

# US1AD THRU US1MD

## SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage – 50 to 1000 V

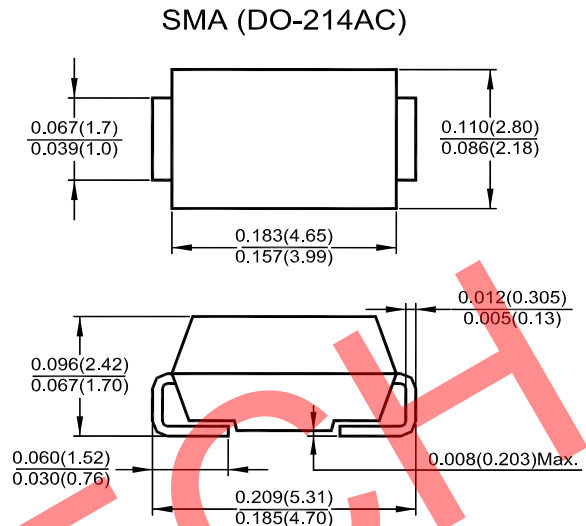
Forward Current – 1 A

### Features

- For surface mount applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0

### Mechanical Data

- **Case:** SMA (DO-214AC) molded plastic
- **Terminals:** Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
- **Polarity:** Color band denotes cathode end



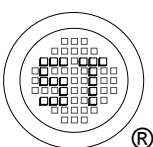
Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20 %.

Parameter	Symbols	US1AD	US1BD	US1DD	US1GD	US1JD	US1KD	US1MD	Units	
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 at $T_L = 100\text{ }^\circ\text{C}$	$I_{F(AV)}$	1							A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A	
Maximum Forward Voltage at 1 A	$V_F$	1		1.4		1.7			V	
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$	
Typical Junction Capacitance at 4 V, 1 MHz	$C_j$	17							pF	
Maximum Reverse Recovery Time at $I_F = 0.5\text{ A}$ , $I_R = 1\text{ A}$ , $I_{rr} = 0.25\text{ A}$	$t_{rr}$	50				75				ns
Typical Thermal Resistance <sup>1)</sup>	$R_{\theta JA}$	50							$^\circ\text{C/W}$	
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 55 to + 150							$^\circ\text{C}$	

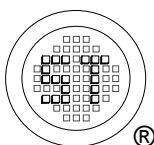
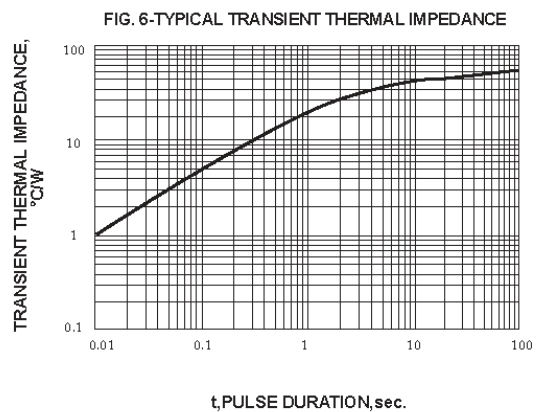
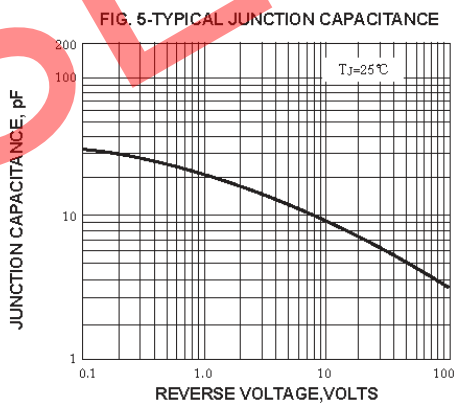
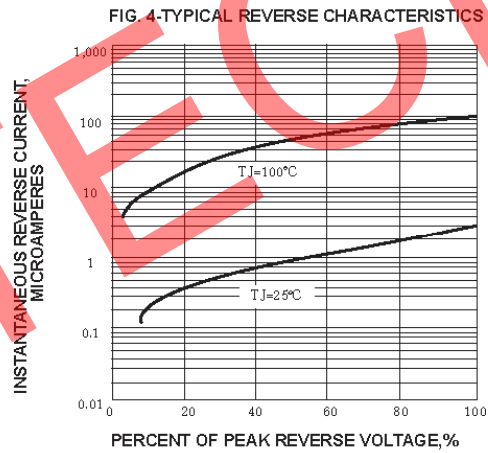
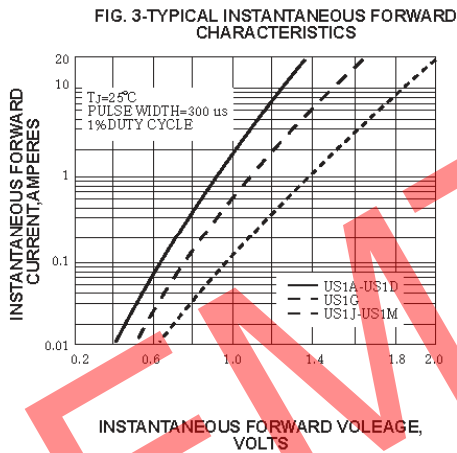
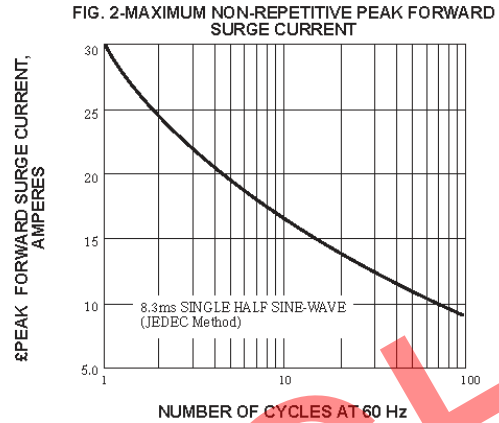
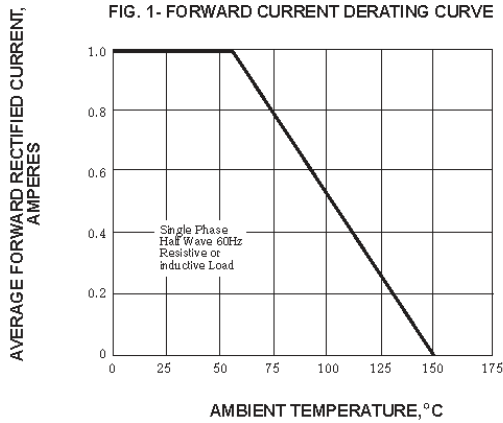
<sup>1)</sup> Mounted on P.C.B. with 0.2 X 0.2" (5 X 5 mm) copper pad areas.



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