

SURFACE MOUNT RECTIFIERS

REVERSE VOLTAGE: 50 - 1000 V
FORWARD CURRENT: 1.0 A

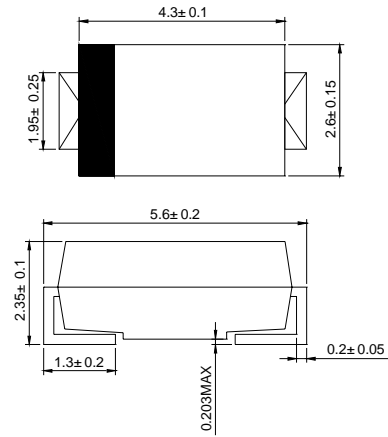
FEATURES

- Plastic package has underwriters laboratories flammability classification 94V-0
- For surface mount applications
- Glass passivated chip junctions
- Low profile package
- Easypick 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 SMAJ, molded plastic body over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounces, 0.084 grams

SMAJ



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		US1AJ	US1BJ	US1DJ	US1GJ	US1JJ	US1KJ	US1MJ	UNITS
		US1A	US1B	US1D	US1G	US1J	US1K	US1M	
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 $T_L=110^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.0				1.7			V
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	I_R	5.0				100.0			μ
Maximum reverse recovery time at $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_T=0.25\text{A}$	t_{rr}	50				75			ns
Typical junction capacitance at 4.0V, 1MHz	C_J	20				15			pF
Maximum thermal resistance (NOTE1)	R_{JA} R_{JL}	55 20							$^\circ\text{C/W}$
Operating temperature range	T_J	-55----- +150							$^\circ\text{C}$
Storage temperature range	T_{STG}	-55----- +150							$^\circ\text{C}$

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

FIG.1 – FORWARD CURRENT DERATING CURVE

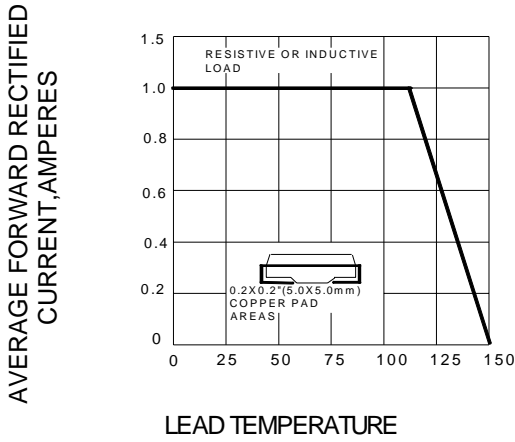


FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

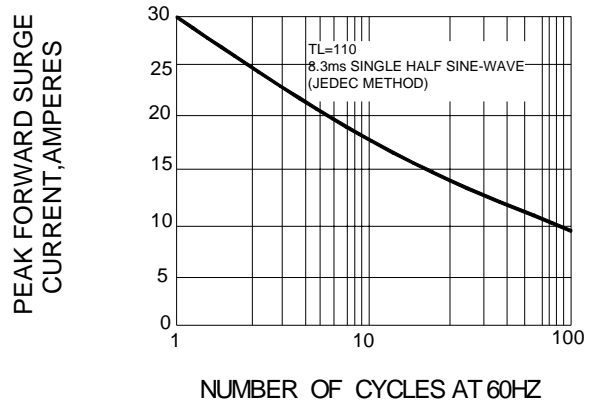


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

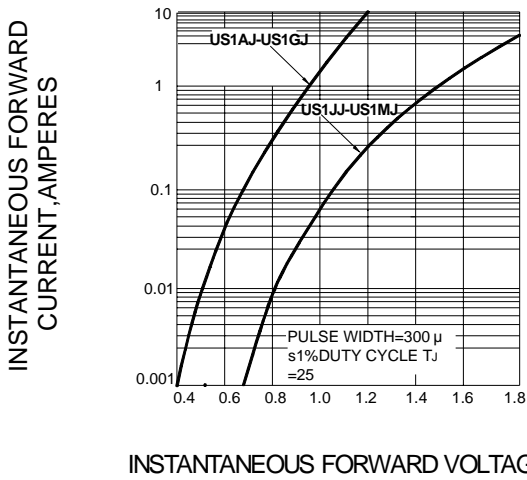


FIG.4 – TYPICAL REVERSE CHARACTERISTICS

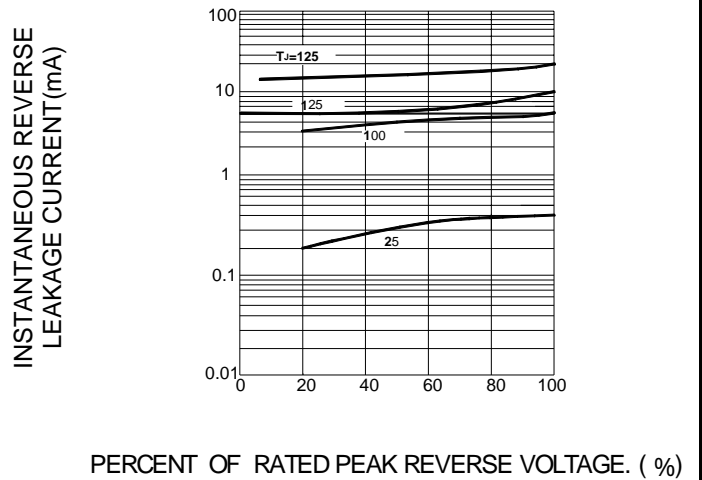


FIG.5 – TYPICAL JUNCTION CAPACITANCE

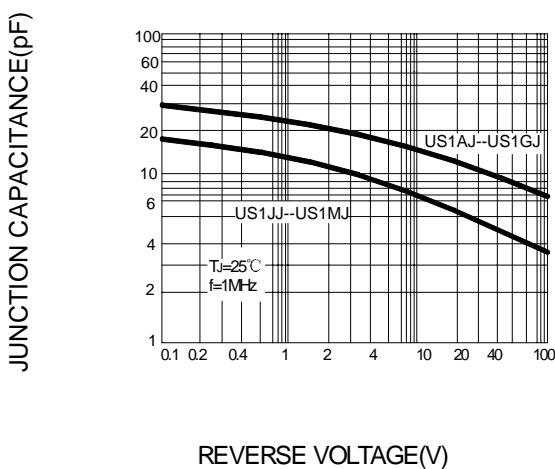


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

