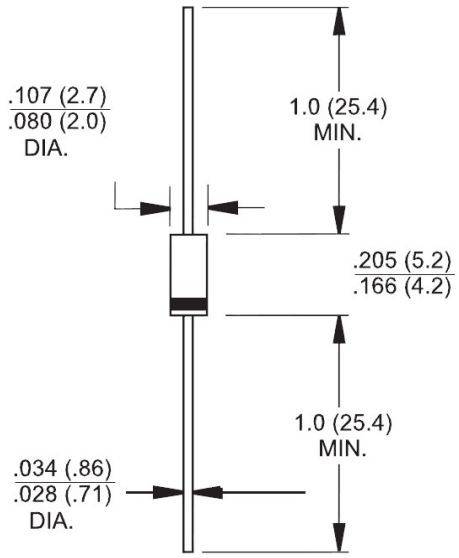
Ultra Fast Recovery Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

Features
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultrafast recovery time for high efficiency
- Excellent high temperature switching
- Soft recovery characteristics
- Glass passivated junction

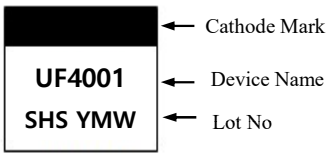
Mechanical Data
- Case : DO-41 Molded plastic
- Epoxy : UL 94V-0 rate flame retardant
- Lead : Axial leads, solderable per MIL-STD-750, method 2026 guaranteed
- Polarity : Color band denotes cathode end
- High temperature soldering guaranteed : 260℃/10 seconds /0.375",(9.5mm) lead lengths at 5lbs.,(2.3kg) tension
- Weight : 0.34gram

DO-41



Dimensions in inches and (millimeters)

Marking



Maximum Ratings & Electrical Characteristics

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

Parameter	Symbol	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	Unit	Remark
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length	$I_F(AV)$	1.0							A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A	
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.0				1.7			V	Note 1
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	10							uA	Ta=25℃
		50							uA	Ta=125℃
Maximum Reverse Recovery Time (I_F =0.5A, I_R =1.0A, I_{rr} = 0.25A)	trr	50				75			nS	
Typical Junction Capacitance	C_J	17							pF	Note 2
Typical Thermal Resistance	Rth(j-a)	65							℃ /W	Note 3
	Rth(j-l)	15								
Operation Junction Temperature Range	T_J	-55 to +150							℃	
Storage Temperature Range	T_{STG}	-55 to +150							℃	

Note 1. Pulse test: 300us pulse width, 1% duty cycle
Note 2. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.
Note 3. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length

Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

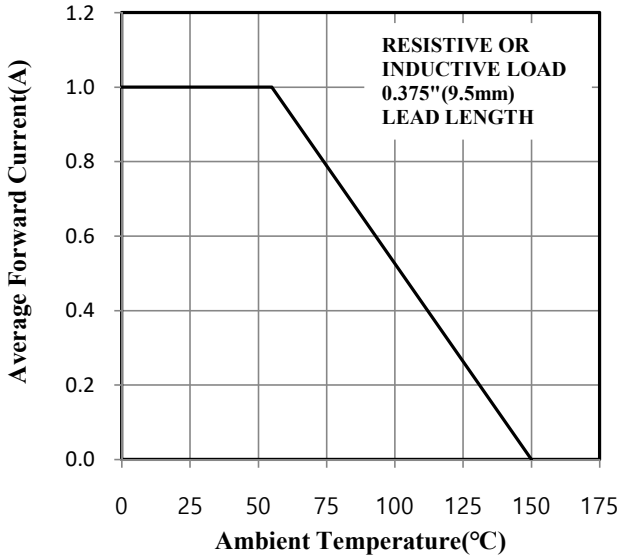


Fig.2 Maximum Non-Repetitive Peak Forward Surage Current

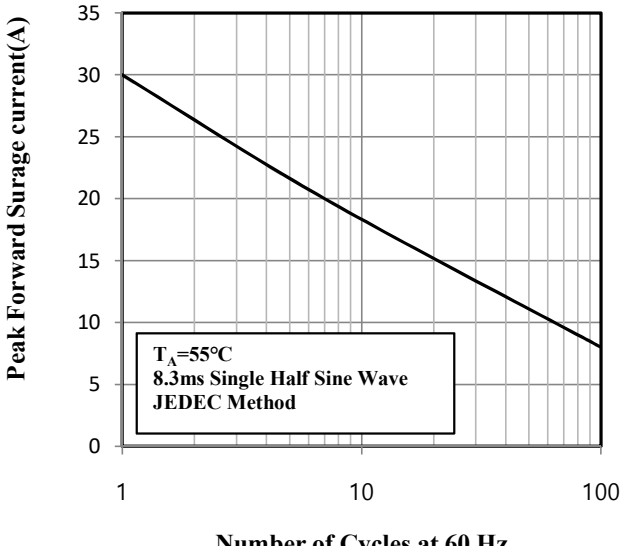


Fig.3 Typical Instantaneous Forward Characteristics

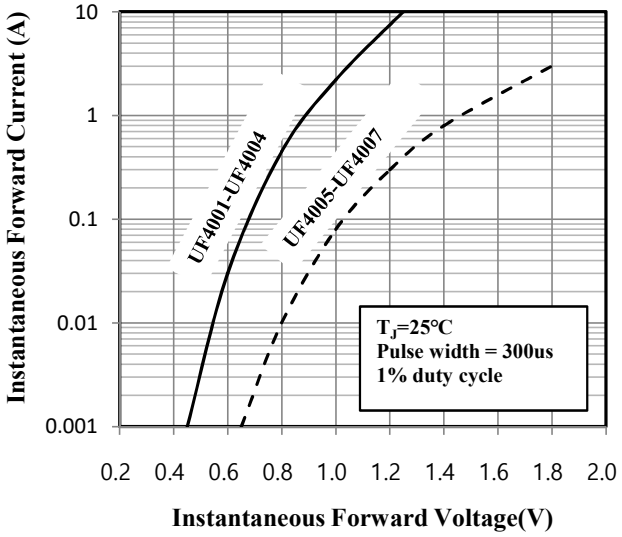


Fig.4 Typical Junction Capacitance

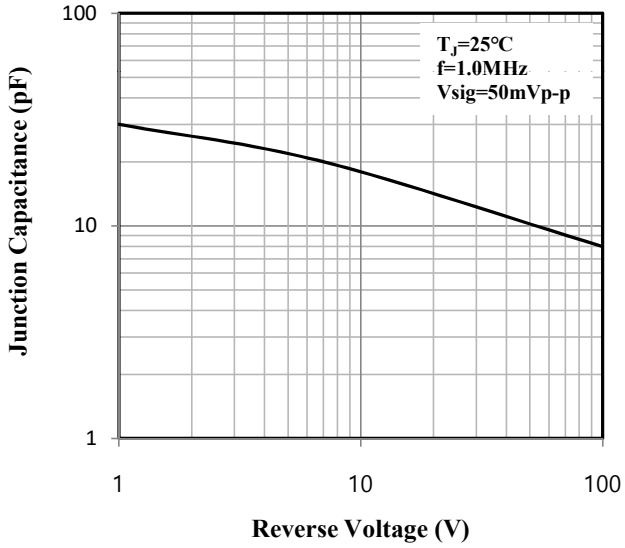


Fig.5 Typical Reverse Charateristics