US2A-US2M

Surface Mount Ultra Fast Rectifiers

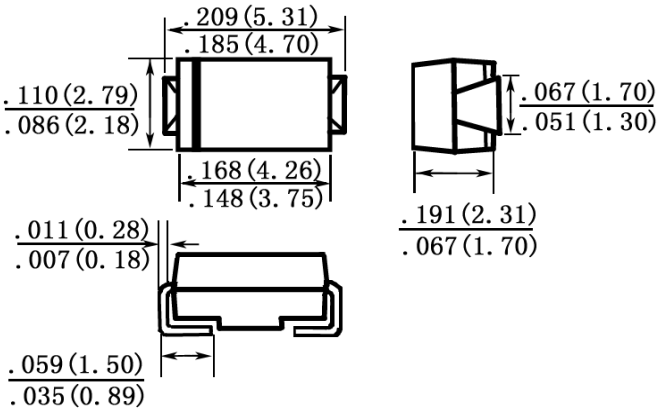
FEATURES

· 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-O
· 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℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60H_Z, 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							**μAmp**
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	Tstg	-55 to +150							**℃**

NOTES:

1- Measured at 1 MH_Z 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.

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RATINGS AND CHARACTERISTIC CURVES

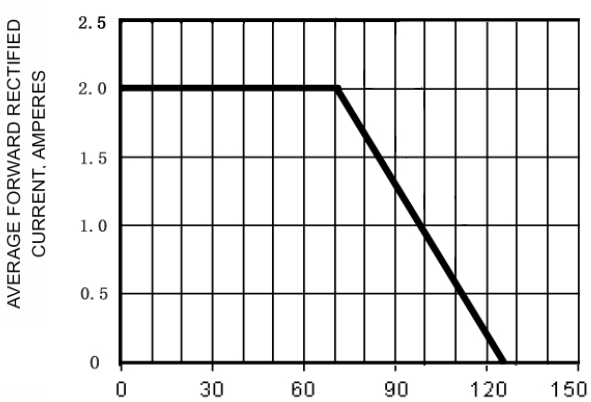


Fig. 1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

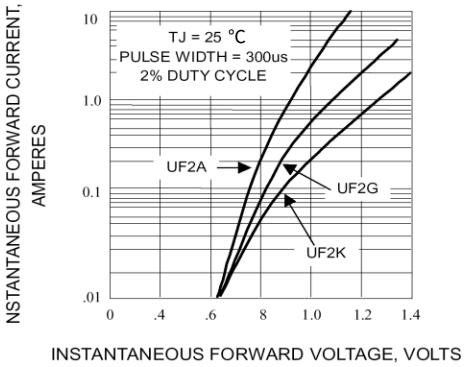


Fig. 2-TYPICAL FORWARD CHARACTERISTICS PER ELEMENT

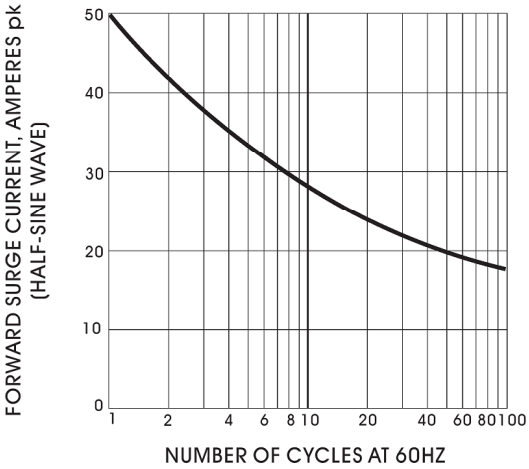


Fig.3-MAXIMUM OVERLOAD SURGE-CURRENT

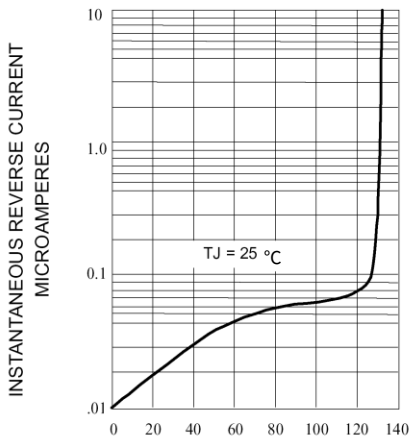


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

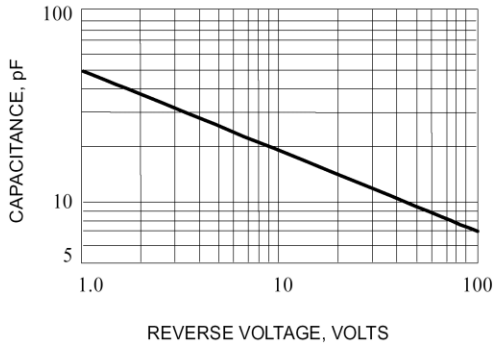


Fig. 5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

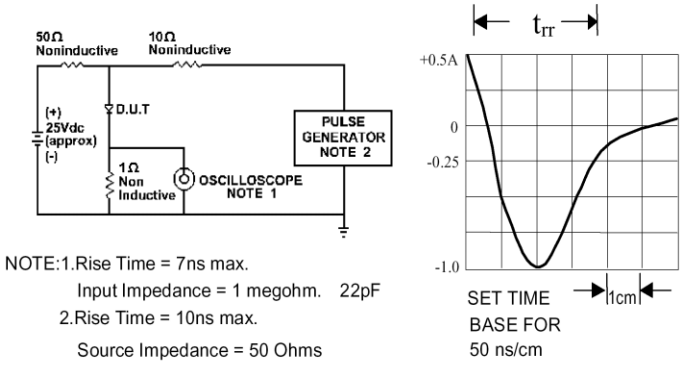


Fig. 6-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

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