



US1A THRU US1M

1.0AMP. SURFACE MOUNT ULTRAFast RECTIFIERS

Voltage Range
50 to 1000 Volts
Current
1.0Amperes

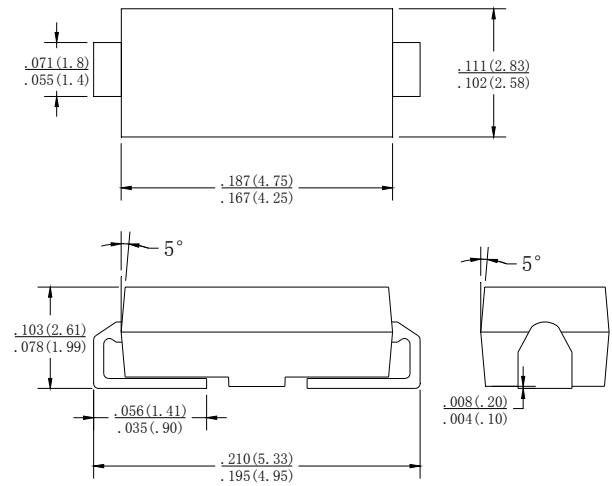
Features

- For surface mounted application
- Low profile package
- Built-in strain relief
- Ideal for automated placement
- Easy pick and place
- Ultrafast recovery time for high efficiency
- Low forward voltage, low power loss
- High temperature soldering guaranteed:
260°C/10 seconds on terminals
- Plastic material used carries Underwriters
Laboratory Classification 94V-O

Mechanical Data

- Cases: Molded plastic
- Terminals: Solder plated, solderable per
MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Weight: 0.064 gram

SMA-W



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave,60Hz,resistive or inductive load.
For capacitive load,derate current by 20%

Type Number		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 _{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 @T _L =110°C	I _{F(AV)}	1.0							A
Peak Forward Surge Current,8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30							A
Maximum Instantaneous Forward Voltage (Note@1.0 A	V _F	1.0				1.7			V
Maximum DC Reverse Crrnt @ TA=25°C At Rated DC Blocking Voltage @ TA=100°C	I _R	10				50			uA
Maximun Reverse Recovery Time(Note 1)	T _{RR}	50				75			nS
Typical Thermal Resistance (Note 2)	R _{θ JL} R _{θ JA}	27				75			°C /W
Operating J unction Temperature Range	T _J	-55 to+150							°C
Storage Temperature Ranage	T _{STG}	-55 to+150							°C

- NOTES:** 1.Reverse Recovery Test conditions:IF=0.5A,IR=1.0A,IRR=0.25A.
2. P.C.B. Mounted on 0.2"x0.2" (5.0 x 5.0 mm) Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES US1A THRU US1M



