

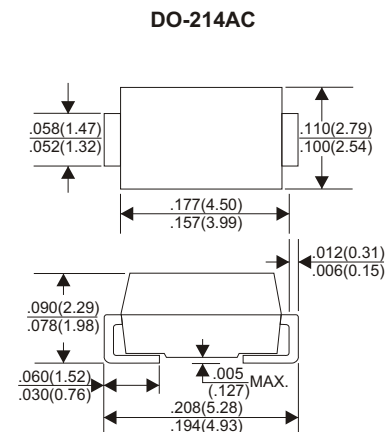
## 2.0 AMP SURFACE MOUNT ULTRA FAST RECTIFIERS

### Features:

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* High speed switching
- \* Both normal and Pb free product are available:
- \* Normal: 80~95%Sn, 5~20%Pb
- \* Pb free: 99 Sn above can meet Rohs environment substance directive request

### Mechanical Data:

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-750, method 2026 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.064 grams



Dimensions in inches and (millimeters)

## 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%.

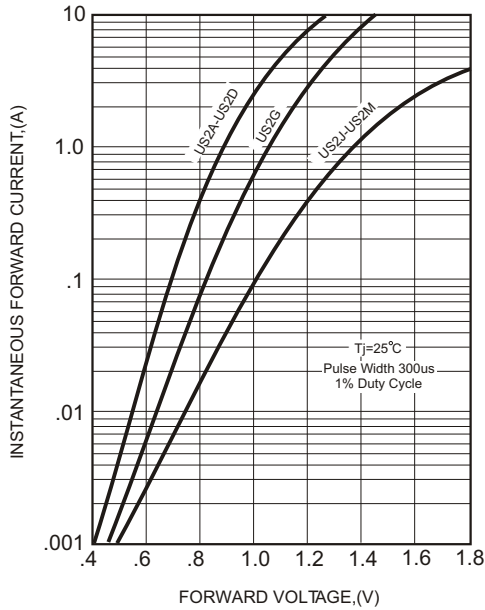
TYPE NUMBER	US2A	US2B	US2D	US2G	US2J	US2K	US2M	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	2.0							A
Peak Forward Surge 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		1.70			V
Maximum DC Reverse Current Ta=25°C	5.0							A
at Rated DC Blocking Voltage Ta=100°C	150							A
Maximum Reverse Recovery Time (Note 1)	50				75			nS
Typical Junction Capacitance (Note 2)	20							pF
Operating and Storage Temperature Range Tj, TSTG	-65 — +150							°C

**NOTES:**

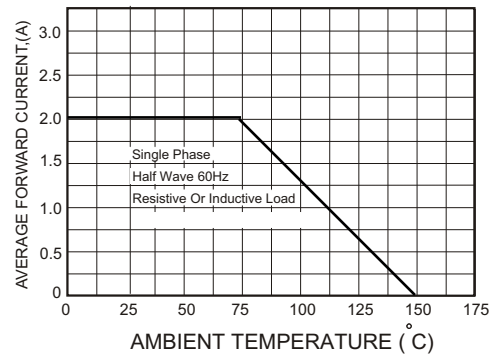
1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

**RATING AND CHARACTERISTIC CURVES (US2A THRU US2M)**

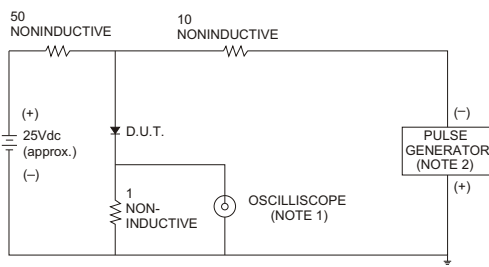
**FIG.1-TYPICAL FORWARD CHARACTERISTICS**



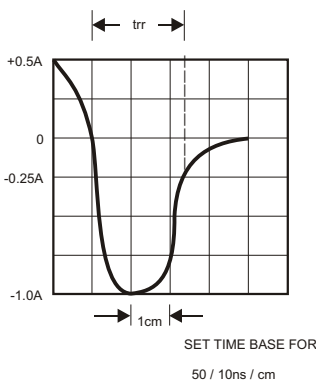
**FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE**



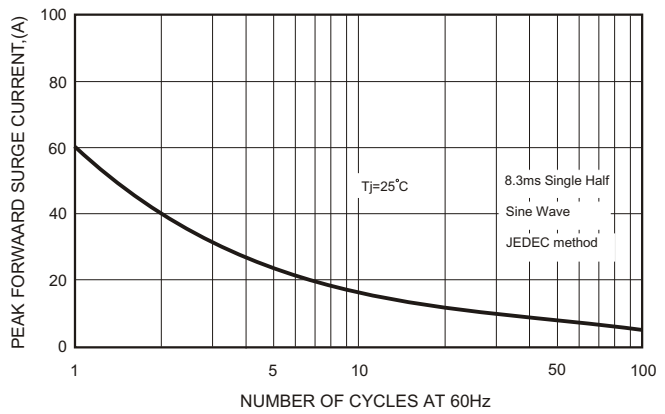
**FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



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**

