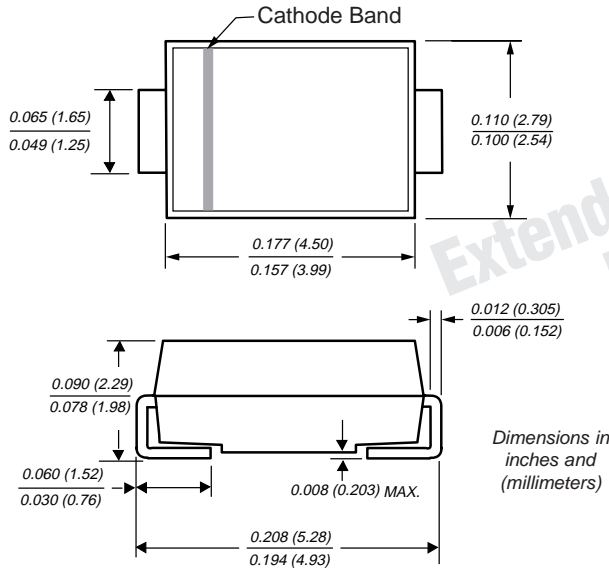




## Surface Mount Ultrafast Rectifiers

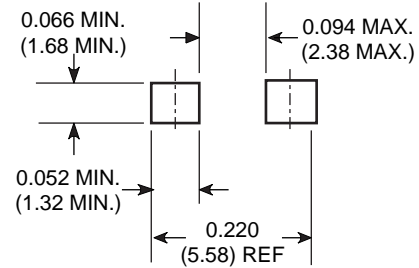
DO-214AC (SMA)

Reverse Voltage 50 to 1000V  
Forward Current 1.0A



Dimensions in inches and (millimeters)

### Mounting Pad Layout



### Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- For surface mount applications
- Glass passivated chip junctions
- Low profile package
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Low forward voltage, low power loss
- Built-in strain relief, ideal for automated placement
- High temperature soldering guaranteed: 250°C/10 seconds on terminals

### Mechanical Data

**Case:** JEDEC DO-214AC molded plastic body over passivated chip

**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Weight:** 0.002 ounce, 0.064 gram

### Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Units
Device Marking Code		UA	UB	UD	UG	UJ	UK	UM	
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 $T_L = 110^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Maximum thermal resistance <sup>(1)</sup>	$R_{\theta JA}$ $R_{\theta JL}$						75 27	°C/W	
Operating and storage temperature range	$T_J, T_{STG}$	-55 to +150							°C

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 1.0A	$V_F$	1.0				1.7		V
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	$I_R$	10 50						$\mu\text{A}$
Maximum reverse recovery time at $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{rr} = 0.25\text{A}$	$t_{rr}$	50				75		ns
Typical junction capacitance at 4.0V, 1MHz	$C_J$	15				10		pF

**Notes:** (1) P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad area

# US1A thru US1M

Vishay Semiconductors  
formerly General Semiconductor



## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

