

SURFACE MOUNT ULTRAFAST RECTIFIER

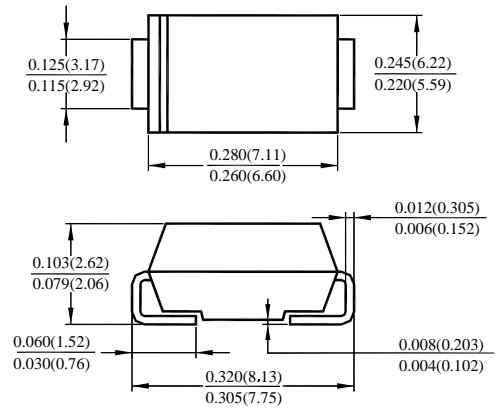
FEATURES

- 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

MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band

UF3A---UF3K



Dimensions in inches and (millimeters)

DO-214AB (SMC)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	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 Current .375"(9.5mm) lead length at T _L =90°C	I _{AV}	3.0						A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I _{FSM}	100						A
Maximum Forward Voltage at 2.0A	V _F	1.0		1.4		1.7		V
Maximum DC Reverse Current at T _A =25°C Rated DC Blocking Voltage T _A =100°C	I _R	10.0 200						uA
Typical Junction capacitance (Note 2)	C _J	28						pF
Typical Thermal Resistance(Note 3)	R _{θJL}	20						°C / W
Maximum Reverse Recovery Time (Note 1)	T _{RR}	50				100		ns
Operating Junction and Storage Temperature Range	T _J ,T _{STG}	-50 TO +150						°C

- 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 V_r = 4.0 volts.
 3. 8.0 mm² (.013mm thick) land areas.

