



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

UF3A  
THRU  
UF3K

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT ULTRA FAST RECTIFIER**

**VOLTAGE RANGE - 50 to 800 Volts**

**CURRENT - 3.0 Amperes**

**FEATURES**

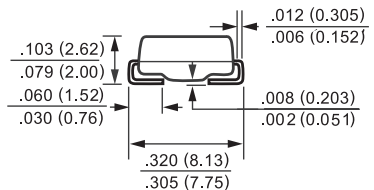
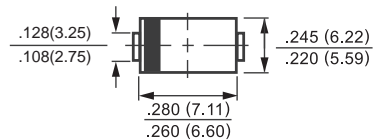
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Glass passivated junction

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.24 gram



SMC ( DO-214AB )



Dimensions in inches and (millimeters)

**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%.

	SYMBOL	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	Volts
Maximum DC Blocking Voltage	Vdc	50	100	200	400	600	800	Volts
Maximum Average Forward Rectified Current TA = 75°C	Io	3.0						Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	100						Amps
Maximum Forward Voltage at 3.0A DC	VF	1.0		1.4	1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	10						uAmps
	@ TA = 125°C	300						
Maximum Reverse Recovery Time (Note 3)	trr	50						nSec
Typical Thermal Resistance (Note 2)	RθJL	10						°C/W
Typical Junction Capacitance (Note 1)	Cj	60						pF
Operating and Storage Temperature Range	Tj, TSTG	-65 to + 175						°C

- NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC  
 2. Thermal Resistance (Junction to Ambient), 0.2x0.2in<sup>2</sup> (5X5mm<sup>2</sup>)copper pads to each terminal.  
 3. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.

# RATING AND CHARACTERISTIC CURVES ( UF3A THRU UF3K )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

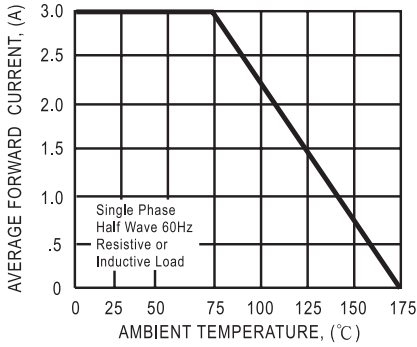


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

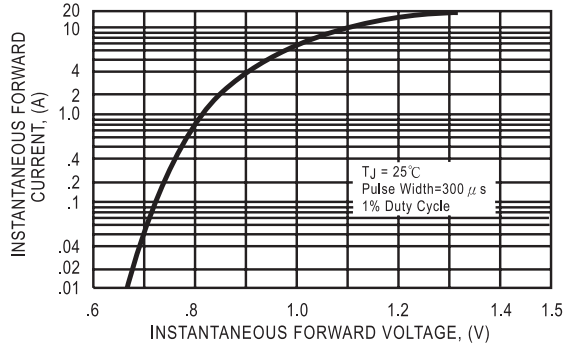


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

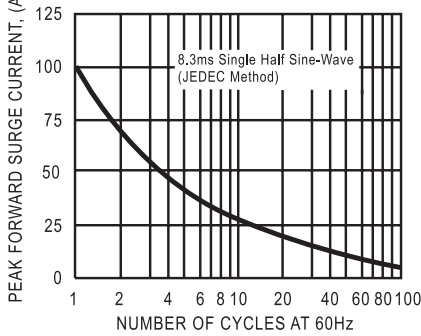


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

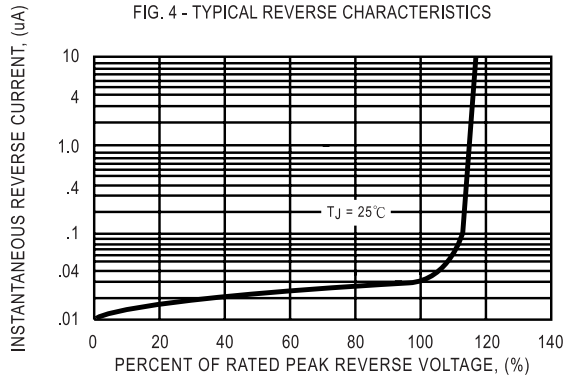
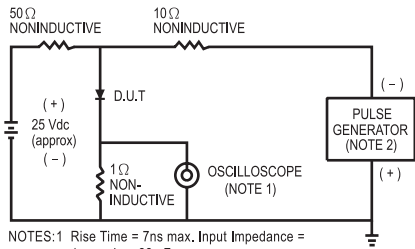


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm, 22 pF.  
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

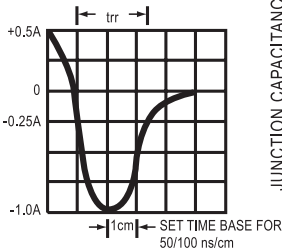
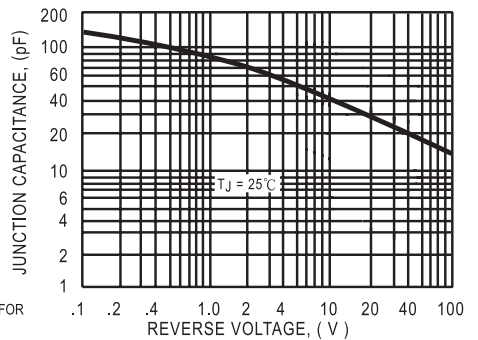


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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