DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

UF5400 THRU UF5408

TECHNICAL SPECIFICATIONS OF ULTRA FAST RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 3.0 Amperes

FEATURES

* Low power loss, high efficiency
* Low forward voltage drop
* High current capability
* Ultra fast switching
* High reliability
* High surge capability

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94-V0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 2.08 grams

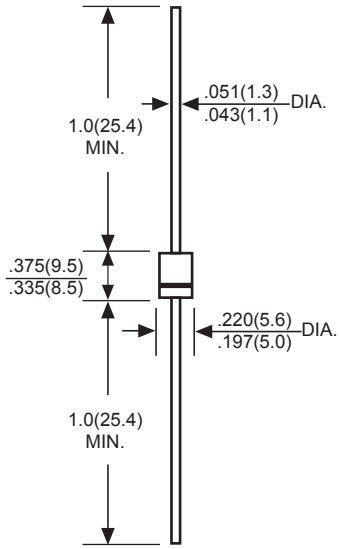
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

DO-27



Dimensions in inches and (millimeters)

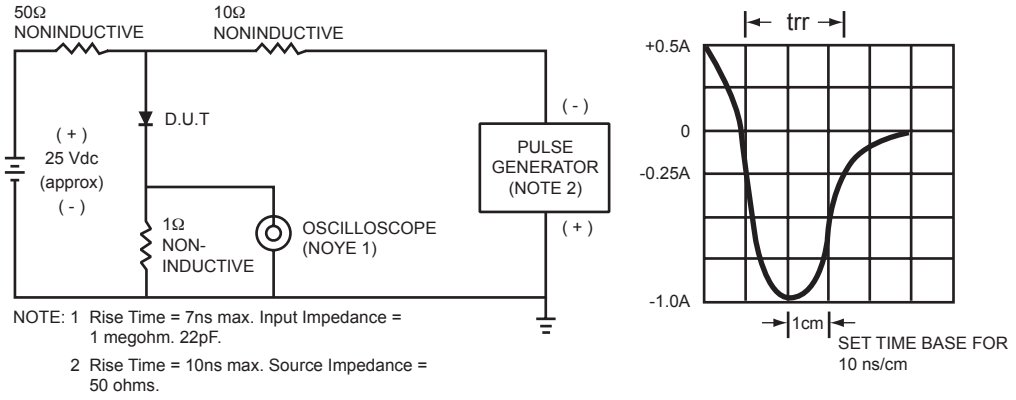
	SYMBOL	UF5400	UF5401	UF5402	UF5404	UF5406	UF5407	UF5408	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T_A = 50°C	I_O	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150							Amps
Maximum Instantaneous Forward Voltage at 3.0 A DC	V_F	1.0				1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ = 25°C	I_R	10							μAmps
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ = 125°C	I_R	150							μAmps
Maximum Reverse Recovery Time (Note 1)	trr	50				100			nSec
Typical Junction Capacitance (Note 2)	C_J	70				50			pF
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to +150							°C

Note 1 :Test conditions: I_F = 0.5A, I_R = 0.1A, I_{RR} = 0.25A.

Note 2 :Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (UF5400 THRU UF5408)

FIG. 1
TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2 Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG. 2
TYPICAL FORWARD
CURRENT DERATING CURVE

