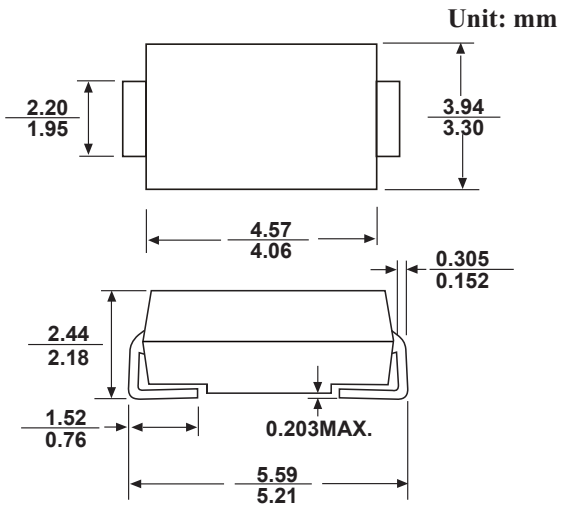
SMB Ultra-Fast Recovery Rectifier Diodes

FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Super 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: SMB molded plastic body
- Terminals: Solder plated, 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	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3H	ES3J	UNITS
Maximum recurrent peak reverse voltage		V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage		V_{RMS}	35	70	105	140	210	280	420	560	V
Maximum DC blocking voltage		V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current.375"(9.5mm) Lead Length at T_A=55℃		$I_{F(AV)}$	3.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	100.0								A
Maximum Instantaneous Forward Voltage at 3.0A		V_F	1.0				1.3		1.7		V
Maximum reverse current at rated DC blocking voltage	@T_A=25℃	I_R	10.0								μA
	@T_A=100℃		100.0								
Maximum reverse recovery time (Note1)		t_{rr}	35.0								ns
Typical junction capacitance (Note2)		C_J	130.0								pF
Typical thermal resistance(Note3)		$R_{\theta JA}$	40.0								℃/W
Operating junction temperature range		T_j	- 55 ---- + 125								℃
Storage temperature range		T_{STG}	- 55 ---- + 150								℃

Note: 1.Reverse recovery condition I_F=0.5A,I_R=1.0A,Irr=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

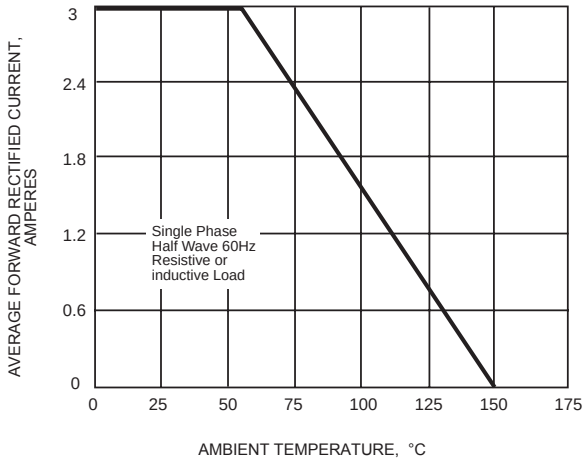


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

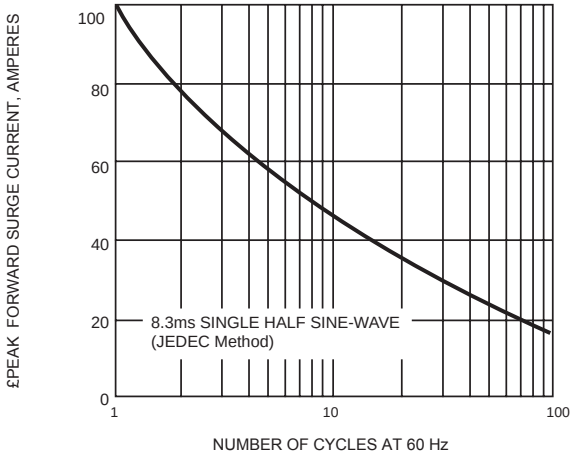


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

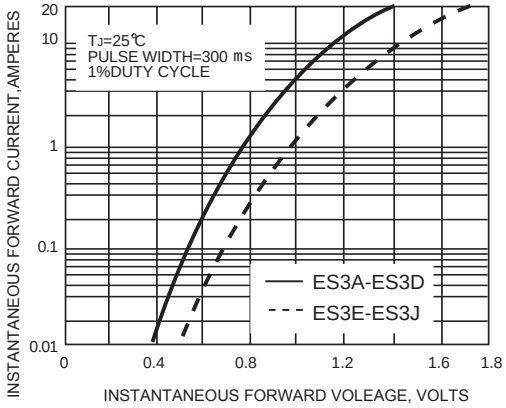


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

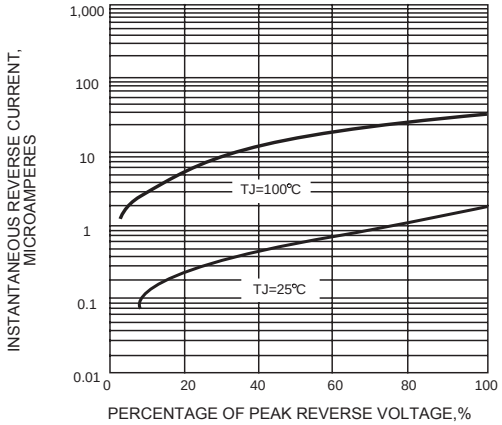


FIG. 5-TYPICAL JUNCTION CAPACITANCE

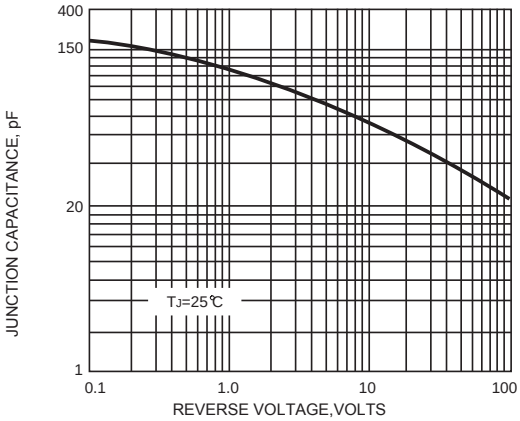


FIG. 6-TYPICAL TRANSIENTTHERMAL IMPEDANCE