

US2AGA THRU US2MGA

2.0AMPS. SURFACE MOUNT ULTRA FAST RECTIFIERS

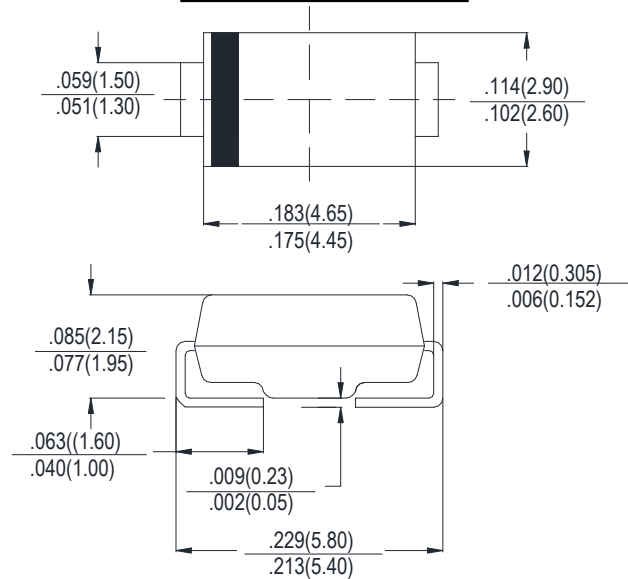
FEATURE

- . Low leakage
- . Low forward voltage drop
- . High current capability
- . High surge capability
- . High reliability
- . High temperature soldering guaranteed:
260°C/10 seconds at terminals.
- . For surface mounted application.

MECHANICAL DATA

- . Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- . Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Mounting position: any

SMA (DO-214AC)



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%

Type Number	SYM BOL	US2A GA	US2B GA	US2D GA	US2G GA	US2J GA	US2K GA	US2M GA	units
Maximum Recurrent 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 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50.0							A
Maximum Instantaneous forward Voltage at 2.0A DC	V_F	1.0			1.3	1.7			V
Maximum DC Reverse Current @T _A =25°C at rated DC blocking voltage @T _A =125°C	I_R	5.0 100.0							μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}	50				75			nS
Typical Junction Capacitance (Note 2)	C_J	15				10			pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	85							°C /W
	$R_{(JC)}$	30							
Storage Temperature	T_{STG}	-55 to +150							°C
Operation Junction Temperature	T_J	-55 to +150							°C

Note:

1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Measured on P.C.Board with $0.2 \times 0.2''$ ($5.0 \times 5.0\text{mm}$) Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES (US2AGA THRU US2MGA)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

