

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

## VOLTAGE RANGE

50 to 1000 Volts

## CURRENT

3.0 Ampere



SMB

## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Fast switching speed

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.093 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

P/N(MARK)	US3AB	US3BE	US3DB	US3EB	US3GE	US3JB	US3KB	US3MB	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current at Ta=55°C	3.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	100								A
Maximum Instantaneous Forward Voltage at 3.0A	1.0		1.3		1.85				V
Maximum DC Reverse Current Ta=25°C	10								μA
at Rated DC Blocking Voltage Ta=100°C	200								μA
Maximum Reverse Recovery Time (Note 1)	50				75				nS
Typical Junction Capacitance (Note 2)	75								pF
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>	-65 — +150								°C

### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (US3AB THRU US3MB)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

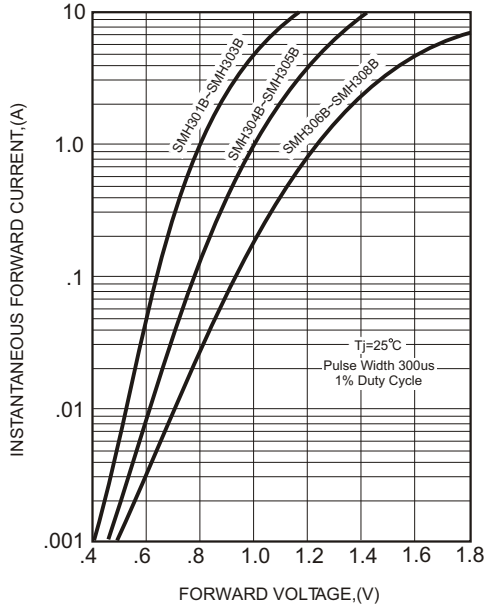


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

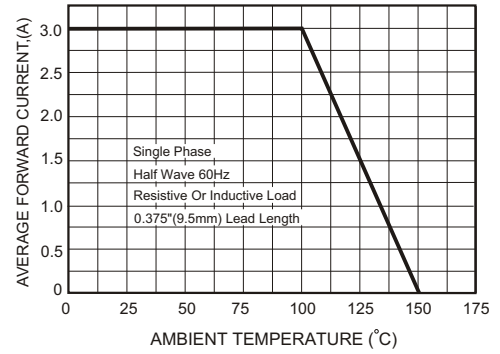


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

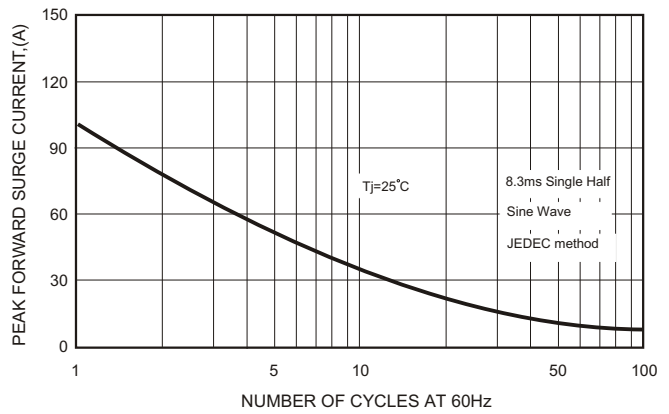
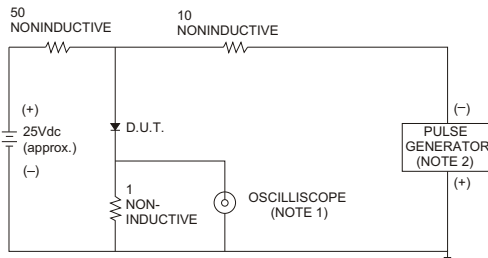


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

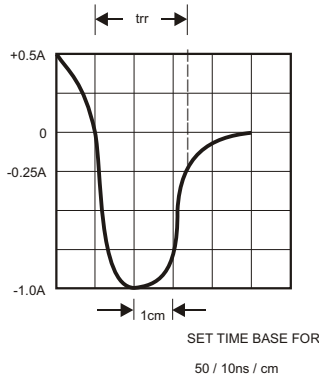
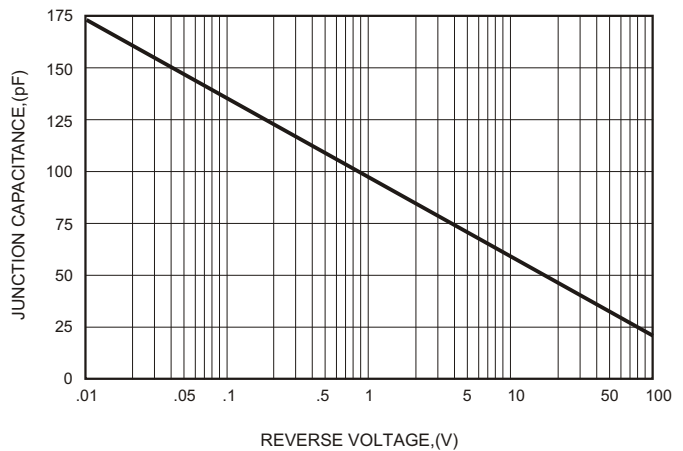
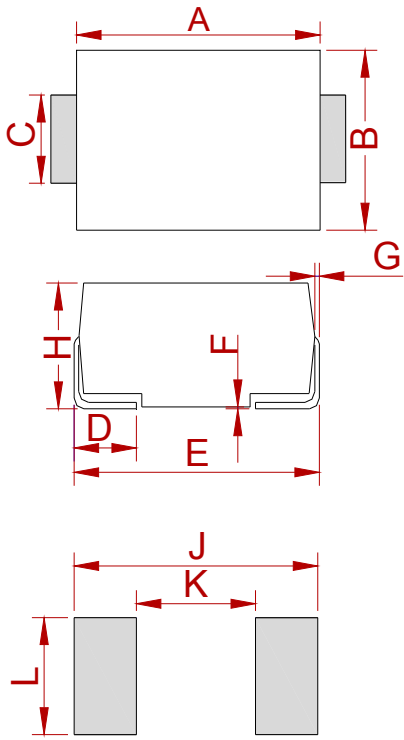


FIG.5-TYPICAL JUNCTION CAPACITANCE



**PACKAGE MECHANICAL DATA**



DO-214AA (SMB)

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.25	4.75	0.167	0.187
B	3.30	3.94	0.130	0.155
C	1.85	2.21	0.073	0.087
D	0.76	1.52	0.030	0.060
E	5.08	5.59	0.200	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.11	2.44	0.083	0.096
J	6.80		0.270	
K		2.60		0.100
L	2.40		0.090	

**REEL SPECIFICATION**

P/N	PKG	QTY
US3AB THRU US3MB	SMB	3000

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