

# UF3A THRU UF3K

## SURFACE MOUNT ULTRAFAST RECTIFIER

VOLTAGE - 50 to 800 Volts

CURRENT - 3.0 Amperes



### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- High temperature soldering:  
260  $\mu$ J/10 seconds at terminals

### MECHANICAL DATA

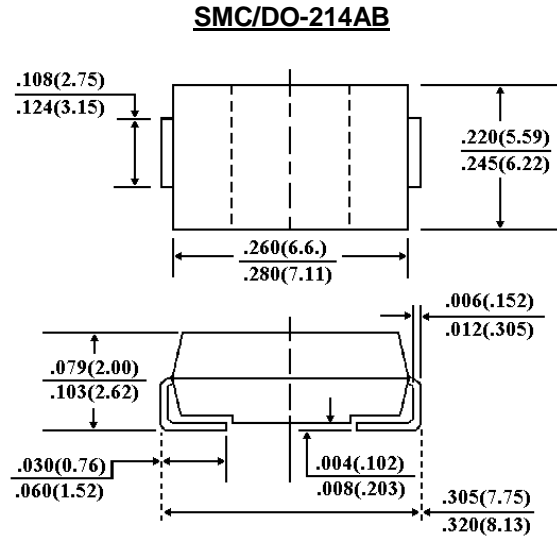
Case: JEDEC DO-214AB molded plastic

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

Polarity: Indicated by cathode band

Standard packaging: 16mm tape (EIA-481)

Weight: 0.007 ounce, 0.21 gram



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $\mu$ J ambient temperature unless otherwise specified.

Resistive or inductive load. For capacitive load, derate current by 20%.

	SYMBOLS	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current, at $T_J=75 \mu$ J	$I_{(AV)}$	3.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) $T_A=55 \mu$ J	$I_{FSM}$	100.0						Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.0		1.4		1.7		Volts
Maximum DC Reverse Current $T_A=25 \text{ }^\circ\text{C}$ At Rated DC Blocking Voltage $T_A=100 \text{ }^\circ\text{C}$	$I_R$	10.0 300						$\mu$ A
Maximum Reverse Recovery Time (Note 1) $T_J=25 \text{ }^\circ\text{C}$	$T_{RR}$	50.0			100.0			nS
Typical Junction capacitance (Note 2)	$C_J$	75.0			63			$\mu$ F
Maximum Thermal Resistance (Note 3)	$R_{\mu KJL}$	15						$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-50 to +150						$\mu$ J

### NOTES:

1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$
2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3.  $8.0\text{mm}^2$  (.013mm thick) land areas

RATING AND CHARACTERISTIC CURVES

UF3A THRU UF3K

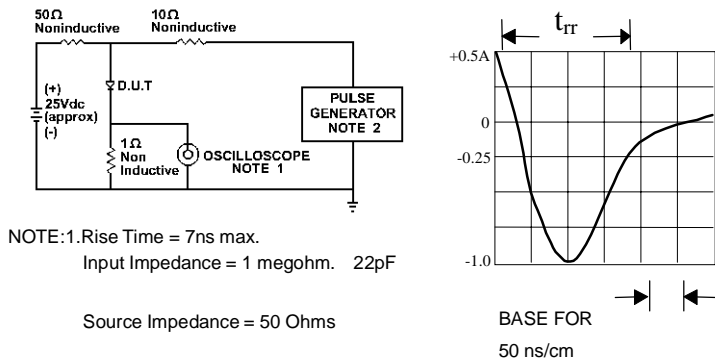


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

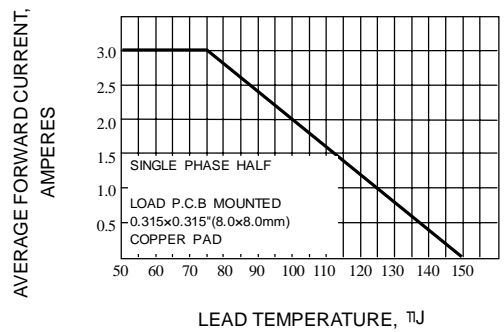


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

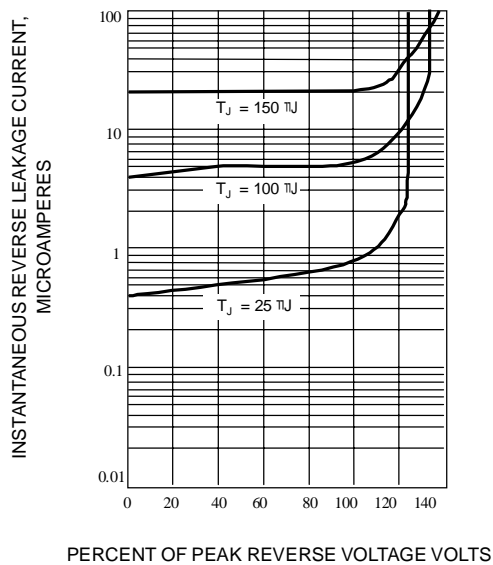


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

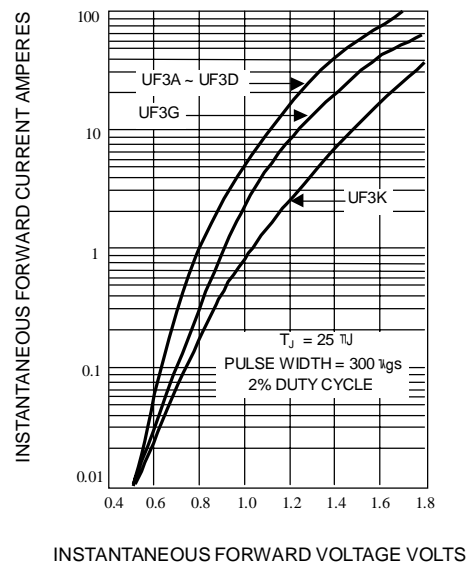


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

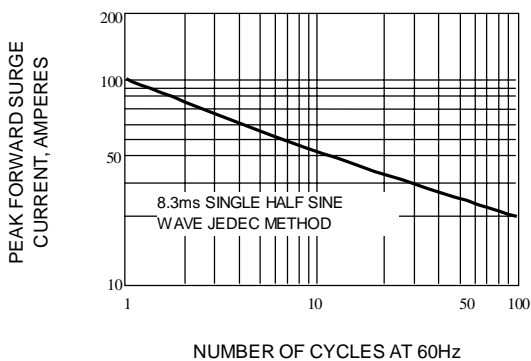


Fig. 5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

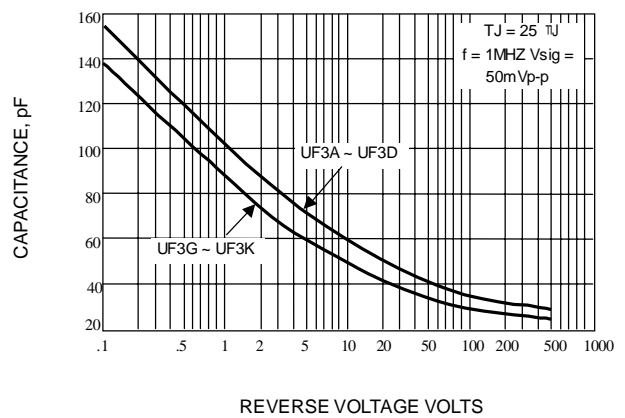


Fig. 6-TYPICAL JUNCTION CAPACITANCE