



US2A-US2M

Surface Mount Ultra Fast Rectifiers

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Low forward voltage drop
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals

MECHANICAL DATA

Case: Molded plastic, SMA

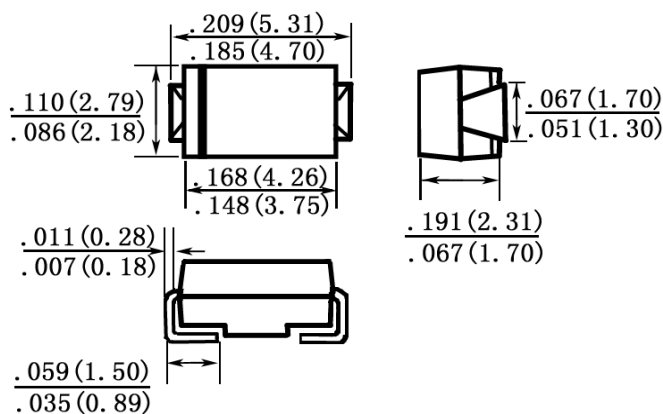
Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity: Color band denotes cathode end

Packaging: 12mm tape per EIA STD RS-481

Weight: 0.002 ounce, 0.064 gram

DO-214AC(SMA)



Dimensions in inches and (millimeters)

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%.

	Symbols	US2A	US2B	US2D	US2G	US2J	US2K	US2M	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current at $T_L=90$	$I_{(AV)}$	2.0							Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50							Amp	
Maximum Forward Voltage at 2.0A	V_F	1.0			1.3	1.7			Volts	
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	I_R				5.0			200	μ Amp	
Typical Junction Capacitance (Note 1)	C_J	28							pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	20							/W	
Maximum Reverse Recovery Time (Note 3)	T_{RR}	50				75				nS
Operating Junction Temperature Range	T_J	-55 to +125								
Storage Temperature Range	T_{stg}	-55 to +150								

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

3- Reverse Recovery Test Conditions : $I_F=0.5A$ $I_R=1A$ $I_{RR}=0.25A$.





RATINGS AND CHARACTERISTIC CURVES

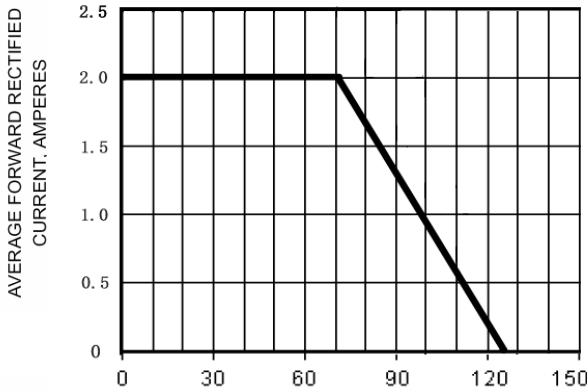


Fig. 1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

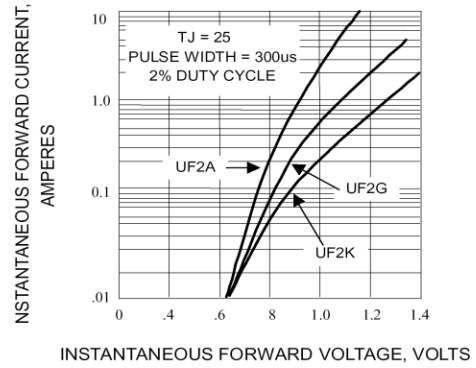


Fig. 2-TYPICAL FORWARD CHARACTERISTICS PER ELEMENT

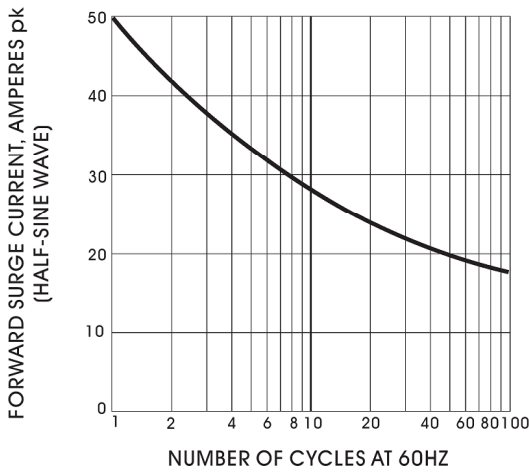


Fig.3-MAXIMUM OVERLOAD SURGE-CURRENT

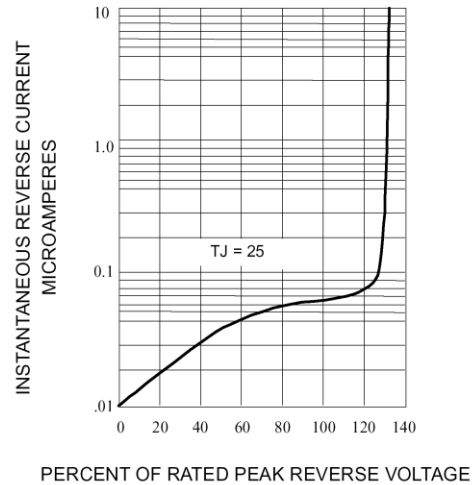


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

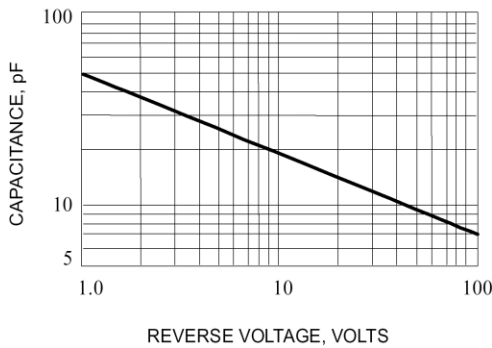


Fig. 5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

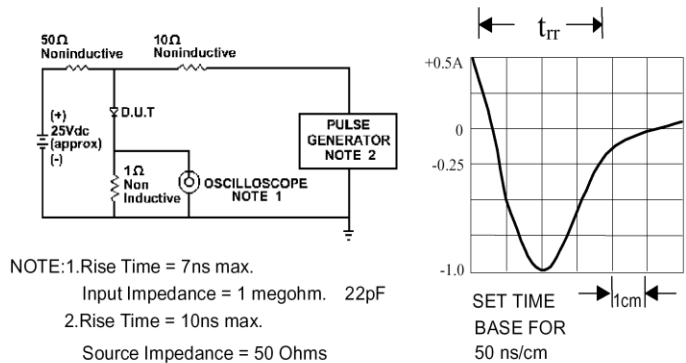


Fig. 6-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM