



DATA SHEET

SEMICONDUCTOR

U1A Thru U1M

Surface Mount Ultrafast Rectifiers



Reverse Voltage 50 to 1000V
Forward Current 1.0A

SMF Unit: inch (mm)

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

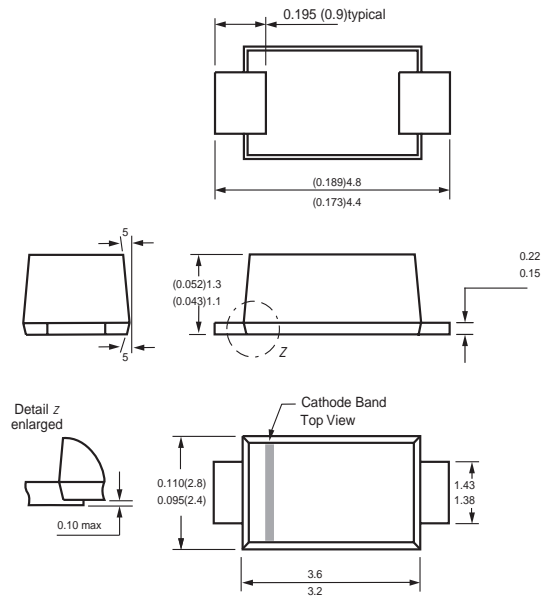
Mechanical Data

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	U1A	U1B	U1D	U1G	U1J	U1K	U1M	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 = 110°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 ⁽¹⁾	R _{θJA} R _{θJL}	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	I _R	10				50				μA
Maximum reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	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

RATING AND CHARACTERISTIC CURVES

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