

### SURFACE MOUNT DIODES

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

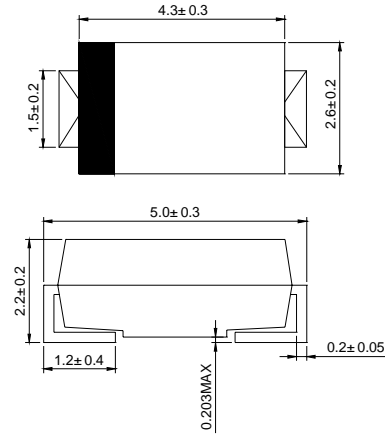
#### FEATURES

- 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 SMA, molded plastic body over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

#### SMAE



Dimensions in millimeters

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

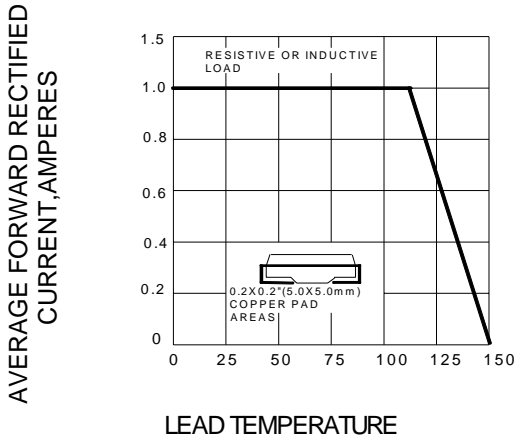
Ratings at 25°C ambient temperature unless otherwise specified

		US1A	US1B	US1D	US1G	US1J	US1K	US1M	UNITS
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			$\mu$
Maximum reverse recovery time at $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$	$t_{rr}$	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							$^\circ\text{C}$

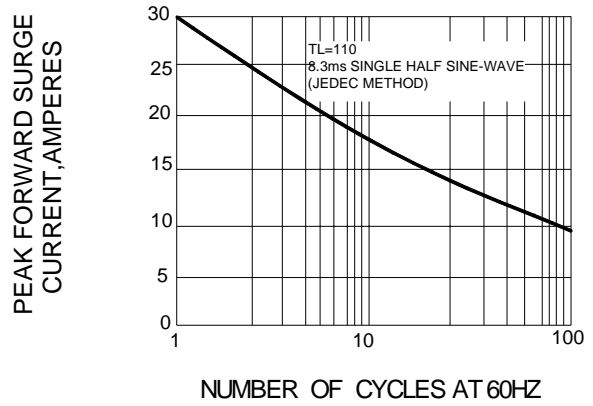
NOTE: 1.P.C.B.mounted on 0.2X0.2"(5.0X5.0mm) copper pad area

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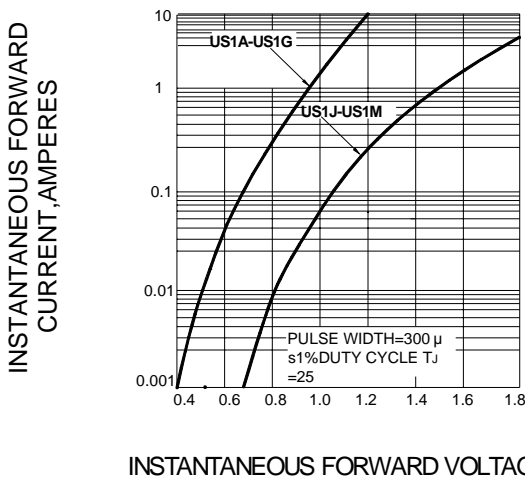
**FIG.1 – FORWARD CURRENT DERATING CURVE**



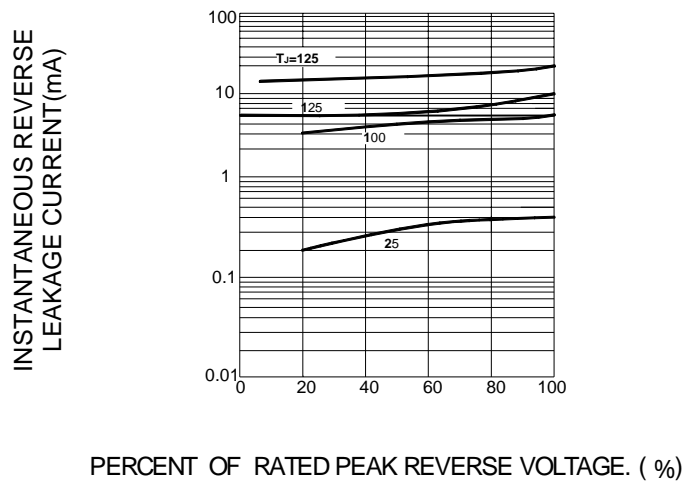
**FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



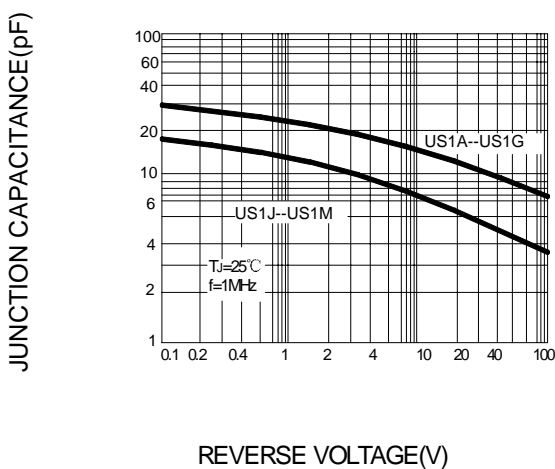
**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**



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

