



TAYCHIPST

SURFACE MOUNT HIGH EFFICIENCY RECTIFIERS

US2A THRU US2M

50V-1000V 2.0A

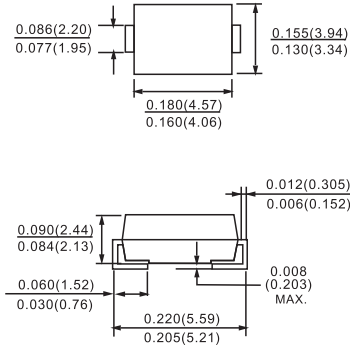
Features

- 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

DO-214AA(SMB)



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	US2A	US2B	US2D	US2G	US2J	US2K	US2M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	50							A
Typical thermal resistance	$R_{\theta JA}$	50							°C/W
Operating junction and storage temperature range	T_j, T_{STG}	-55 --- +150							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	US2A	US2B	US2D	US2G	US2J	US2K	US2M	Unit
Maximum forward voltage $I_F = 2.0A$	V_F	1.0			1.3	1.7			V
Maximum reverse current $T_A = 25^\circ C$ $T_A = 125^\circ C$	I_R	10 500							µA
MAX. Reverse Recovery Time $I_F = 0.5A$ $I_R = 1.0A$ $I_{RR} = 0.25A$	t_{rr}	50				75			nS
Type junction capacitance $V_R = 4.0V, f = 1MHz$	C_j	15							pF



Fig.1 TYPICAL FORWARD CHARACTERISTIC

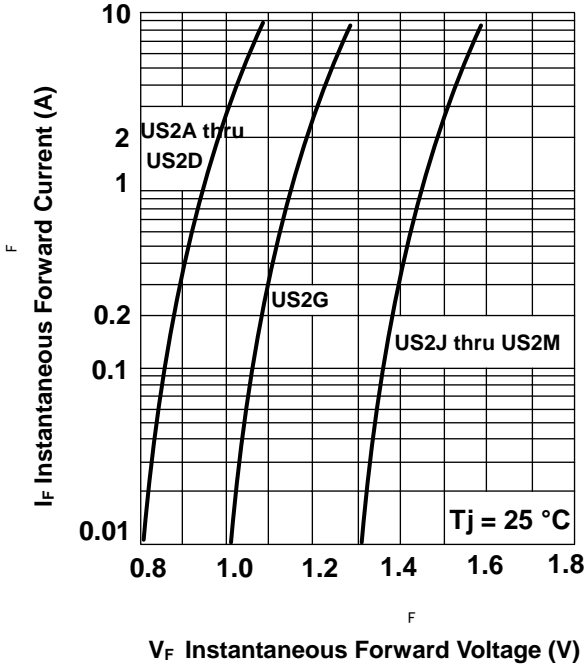


Fig.2 FORWARD CURRENT DERATING CURVE

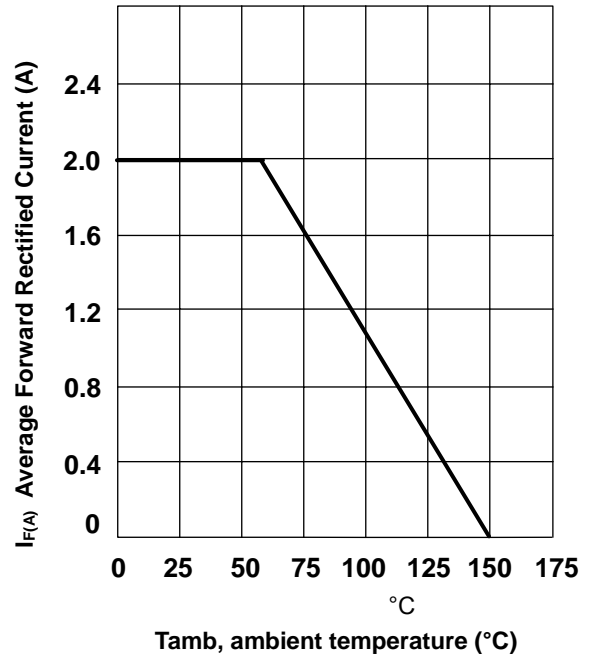


Fig.3 -TYPICAL REVERSE CHARACTERISTICS

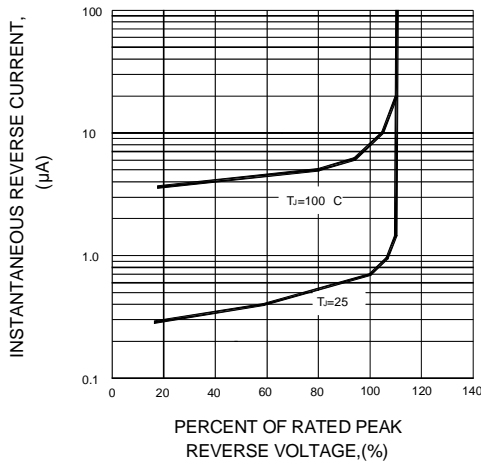


FIG.4-TYPICAL JUNCTION CAPACITANCE

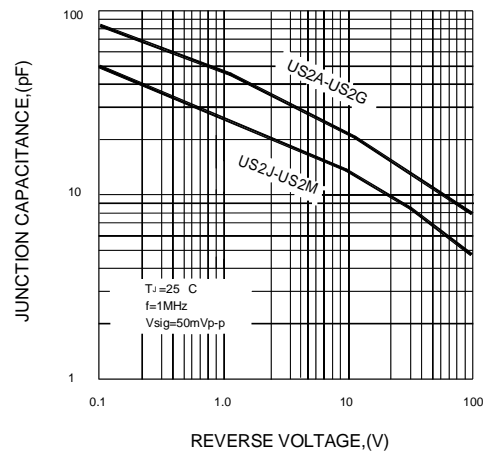
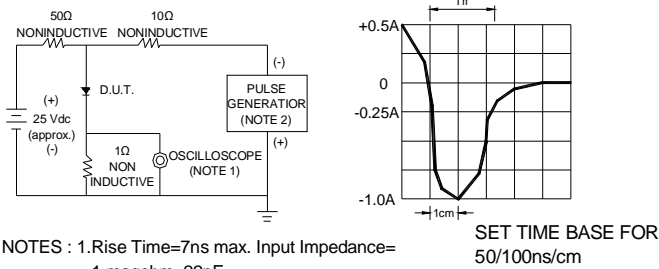


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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