



ULTRA FAST RECTIFIER

UF5400 THRU UF5404

VOLTAGE RANGE
CURRENT

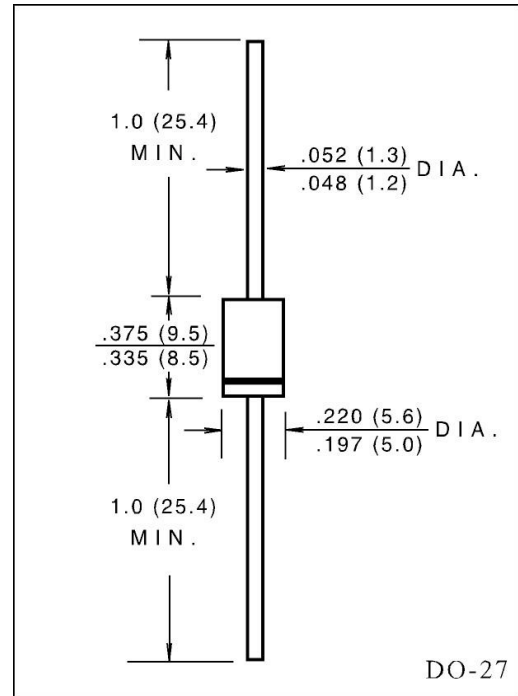
50 to 1000 Volts
3.0 Ampere

FEATURES

- Low cost construction
- Fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375" (9.5mm) lead length
at 5 lbs. (2.3kg) tension

MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V - 0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Lead: Plated axial lead, solderable per MIL - STD - 202E
method 208C
- Mounting position: Any
- Weight: 0.042 ounce, 1.19gram



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%

	SYMBOLS	UF 5400	UF 5401	UF 5402	UF 5403	UF 5404	UF 5405	UF 5406	UF 5407	UF 5408	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	500	600	800	1000	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) Lead length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	3.0									Amps
Peak Forward Surge Current 8.3ms single half sine - wave superimposed on rated load (JEDEC method)	I_{FSM}	150									Amps
Maximum Instantaneous Forward Voltage at 3.0 A	V_F	1.0			107					Volts	
Maximum DC Reverse Current at rate DC blocking voltage	$T_A = 25^\circ\text{C}$	10									μA
	$T_A = 125^\circ\text{C}$	50									
Maximum Reverse Recovery Time $T_j = 25^\circ\text{C}$ (Note 1)	t_{rr}	50			75					nS	
Typical Junction Capacitance (Note 2)	C_j	45									pF
Typical Thermal Resistance(Note 3)	$R_{\theta JA}$	20									$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	(-65 TO +150)									$^\circ\text{C}$

NOTES:

1. Test condition: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1 MHz and applied reverse of 4.0 volts.
3. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, P.C.B. mounted.

RATINGS AND CHARACTERISTIC CURVES UF5400 THRU UF5408

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

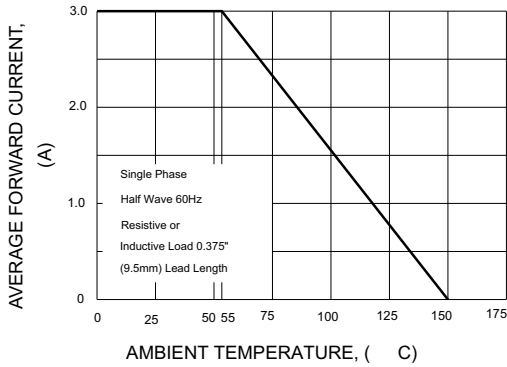


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

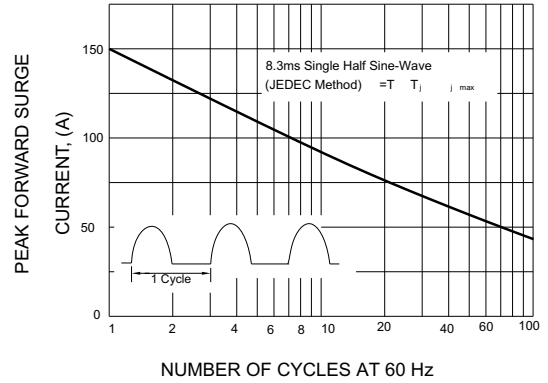


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

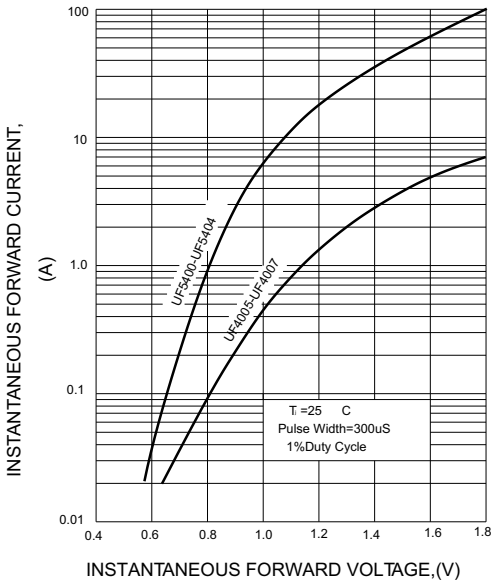


FIG.4-TYPICAL REVERSE CHARACTERISTICS

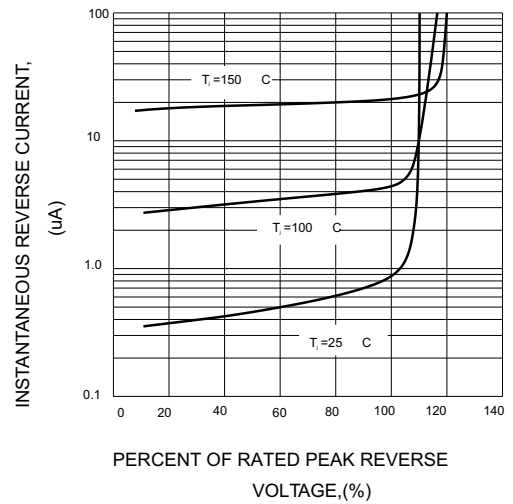


FIG.5-TYPICAL JUNCTION CAPACITANCE

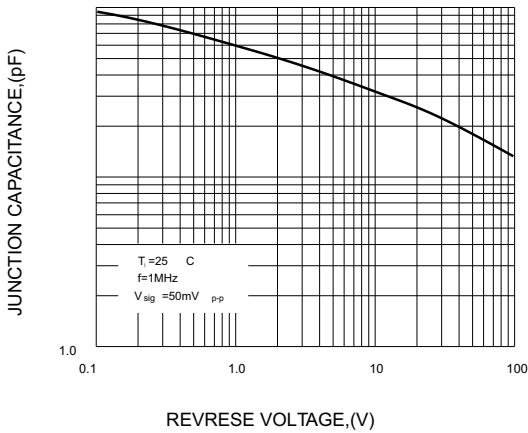


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

