

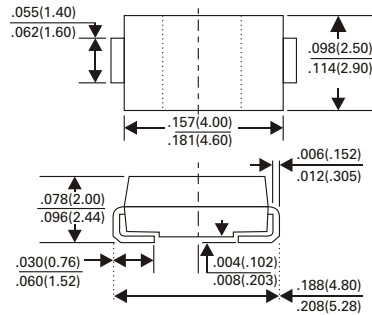
US2A thru US2M

SURFACE MOUNT REVERSE VOLTAGE 50 TO 1000 VOLTS

ULTRA FAST RECTIFIERS FORWARD CURRENT - 2.0 AMPERES



SMA/DO-214AC



Dimensions in inches and (millimeters)

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability classification 94V-0
- Glass passivated junction
- High temperature soldering
260°C/10seconds at terminals

MECHANICAL DATA

Case : JEDEC DO-214AC molded plastic
 Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
 Polarity : Indicated by cathode band
 Standard Packaging : 12mm tape (ELA-481)
 Weight : 0.064grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOL	US2A	US2B	US2D	US2F	US2G	US2J	US2K	US2M	UNITS	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current @ $T_L = 100^\circ\text{C}$	$I_{(AV)}$	2.0								Amps	
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) $T_A = 55^\circ\text{C}$	I_{FSM}	50								Amps	
Maximum Instantaneous Forward Voltage at 2.0A DC	V_F	1.0			1.3		1.7			Volts	
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_R	5.0 100								μA	
Typical Junction Capacitance (NOTE 2)	C_J	50					30				pF
Maximum Reverse Recovery Time (NOTE 1) $T_J = 25^\circ\text{C}$	T_{RR}	50					75				nS
Maximum Thermal Resistance (NOTE 3)	T_J	-55 to +150									$^\circ\text{C}$
Operating and Storage Temperature Range	T_J T_{STG}	-55 to +150									$^\circ\text{C}$

NOTES :

1. Reverse Recovery Test Conditions $I_F = 5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1 MHz and applied reverse Voltage of 4.0VDC
3. Measured on P.C.Board with 0.2" x 0.2" (5mmX5mm) Copper Pad Area.

US2A thru US2M

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RATINGS AND CHARACTERISTIC CURVES US2AA THRU US2MA

Fig. 1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

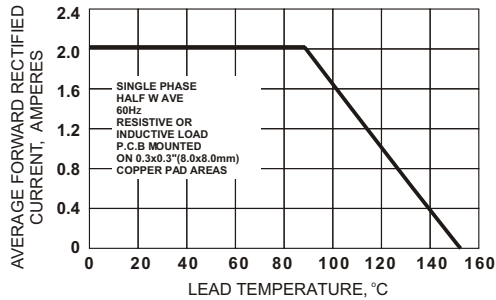


Fig. 2 - TYPICAL FORWARD CHARACTERISTICS PER ELEMENT

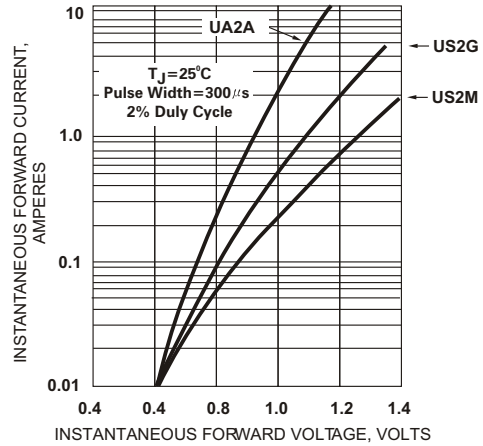


Fig. 3 - MAXIMUM FORWARD SURGE CURRENT

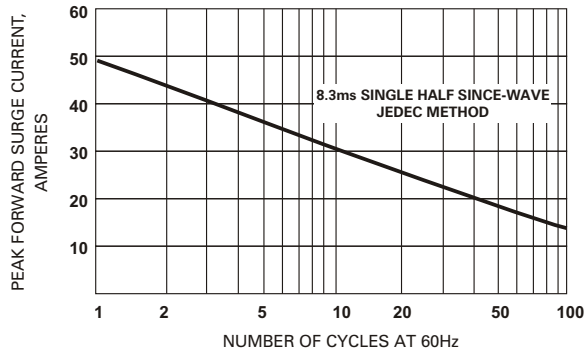


Fig. 4 - TYPICAL REVERSE CHARACTERISTICS

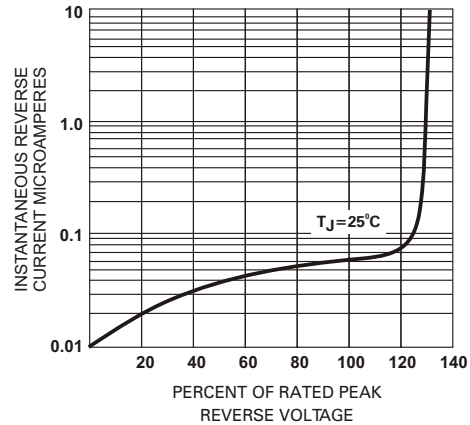


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

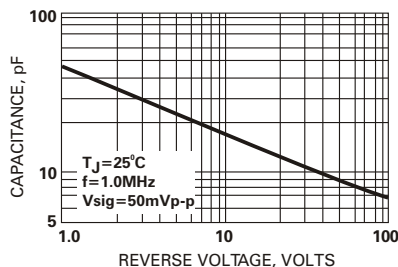


Fig. 6 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

