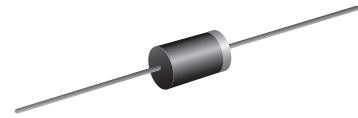


## Ultrafast Plastic Rectifier in DO-41

### Features

- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low switching losses, high efficiency
- High forward surge capability



### Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, and telecommunication.

Absolute Maximum Ratings									
Ratings at 25 °C, ambient temperature unless otherwise specified									
PARAMETER	SYMBOL	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	UNIT
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" (9.5 mm) lead length at $T_A = 55\text{ °C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30							A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150							°C

Electrical Characteristics										
$(T_A = 25\text{ °C}$ unless otherwise specified)										
PARAMETER	TEST CONDITIONS	SYMBOL	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	UNIT
Maximum instantaneous forward voltage	1.0 A	$V_F^{(1)}$	1.0				1.7			V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ °C}$	$I_R$	10							$\mu\text{A}$
	$T_A = 100\text{ °C}$		50							
Maximum reverse recovery time	$I_F = 0.5\text{ A}, I_R = 1.0\text{ A}, I_{rr} = 0.25\text{ A}$	$t_{rr}$	50				75			ns
Typical junction capacitance	4.0 V, 1 MHz	$C_J$	17							pF

#### Note

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)

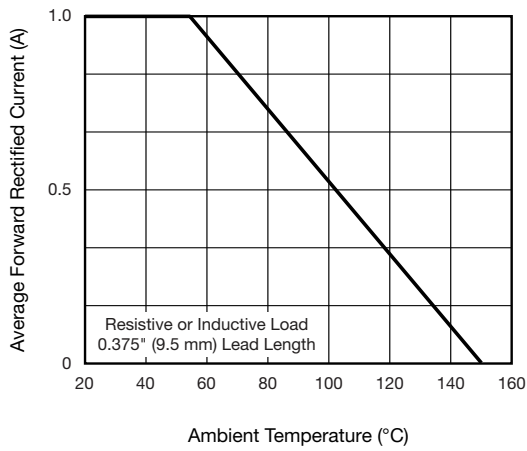


Fig. 1 - Maximum Forward Current Derating Curve

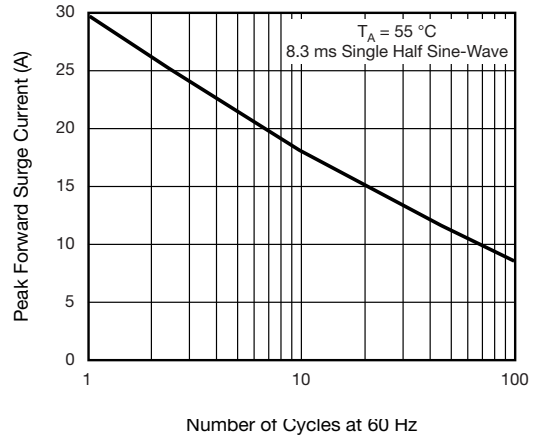


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

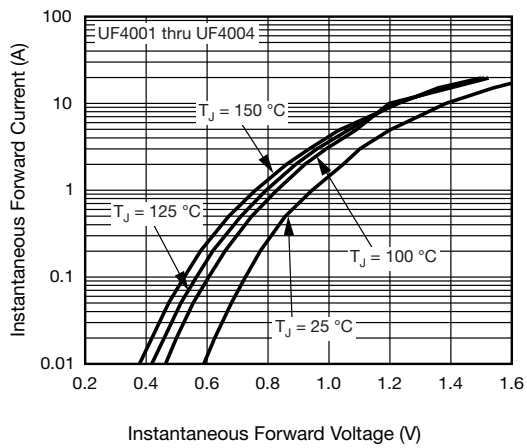


Fig. 3 - Typical Instantaneous Forward Characteristics

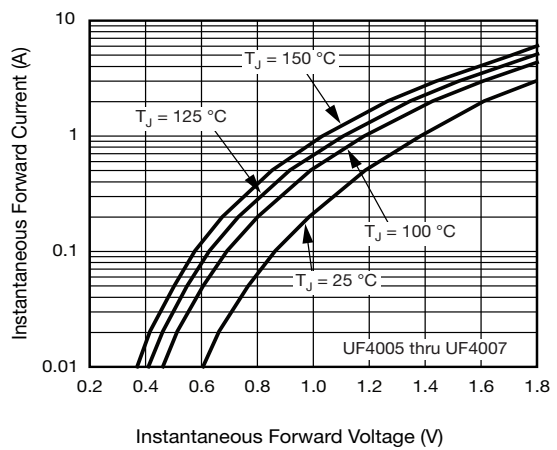


Fig. 4 - Typical Reverse Leakage Characteristics

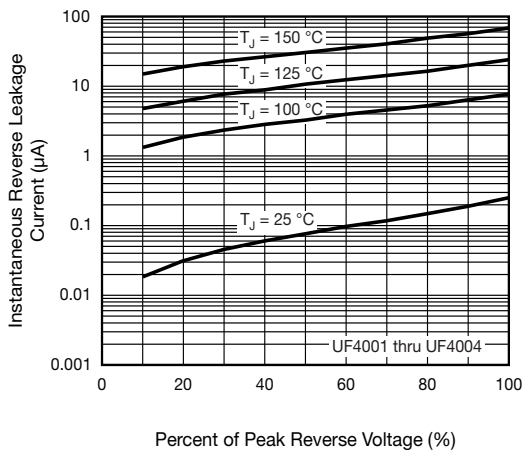


Fig. 5 - Typical Instantaneous Forward Characteristics

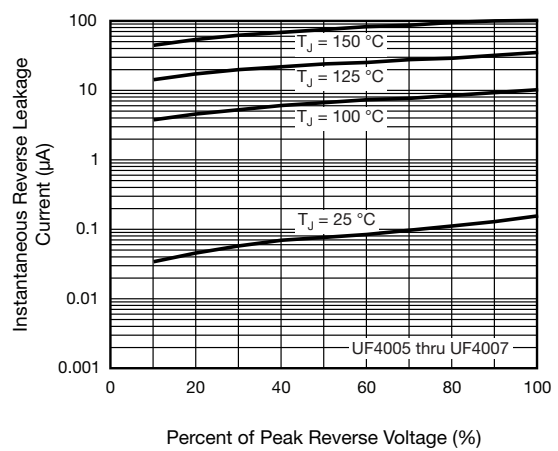
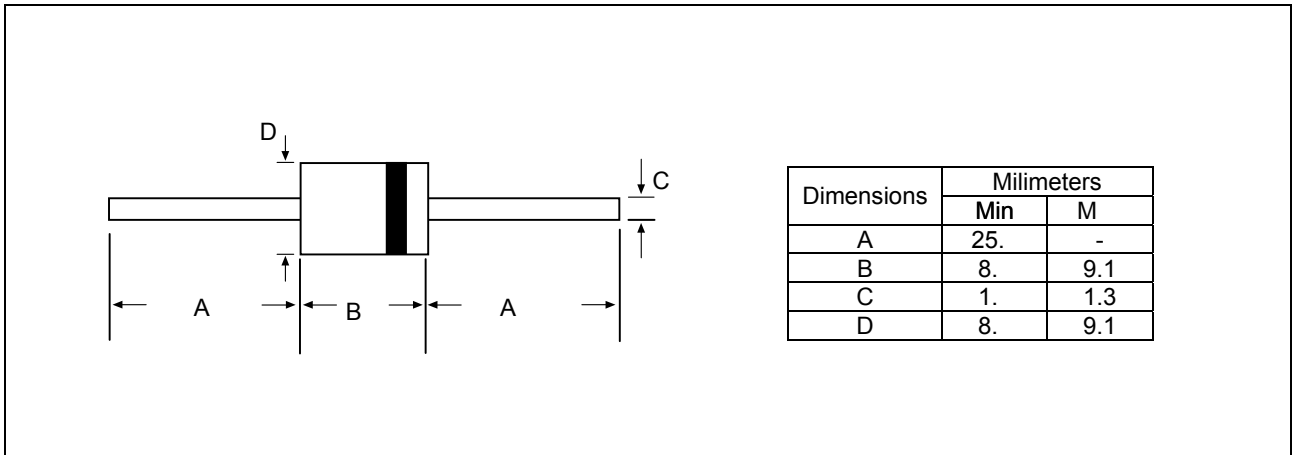


Fig. 6 - Typical Reverse Leakage Characteristics

**Package Dimensions**



**Ordering information**

Order code	Package	Packaging option	Base quantity	Packaging specification
UF4001 Thur UF4007	DO-41	Tape and BOX	5000pcs	EIA STD RS-481

**Revision history**

Date	Revision	Changes
23-May-2012	1.0	Initial release

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