

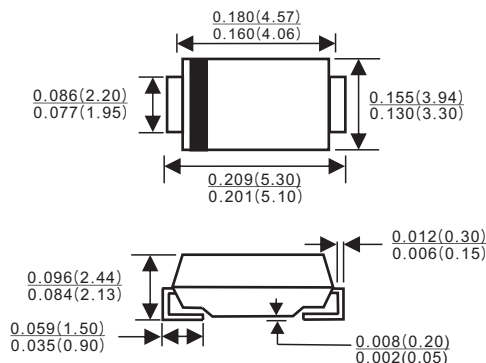


**REVERSE VOLTAGE: 50 - 1000 V**  
**FORWARD CURRENT: 3.0 A**

**SMB/DO-214AA**

### Features

- ✧ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ✧ For surface mount applications
- ✧ Low profile package
- ✧ Easy pick and place
- ✧ Ultrafast recovery times for high efficiency
- ✧ Low forward voltage, low power loss
- ✧ Built-in strain relief, ideal for automated placement
- ✧ High temperature soldering: 250°C/10 seconds on terminals



### Mechanical Data

- ✧ Case: JEDEC DO-214AA, molded plastic body over passivated chip
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.003 ounces, 0.093 gram

Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

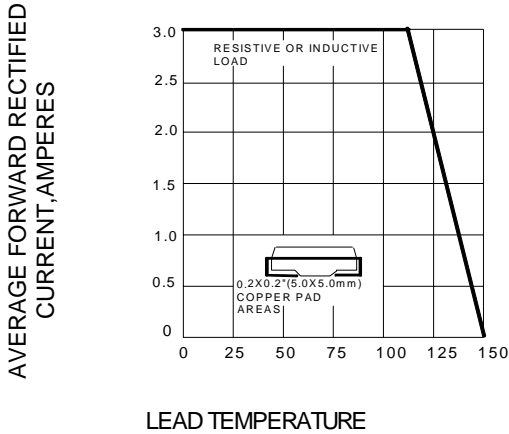
Parameter	Symbol	US3AB	US3BB	US3DB	US3GB	US3JB	US3KB	US3MB	UNITS
<b>Marking code</b>		US3A	US3B	US3D	US3G	US3J	US3K	US3M	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RWS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=110^{\circ}C$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100.0							A
Maximum instantaneous forward voltage at 3A	$V_F$		1.0		1.3		1.7		V
Maximum DC reverse current @ $T_A=25^{\circ}C$ at rated DC blocking voltage @ $T_A=125^{\circ}C$	$I_R$				10.0				$\mu A$
					500				
Maximum reverse recovery time at $I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$	$t_{rr}$		50				75		ns
Typical junction capacitance at 4.0V, 1MHz	$C_J$		70				50		pF
Maximum thermal resistance (NOTE1)	$R_{JA}$	25							$^{\circ}C/W$
Operating temperature range	$T_J$	-55-----+150							$^{\circ}C$
Storage temperature range	$T_{STG}$	-55-----+150							$^{\circ}C$

NOTE: 1.P.C.B.mounted on 0.2X0.2"(5.0X5.0mm)copper pad area

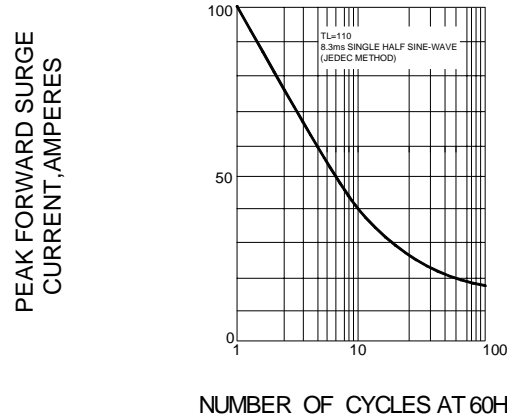


### Ratings AND Characteristic Curves

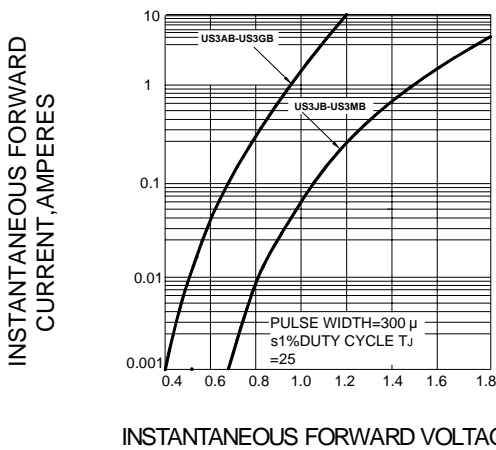
**FIG.1 – FORWARD CURRENT DERATING CURVE**



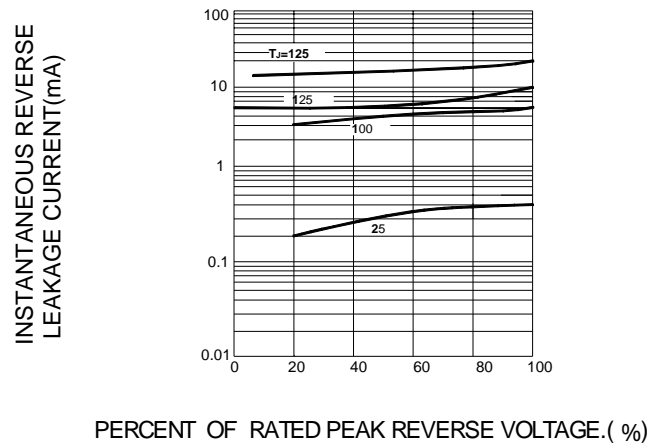
**FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



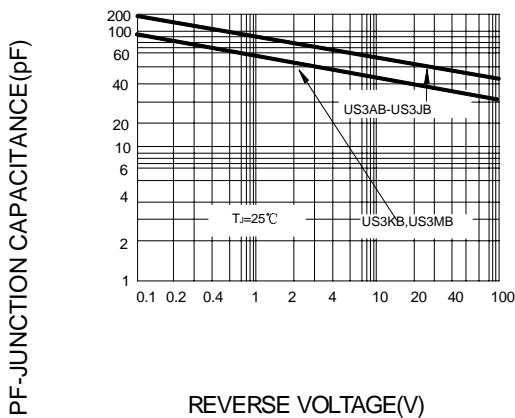
**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



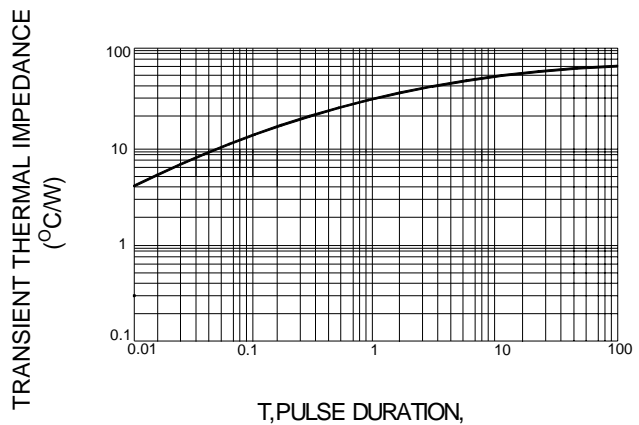
**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**



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



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
SMB	3000/REEL	48000	36X35.8X36.5	12.00	11.00