UF3A---UF3K Typical Characteristics

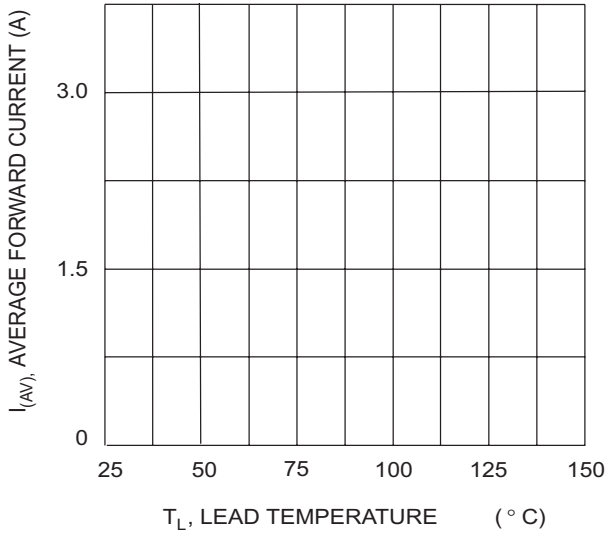


Fig. 1 Forward Current Derating Curve

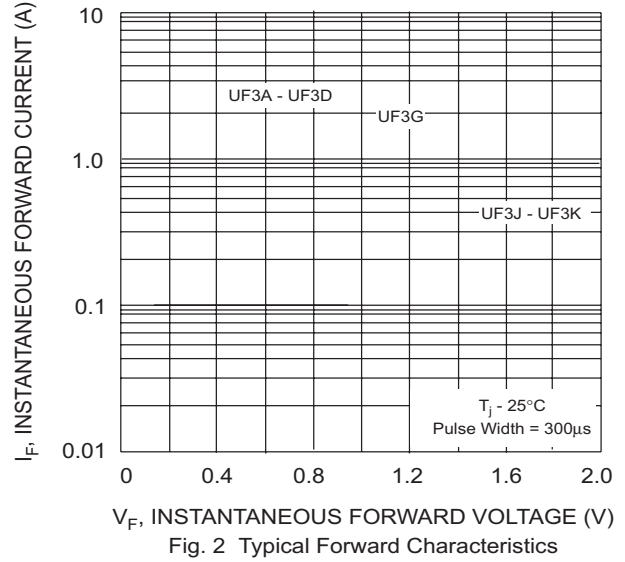


Fig. 2 Typical Forward Characteristics

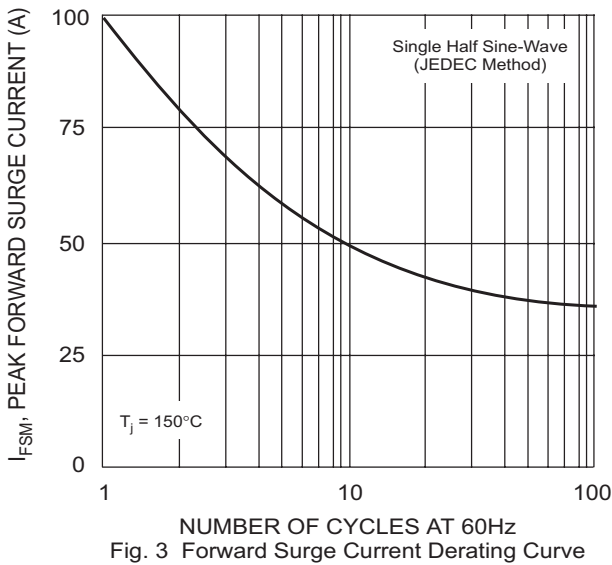


Fig. 3 Forward Surge Current Derating Curve

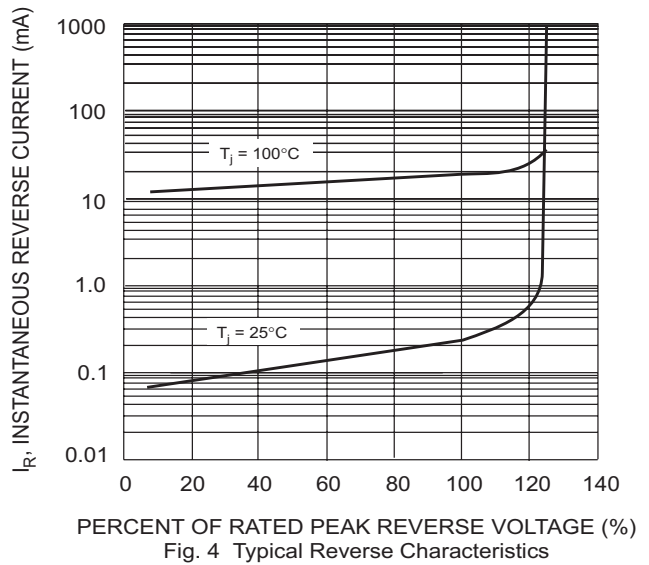
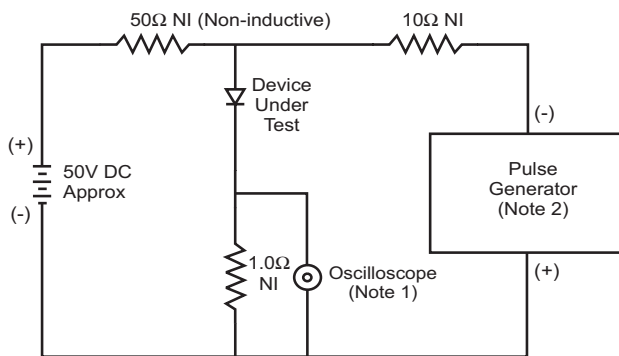
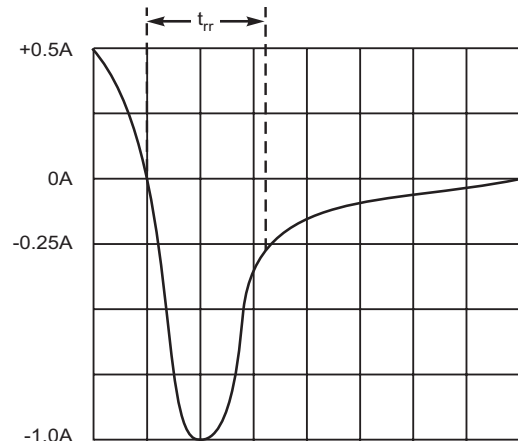


Fig. 4 Typical Reverse Characteristics



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit