



# US2A THRU US2M

## 2.0 AMP SURFACE MOUNT HIGH EFFICIENCY RECTIFIERS



### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Fast switching speed

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.063 grams

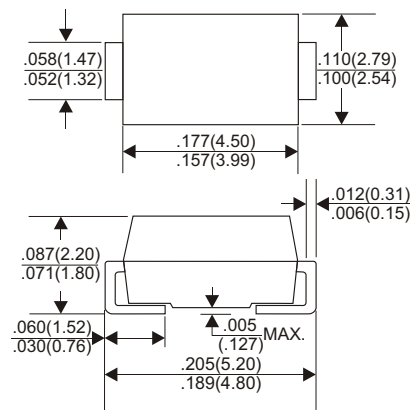
### VOLTAGE RANGE

50 to 800 Volts

### CURRENT

1.0 Ampere

#### DO-214AC(SMA)



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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	US2A	US2B	US2D	US2E	US2G	US2J	US2K	US2M	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	210	280	420	560	700	V	
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	1000	V	
Maximum Average Forward Rectified Current										
.375"(9.5mm) Lead Length at Ta=50°C									2.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)									60	A
Maximum Instantaneous Forward Voltage at 2.0A	1.0				1.3	1.85			V	
Maximum DC Reverse Current Ta=25°C									5.0	µA
at Rated DC Blocking Voltage Ta=100°C									150	µA
Maximum Reverse Recovery Time (Note 1)					50	70			nS	
Typical Junction Capacitance (Note 2)									30	pF
Operating and Storage Temperature Range Tj, Tstg									-65 — +150	°C

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATING AND CHARACTERISTIC CURVES (US2A THRU US2M)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

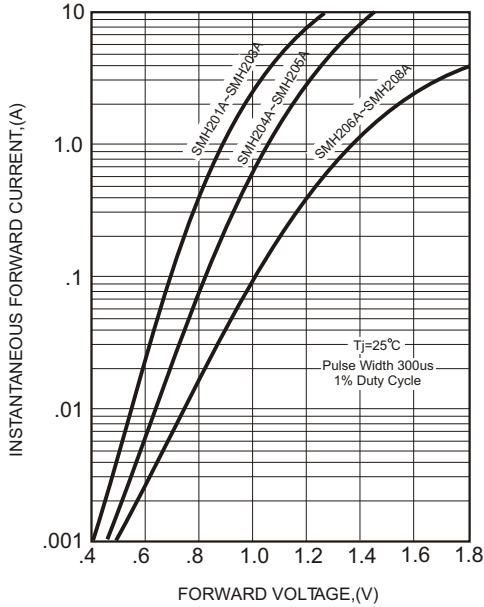


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

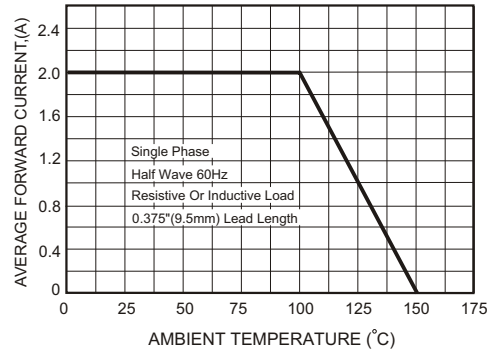
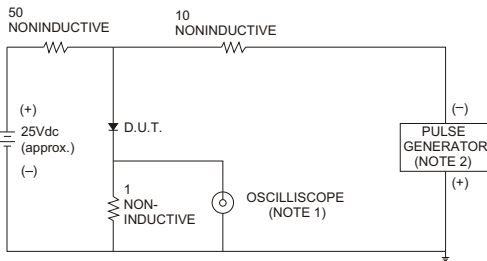


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

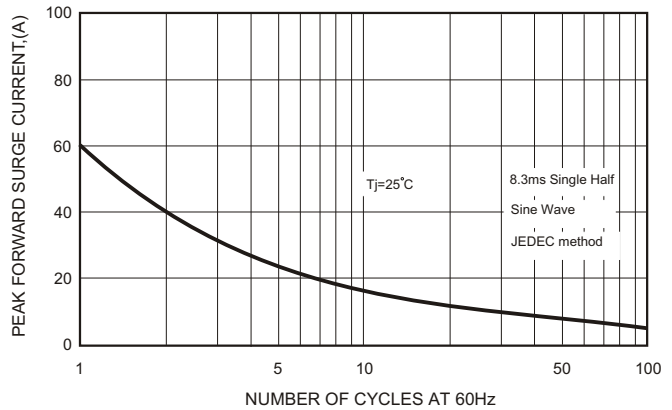
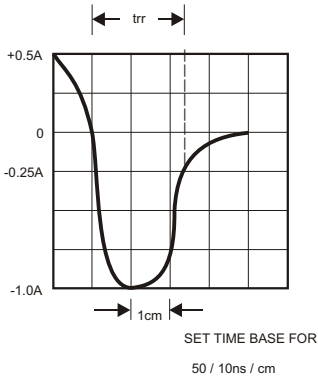
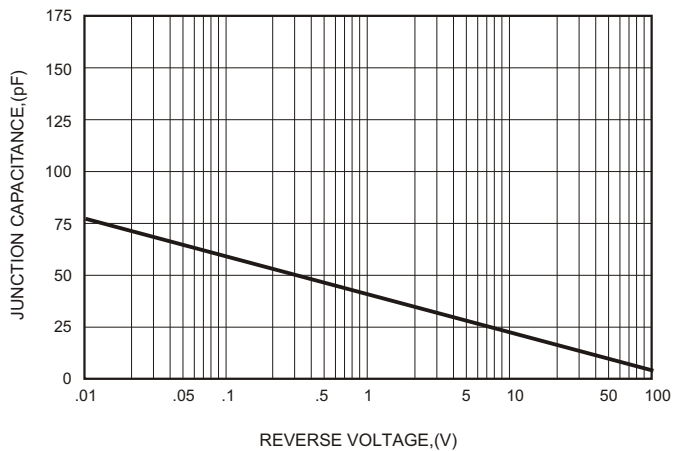


FIG.5-TYPICAL JUNCTION CAPACITANCE



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