

US2A THRU US2M

SURFACE MOUNT HIGH EFFICIENCY RECTIFIER



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 /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

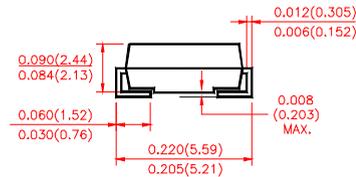
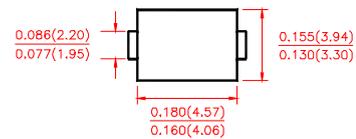
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

2.0 Ampere

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25 °C ambient temperature unless otherwise specified.

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 $T_L=105$ (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	I_R	$T_A=25$ 5.0							A
		$T_A=125$ 100							
Maximum Reverse Recovery Time Test conditions $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$	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							°C/W
	$R_{\theta JL}$	17							
Operating Junction Temperature	T_J	(-55 to +150)							°C
Storage Tempetature Rang	T_{STG}	(-55 to +150)							°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.

RATING AND CHARACTERISTIC CURVES US2A THRU US2M

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

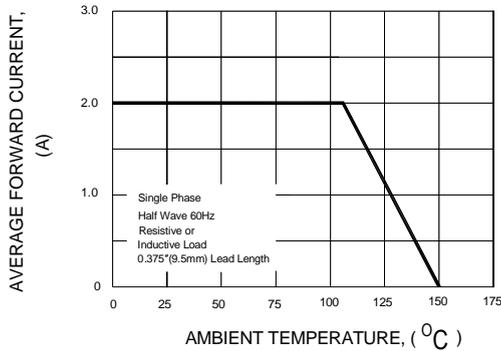


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

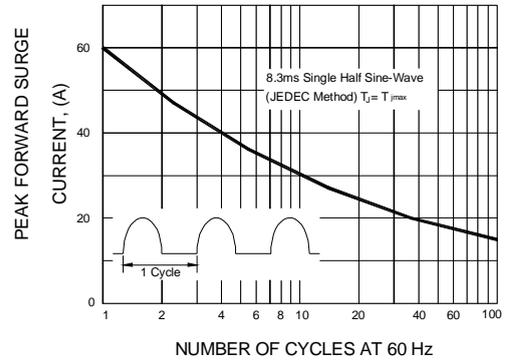


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

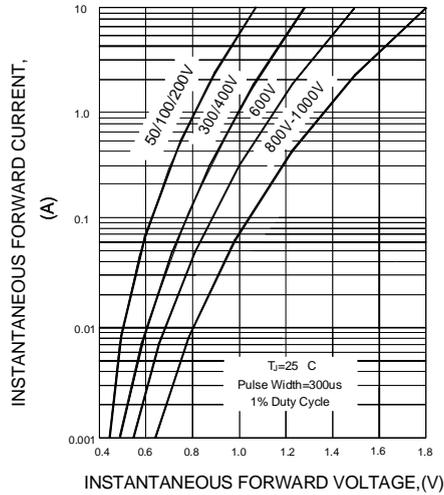


FIG.4-TYPICAL REVERSE CHARACTERISTICS

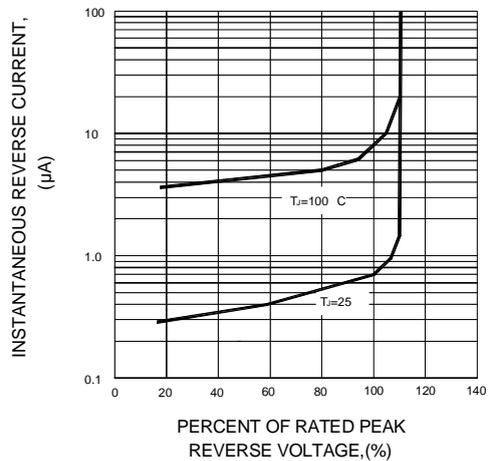


FIG.5-TYPICAL JUNCTION CAPACITANCE

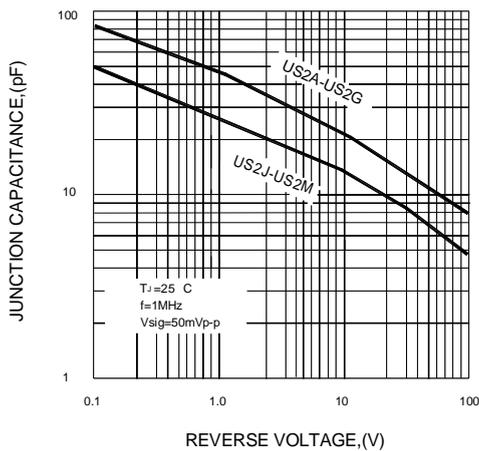
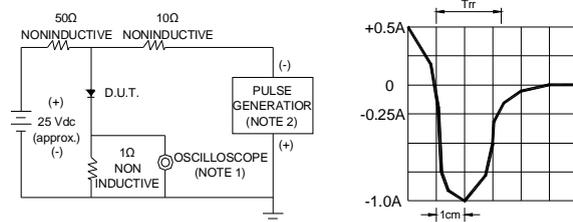


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR 50/100ns/cm