

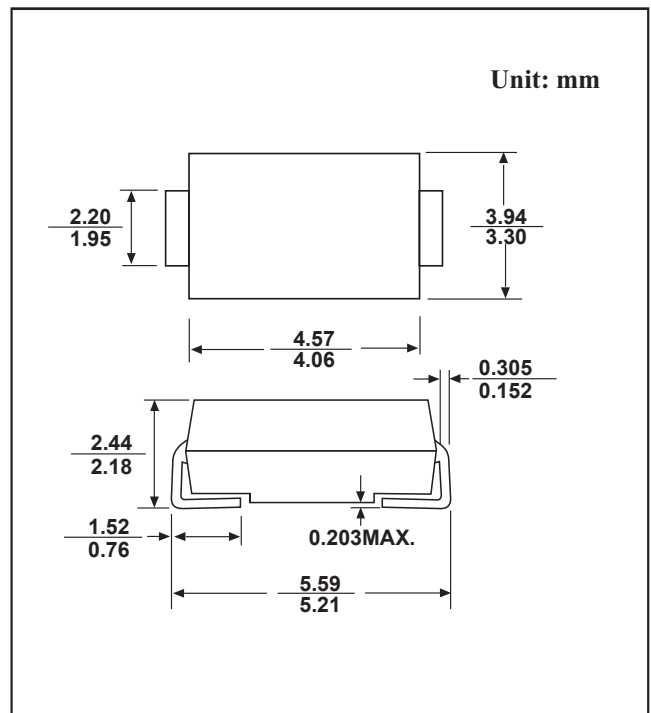
## SMB PLASTIC SILICON RECTIFIERS

### FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Ultra fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed 250 C/10 seconds at terminals

### MECHANICAL DATA

- Case: SMA/SMB molded plastic body
- Lead: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	US2A	US2B	US2D	US2G	US2J	US2K	US2M	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current.375"(9.5mm) Lead Length at Ta=55°C	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50.0							A
Maximum Instantaneous Forward Voltage at 2.0A	$V_F$	1.0		1.4		1.7		V	
Maximum reverse current at rated DC blocking voltage	@T <sub>A</sub> =25°C	5.0							μA
	@T <sub>A</sub> =100°C	50.0							
Maximum reverse recovery time (Note1)	$t_{rr}$	50				75			ns
Typical junction capacitance (Note2)	$C_J$	20							pF
Typical thermal resistance(Note3)	$R_{\theta JA}$	50							°C/W
Operating junction temperature range	$T_j$	- 55 ---- + 125							°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150							°C

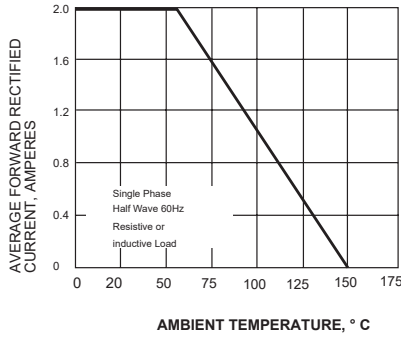
1.Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

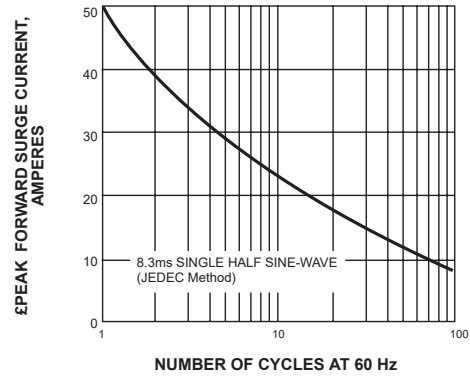
3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

## RATINGS AND CHARACTERISTIC CURVES

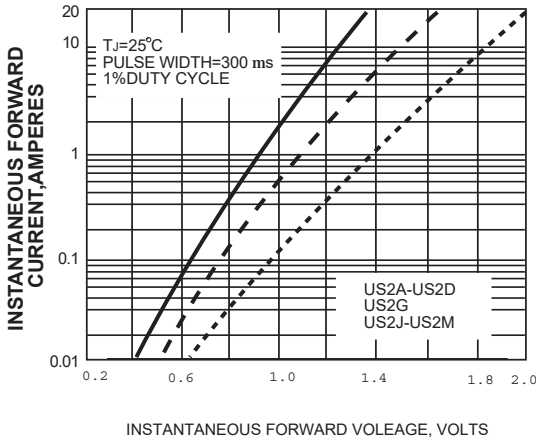
**FIG. 1- FORWARD CURRENT DERATING CURVE**



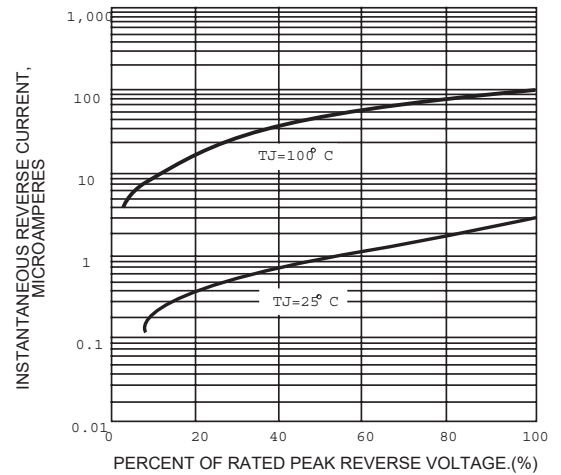
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



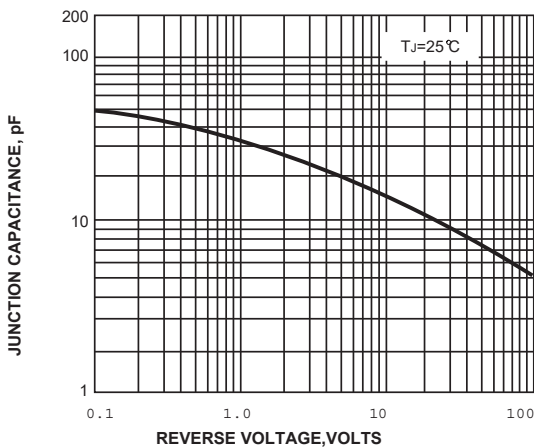
**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5-TYPICAL JUNCTION CAPACITANCE**



**FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

