

US1A THRU US1K

ULTRAFAST RECTIFIER

VOLTAGE: 50-800V

CURRENT: 1.0A

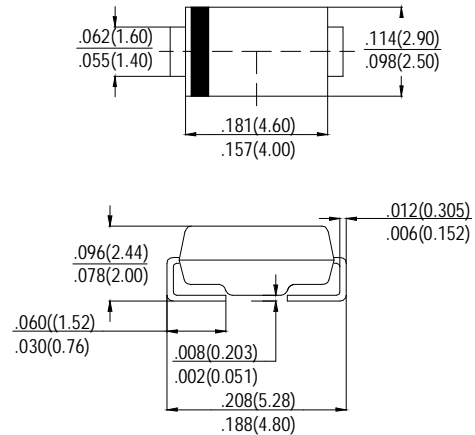
FEATURES

- Low power loss, high efficiency
- Low leakage
- Low forward voltage
- High current capability
- High speed switching
- High surge capability
- High reliability

MECHANICAL DATA

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 0.064 grams

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%.

	SYMBOL	US1A	US1B	US1D	US1G	US1J	US1K	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	V
Maximum Average Forward rectified Current at $T_A=50^\circ\text{C}$	I_o	1.0						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	30						A
Maximum Instantaneous forward Voltage at 1.0A DC	V_F	1.0		1.3		1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$	I_R	5.0						μA
Maximum Full Load Reverse Current Full Cycle Average, .375" (9.5mm) lead length at $T_L=75^\circ\text{C}$		100						
Maximum Reverse Recovery Time (Note 1)	t_{rr}	50			75			nS
Typical Junction Capacitance (Note 2)	C_J	15			12			pF

Notes: 1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0 volts