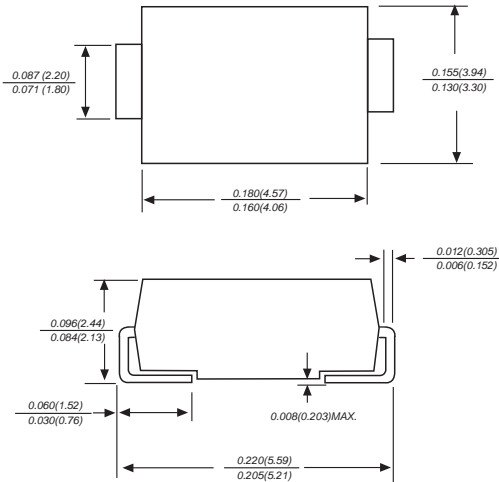




# US2A THRU US2M

**SURFACE MOUNT ULTRA FAST RECTIFIER**  
 Reverse Voltage - 50 to 1000 Volts Forward Current - 2.0 Amperes

## SMB/DO-214AA



## FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Ultra fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

## MECHANICAL DATA

**Case:** JEDEC DO-214AA molded plastic body  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.003 ounce, 0.093 grams

## 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 current derate by 20%.

MDD Catalog Number	SYMBOLS	US2A	US2B	US2D	US2G	US2J	US2K	US2M	UNITS
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 $T_L=75^\circ\text{C}$	$I_{(AV)}$	2.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	50.0							Amps
Maximum instantaneous forward voltage at 2.0A	$V_F$	1.0		1.4	1.7			Volts	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ\text{C}$		5.0			$T_A=125^\circ\text{C}$		$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	$t_{rr}$	50			75			ns	
Typical junction capacitance (NOTE 2)	$C_J$	28.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	20.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150							$^\circ\text{C}$

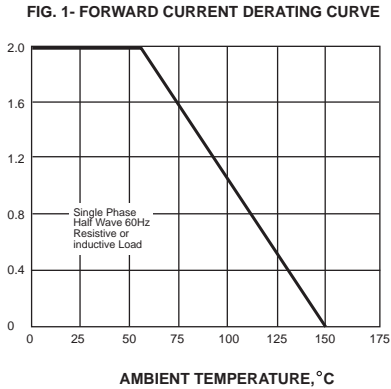
**Note:** 1. Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



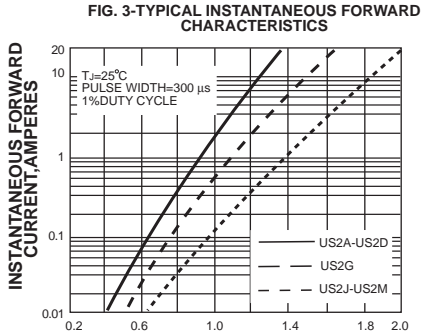
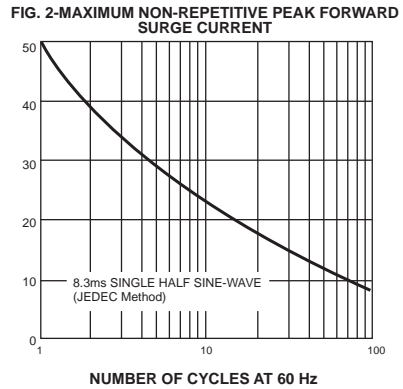
www.microdiode.com

# RATINGS AND CHARACTERISTIC CURVES US2A THRU US2M

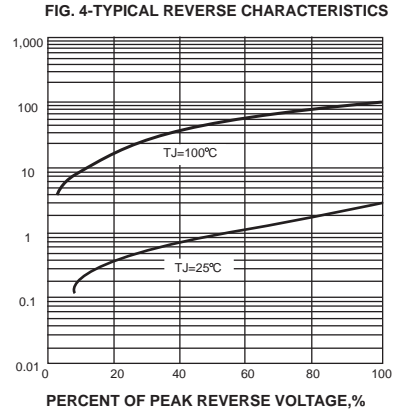
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES



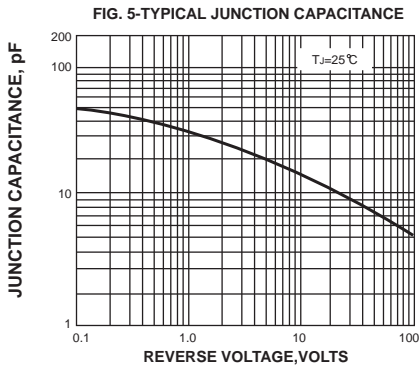
PEAK FORWARD SURGE CURRENT,  
AMPERES



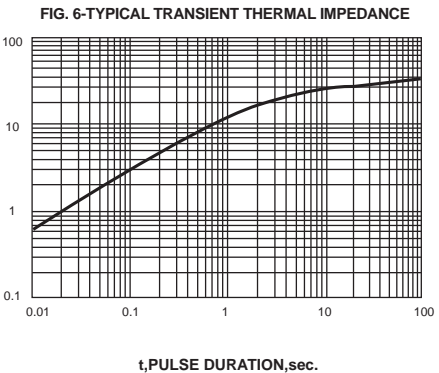
INSTANTANEOUS REVERSE CURRENT,  
MICROAMPERES



INSTANTANEOUS FORWARD VOLTAGE,  
VOLTS



TRANSIENT THERMAL IMPEDANCE,  
°C/W



The cruve graph is for reference only, can't be the basis for judgment(曲线图仅供参考)!

