

HIGH EFFICIENCY RECTIFIERS

VOLTAGE RANGE: 50--- 1000 V
CURRENT: 3.0 A

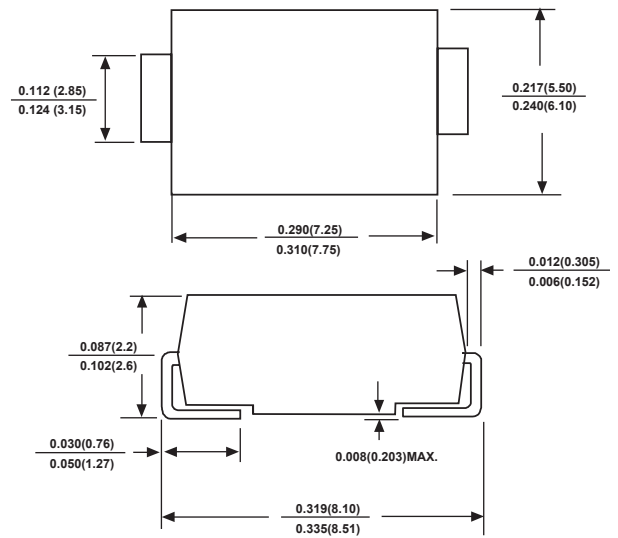
FEATURES

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

SMC



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase,half wave,60 Hz,resistive or inductive load.

For capacitive load,derate by 20%.

		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 $T_a=55^\circ\text{C}$	$I_{F(AV)}$	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		1.4		1.7			V
Maximum reverse current at rated DC blocking voltage	@ $T_A=25$	5.0							μA
	@ $T_A=100$	50.0							
Maximum reverse recovery time (Note1)	t_{rr}	50				75			ns
Typical junction capacitance (Note2)	C_J	50							pF
Typical thermal resistance(Note3)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating junction temperature range	T_j	- 55 ---- + 125							$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150							$^\circ\text{C}$

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

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

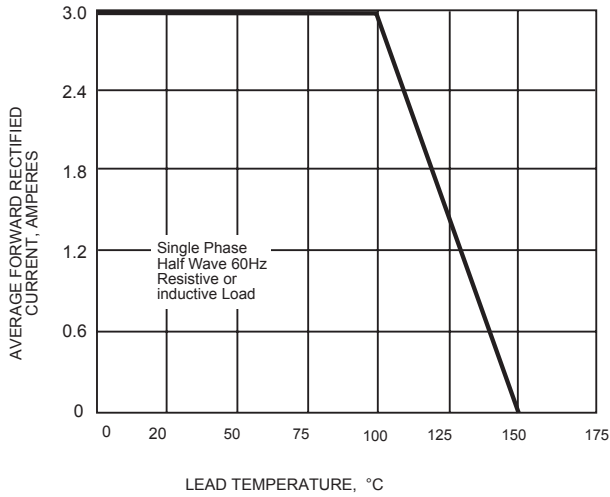


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

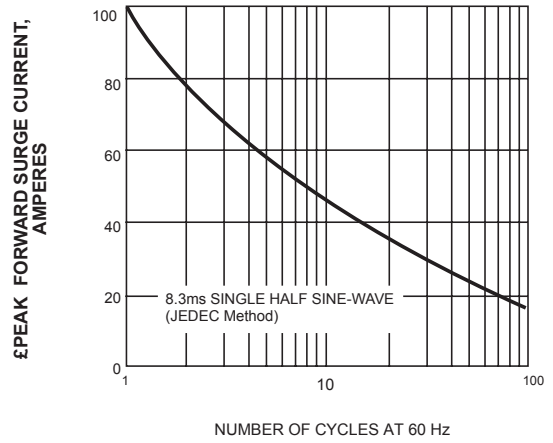


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

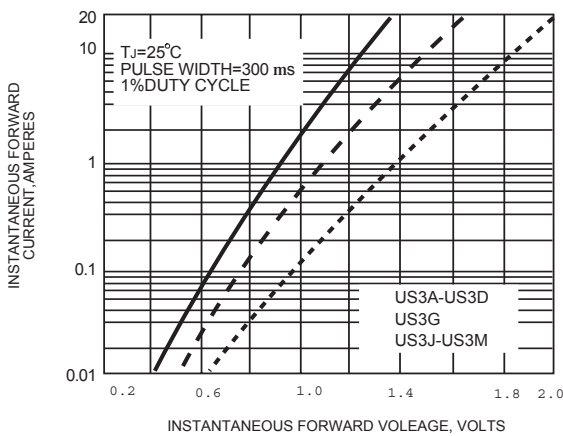


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

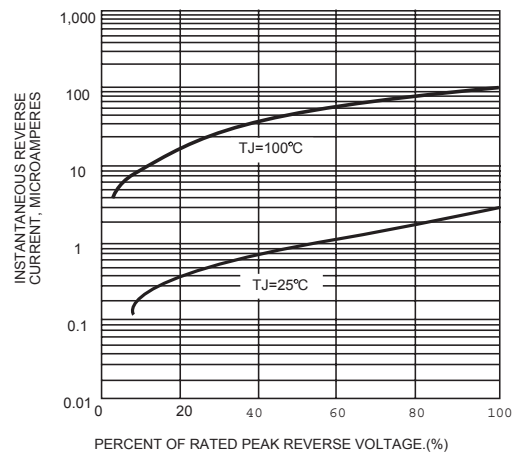


FIG. 5-TYPICAL JUNCTION CAPACITANCE

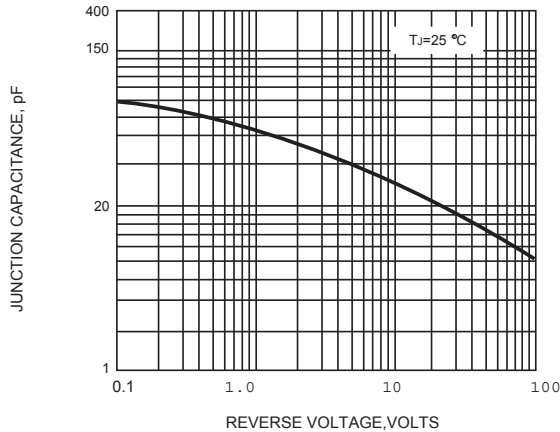


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

