



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

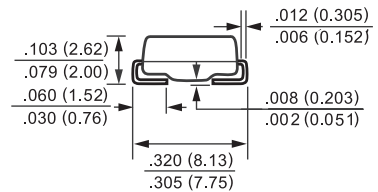
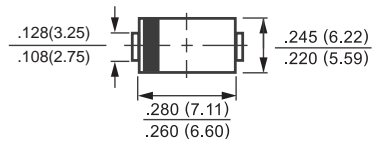
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.24 gram

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%.



SMC (DO-214AB)



Dimensions in inches and (millimeters)

	SYMBOL	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 T _A = 75°C	I _O	3.0						Amps
Peak Forward Surge Current I _{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100						Amps
Maximum Forward Voltage at 3.0A DC	V _F	1.0		1.4	1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T _A = 25°C	10						uAmps
	@ T _A = 125°C	300						
Maximum Reverse Recovery Time (Note 3)	t _{rr}	50						nSec
Typical Thermal Resistance (Note 2)	R _{θJL}	10						°C/W
Typical Junction Capacitance (Note 1)	C _J	60						pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 175						°C

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
 2. Thermal Resistance (Junction to Ambient), 0.2x0.2in² (5X5mm²)copper pads to each terminal.
 3. Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

RATING AND CHARACTERISTIC CURVES (UF3A THRU UF3K)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

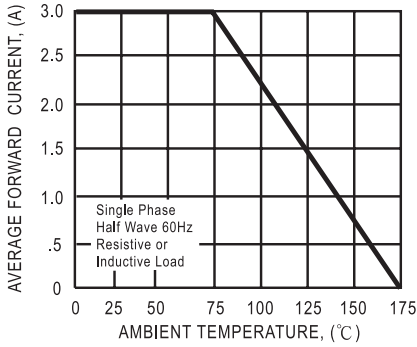


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

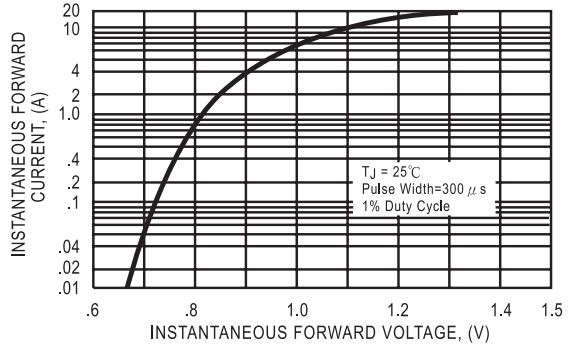


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

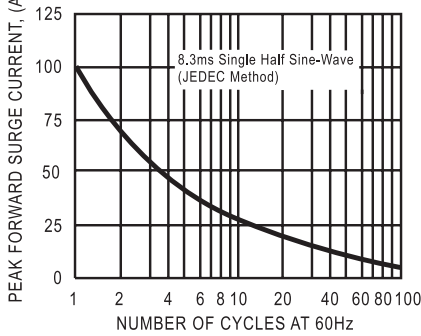


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

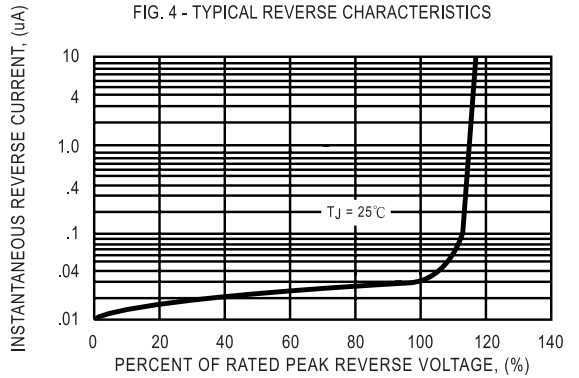
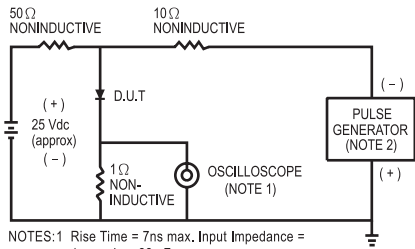


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

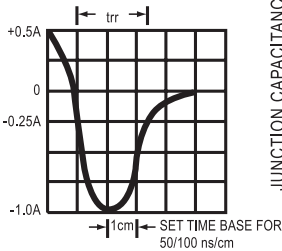
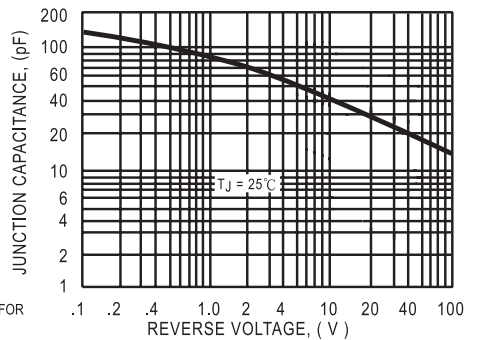


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



DC COMPONENTS CO., LTD.