	
Maximum Instantaneous Forward Voltage at 3.0A DC	$V_F$	1.0			1.3		1.7			Volts	
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	$I_R$	10 250								$\mu\text{A}$	
Typical Junction Capacitance (NOTE 2)	$C_J$	50					75				pF
Maximum Reverse Recovery Time (NOTE 1) $T_J = 25^\circ\text{C}$	$T_{RR}$	80					50				nS
Maximum Thermal Resistance (NOTE 3)	$T_J$	-55 to +150								$^\circ\text{C}$	
Operating and Storage Temperature Range	$T_{STG}$	-55 to +150								$^\circ\text{C}$	

NOTES :

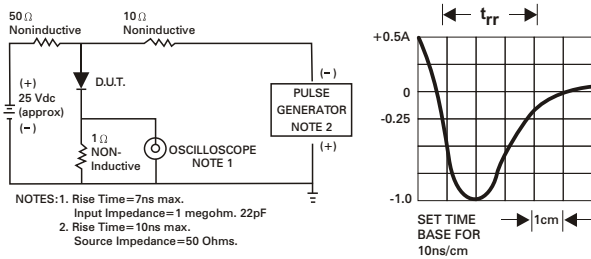
1. Reverse Recovery Test Conditions  $I_F = 5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{RR} = 0.25\text{A}$
2. Measured at 1 MHz and applied reverse Voltage of 4.0VDC
3. Measured on P.C.Board with 0.6" x 0.6" (16mmX16mm) Copper Pad Area.

# US3AB thru US3MB

## SURFACE MOUNT REVERSE VOLTAGE 50 TO 1000 VOLTS

### RATING AND CHARACTERISTICS CURVES US3AB THRU US3MB

Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



FORWARD CURRENT RATING

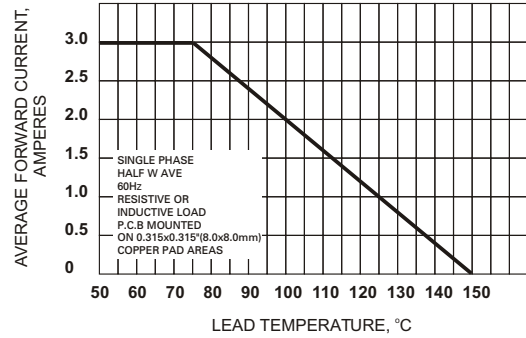


Fig. 3 - TYPICAL REVERSE CHARACTERISTICS

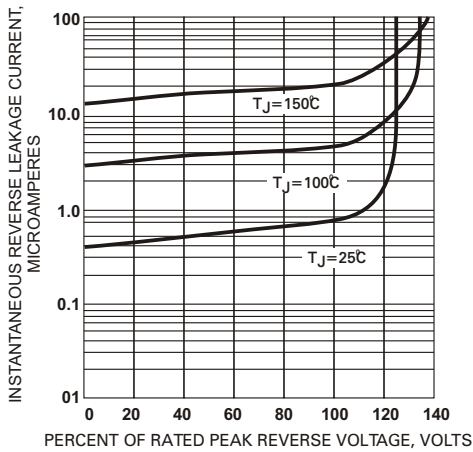


Fig. 4 - TYPICAL FORWARD CHARACTERISTICS

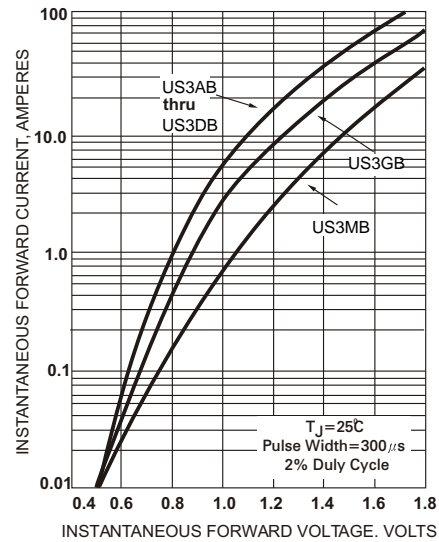


Fig. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

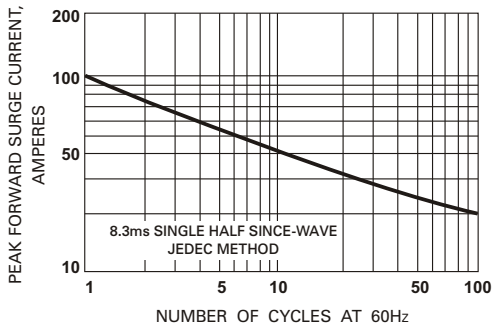


Fig. 6 - TYPICAL JUNCTION CAPACITANCE

