



## SURFACE MOUNT HIGH EFFICIENCY RECTIFIER

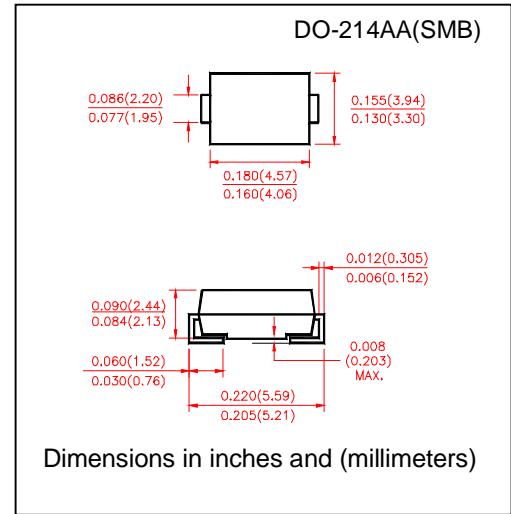
<b>US2A THRU US2M</b>	<b>VOLTAGE RANGE</b>	<b>50 to 1000 Volts</b>
	<b>CURRENT</b>	<b>2.0 Ampere</b>

### FEATURES

- Plastic package has UL flammability Classification 94V-0
- Glass Passivated chip junction
- Built in strain relief
- Fast switching speed for high efficiency
- High temperature soldering guaranteed: 250°C/10 seconds

### MECHANICAL DATA

- Case: JEDED DO-214AA transfer molded plastic
- Terminals: Solder plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.003 ounce, 0.093 gram



### 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%.

### MAXIMUM RATINGS & THERMAL CHARACTERISTICS

PARAMETELS	SYMBOLS	US2A	US2B	US2D	US2G	US2J	US2K	US2M	UNIT
Maximum Repetitive 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 $T_L=105^\circ\text{C}$ (NOTE 1)	$I_{(AV)}$	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50							Amps
Maximum Instantaneous Forward Voltage at 2.0A	$V_F$	1.0			1.3	1.7			Volts
Maximum DC Reverse Current At rated DC blocking voltage at	$T_A=25^\circ\text{C}$	5.0							$\mu\text{A}$
	$T_A=125^\circ\text{C}$	100							
Maximum Reverse Recovery Time Test conditions $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{RR}=0.25\text{A}$	$t_{rr}$	50				100			nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	50				30			pF
Typical Thermal Resistance (NOTE 1)	$R_{\theta JA}$	75							$^\circ\text{C/W}$
	$R_{\theta JL}$	17							
Operating Junction Temperature	$T_J$	(-55 to +150)							$^\circ\text{C}$
Storage Tempetature Rang	$T_{STG}$	(-55 to +150)							$^\circ\text{C}$

#### Notes:

1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.3×0.3" (8.0×8.0mm) copper pad areas.



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US2A THRU US2M

VOLTAGE RANGE 50 to 1000 Volts  
CURRENT 2.0 Ampere

## RATING AND CHARACTERISTIC CURVES US2A THRU US2M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

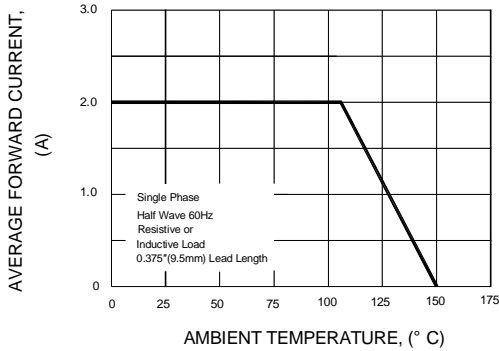


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

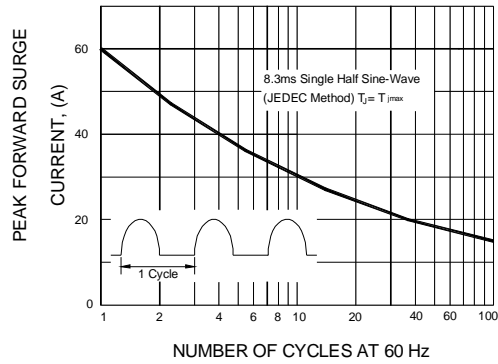


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

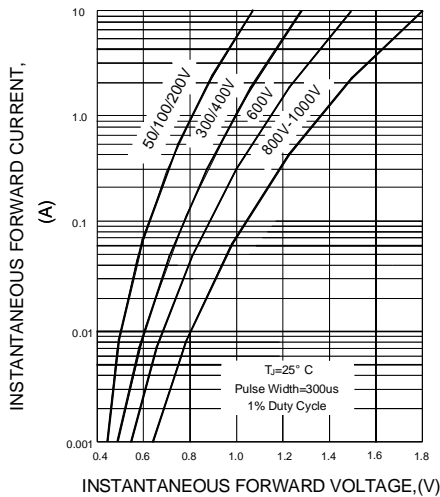


FIG.4-TYPICAL REVERSE CHARACTERISTICS

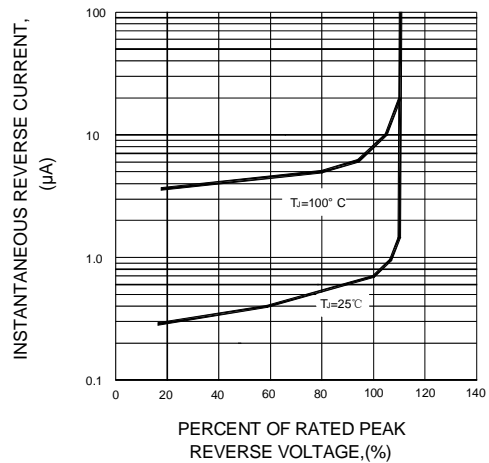


FIG.5-TYPICAL JUNCTION CAPACITANCE

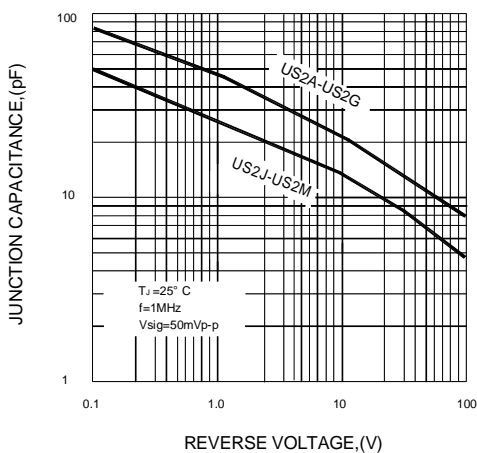
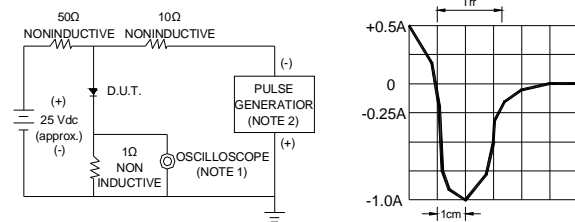


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR 50/100ns/cm