



# UF1A THRU UF1K

SURFACE MOUNT ULTRAFAST RECTIFIER  
VOLTAGE - 50 to 800 Volts CURRENT - 1.0 Ampere

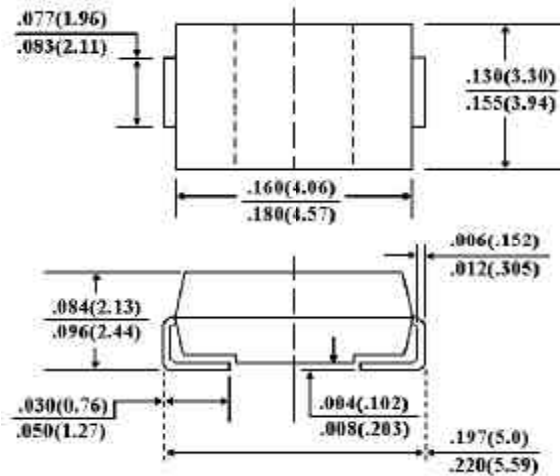
## FEATURES

- 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-0
- Glass passivated junction
- High temperature soldering:  
260 °C/10 seconds at terminals

## MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.003 ounce, 0.093 gram

## SMB/DO-214AA



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25 °C ambient temperature unless otherwise specified.
- Resistive or inductive load.
- For capacitive load, derate current by 20%.

	SYMBOLS	UF1A	UF1B	UF1D	UF1G	UF1J	UF1K	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 $T_L=100$ °C	$I_{(AV)}$	1.0						Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) $T_A=55$ °C	$I_{FSM}$	30.0						Amps
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.0		1.4		1.7		Volts
Maximum DC Reverse Current $T_A=25$ °C	$I_R$	10.0						µgA
At Rated DC Blocking Voltage $T_A=100$ °C		100						
Maximum Reverse Recovery Time (Note 1) $T_J=25$ °C	$T_{RR}$	50.0				100.0		nS
Typical Junction capacitance (Note 2)	$C_J$	17.0						pF
Maximum Thermal Resistance (Note 3)	$R_{\theta KJL}$	30						°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-50 to +150						°C

## NOTES:

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

RATING AND CHARACTERISTIC CURVES

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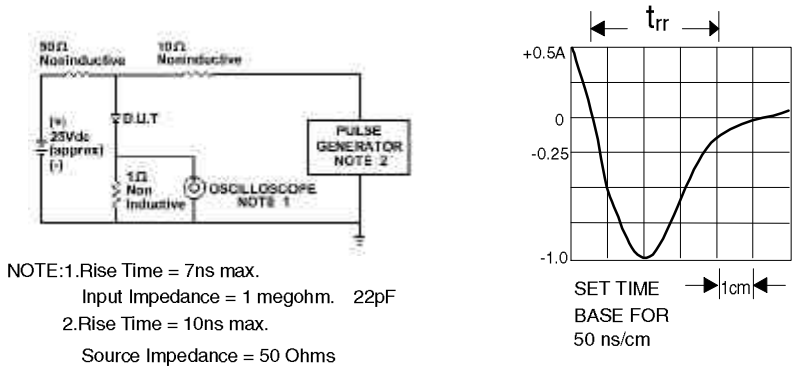


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

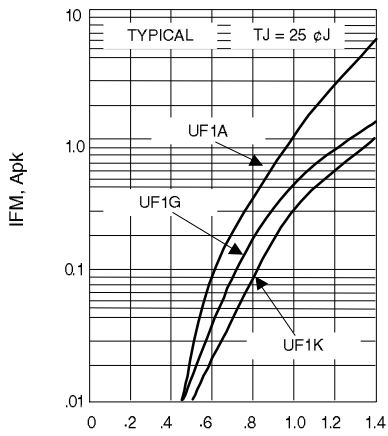


Fig. 2-FORWARD CHARACTERISTICS

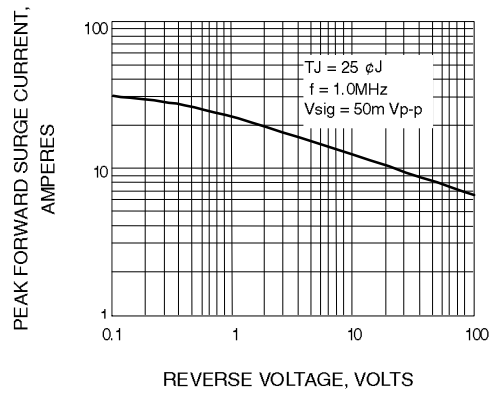


Fig. 3- TYPICAL JUNCTION CAPACITANCE

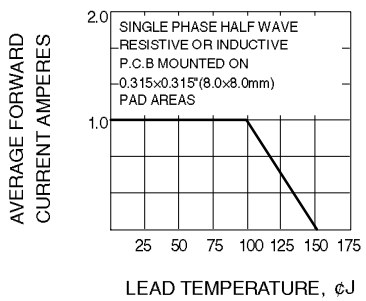


Fig. 4- FORWARD CURRENT DERATING CURVE

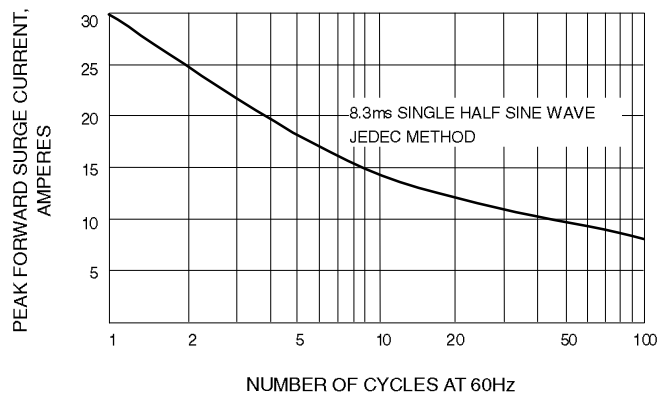


Fig. 5-PEAK FORWARD SURGE CURRENT