



# US11FL THRU US17FL

## SURFACE MOUNT ULTRA FAST RECTIFIER

Reverse Voltage - 50 to 1000 Volts      Forward Current - 1.0 Ampere

### FEATURES

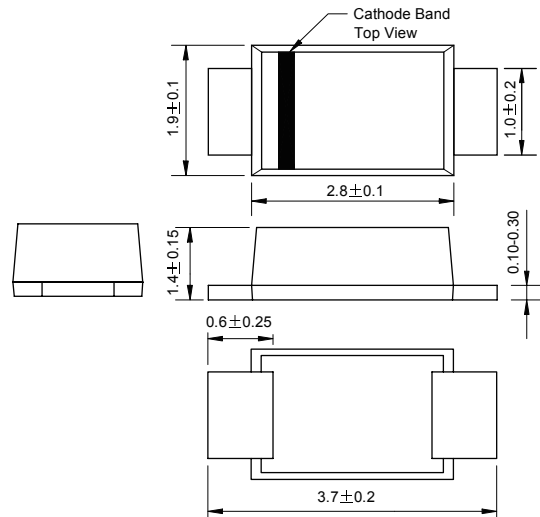
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering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

### MECHANICAL DATA

- Case: SOD-123FL, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.017 grams



### SOD-123FL



Dimensions in inches and (millimeters)

### 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%.

Characteristic	Symbol	US11FL	US12FL	US13FL	US14FL	US15FL	US16FL	US17FL	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	VR(RMS)	35	70	140	280	420	560	700	V
Average Rectified Output Current @TL = 75°C	IO	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	IFSM	30							A
Forward Voltage @IF = 1.0A	VFM	1.0			1.3	1.7			V
Peak Reverse Current @TA = 25°C At Rated DC Blocking Voltage @TA = 125°C	IRM	5.0 200							µA
Reverse Recovery Time (Note 1)	trr	50				75			nS
Typical Junction Capacitance (Note 2)	CJ	10							pF
Thermal Resistance Junction to Ambient (Note 3) Thermal Resistance Junction to Ambient (Note 4) Thermal Resistance Junction to Lead (Note 3) Thermal Resistance Junction to Lead (Note 4)	RθJA RθJA RθJL RθJL	325 82 26 21							°C/W
Operating and Storage Temperature Range	TJ, TSTG	-55 to +150							°C

Note: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
3. Mounted on FR-4 P.C. Board with minimum recommended pad size.  
4. Mounted on FR-4 P.C. Board with 700mm<sup>2</sup> copper pads.



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## RATINGS AND CHARACTERISTIC CURVES