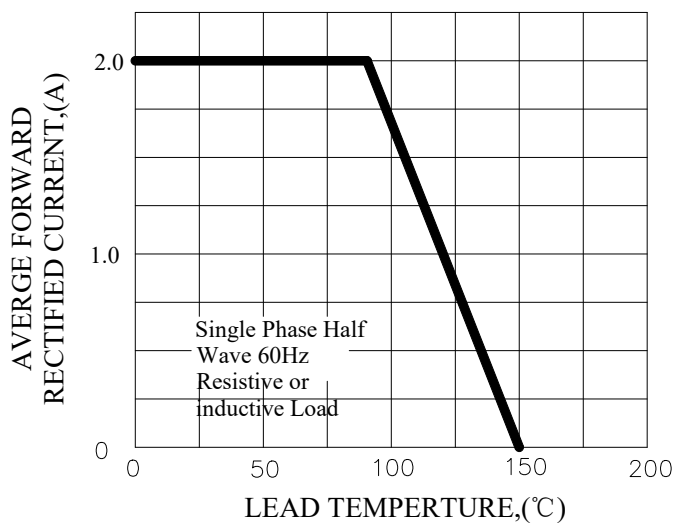


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

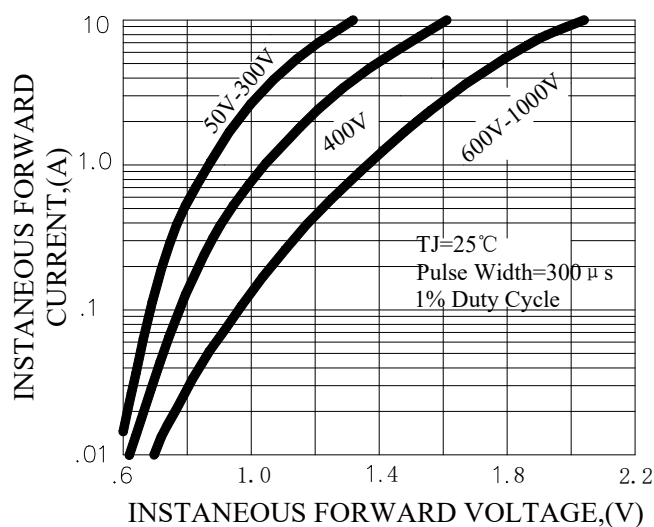


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

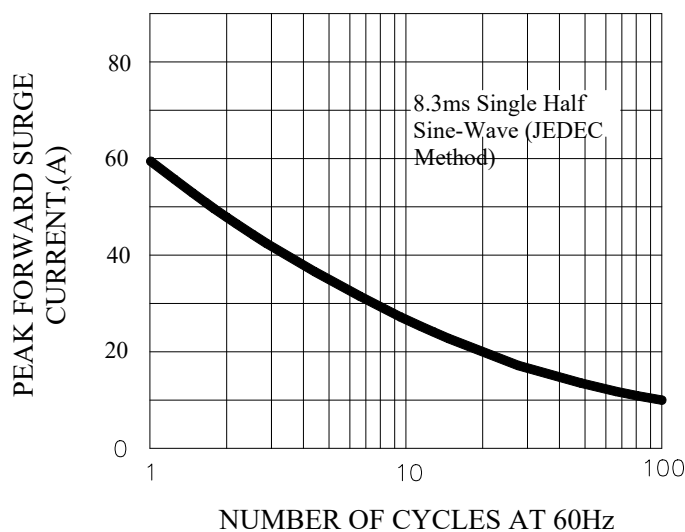


FIG.4-TYPICAL REVERSE CHARACTERISTICS

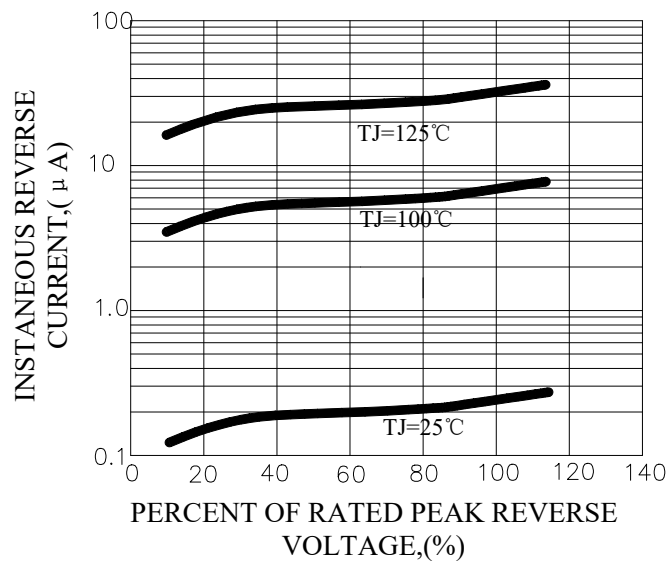
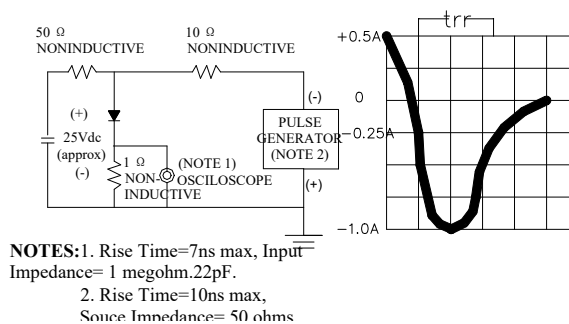
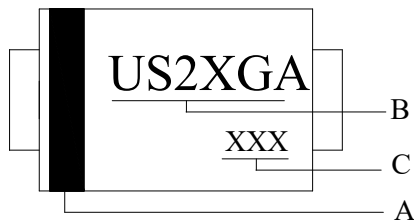


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



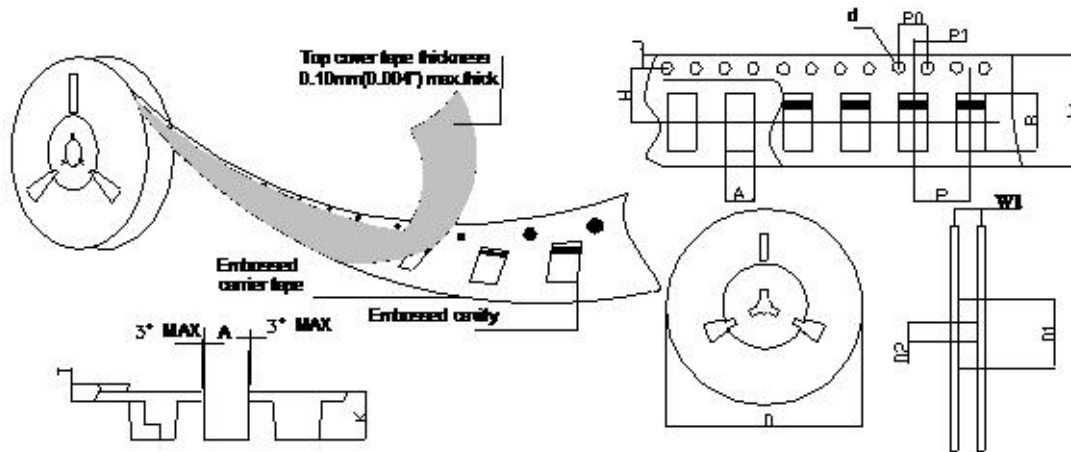
Marking and packaging illustration

1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product Name, X: A、B....M
C	Date Code

2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	DO-214AA	ITEM	SYM BOL	DO-214AA
Carrier width	A	3.81(0.150)Max	Carrier depth	K	2.45(0.965)Typ
Carrier length	B	5.41(0.213)Max	Punch hole pitch	P	8.00(0.315)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13.0)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(1.969)Min	Overall tape thickness	T	0.30(0.012)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.55(0.219)Typ			