FIG.1-MAXIMUM NONO-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

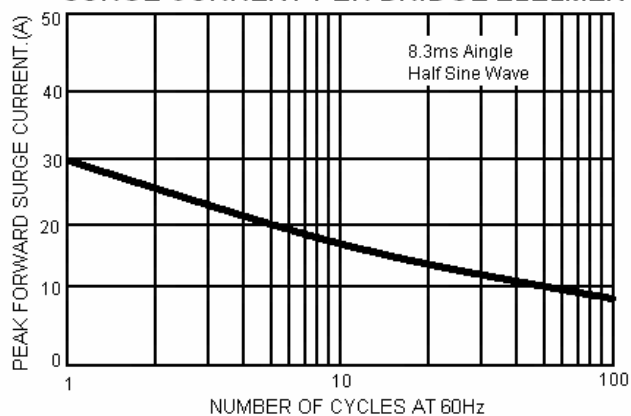


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

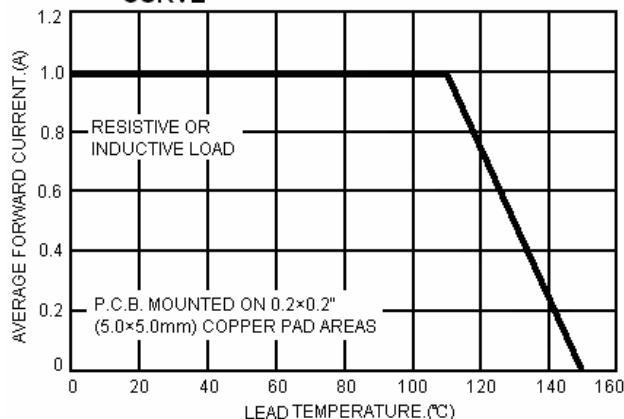


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

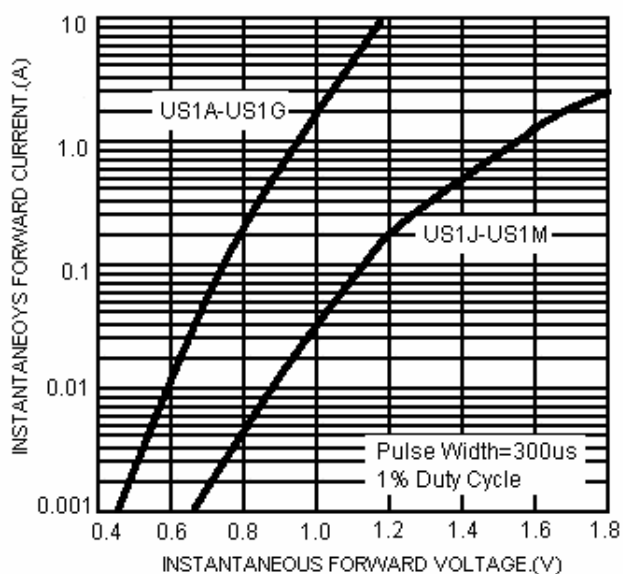


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

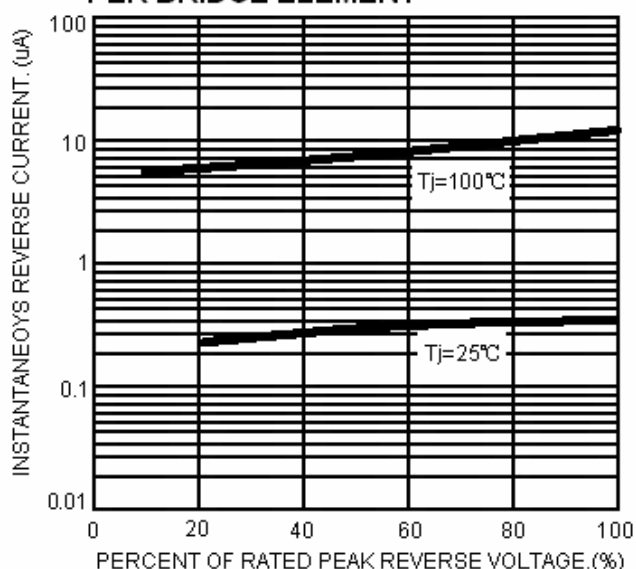
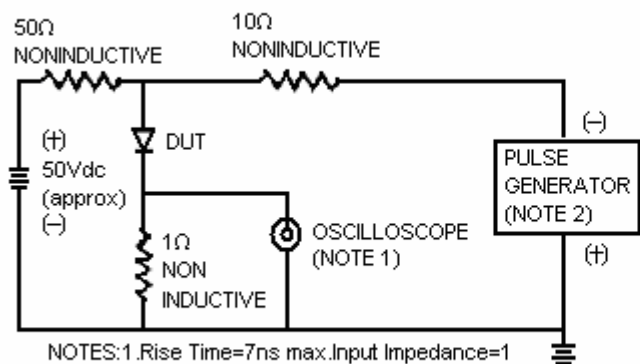


FIG.5-REVERSE RECOVER TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=1 megohm 22pf
2. Rise Time=10ns max. Source Impedance =50 ohms