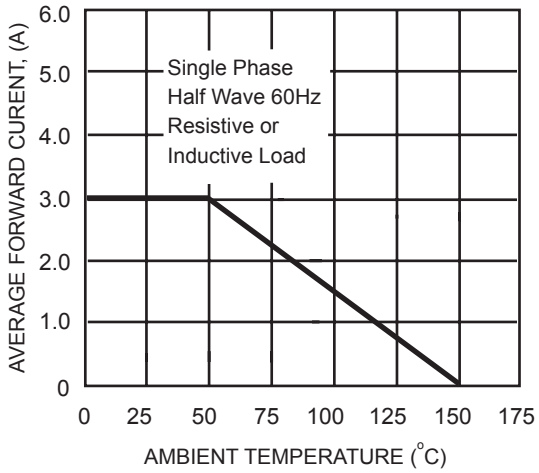


FIG. 3
TYPICAL REVERSE CHARACTERISTICS

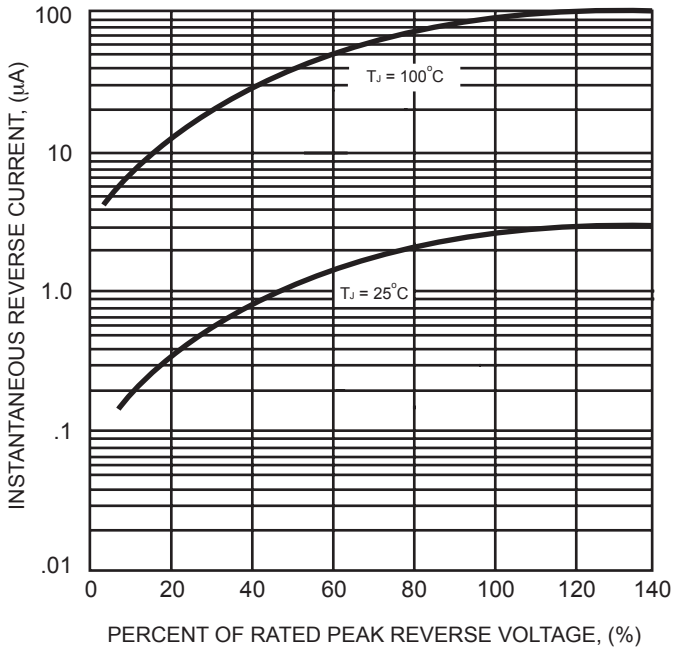


FIG. 4
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

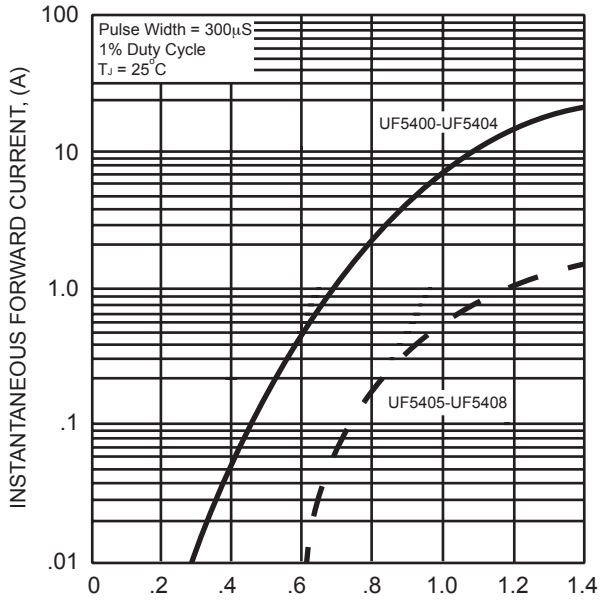
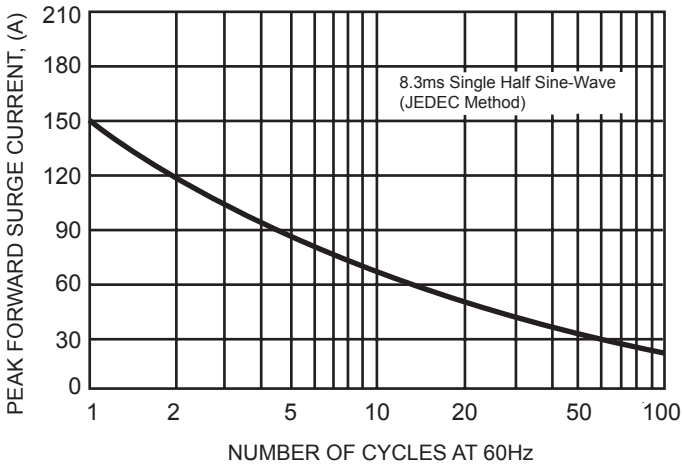


FIG. 5
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT



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