

### ■ Features

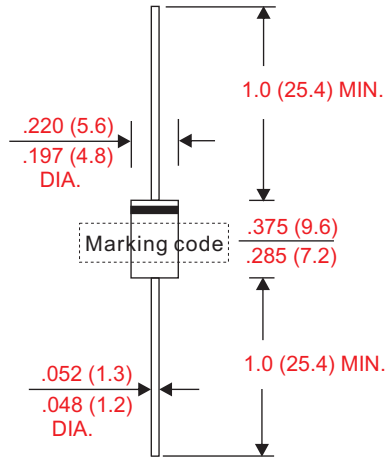
- Axial lead type devices for through hole design.
- High current capability.
- Ultrafast recovery time for switching mode application.
- High surge current capability.
- Glass passivated chip junction.
- Suffix "G" indicates Halogen free parts, ex. UF5005G
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

### ■ Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DO-201AD / DO-27
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity : Color band denotes cathode end
- Weight : Approximated 1.10 gram

### ■ Outline

DO-27(DO-201AD)



Dimensions in inches and (millimeters)

### ■ Maximum ratings and electrical characteristics

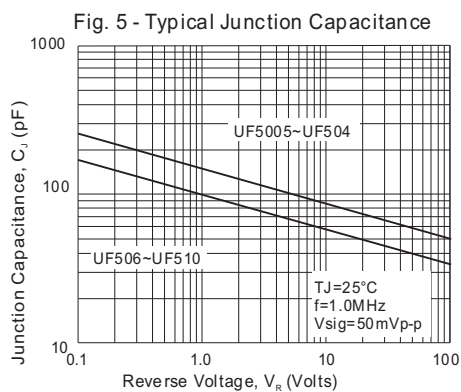
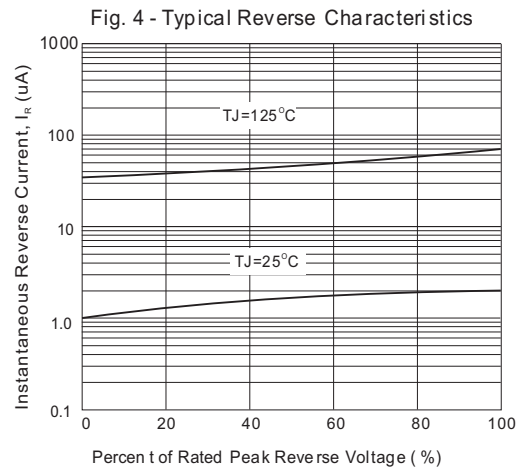
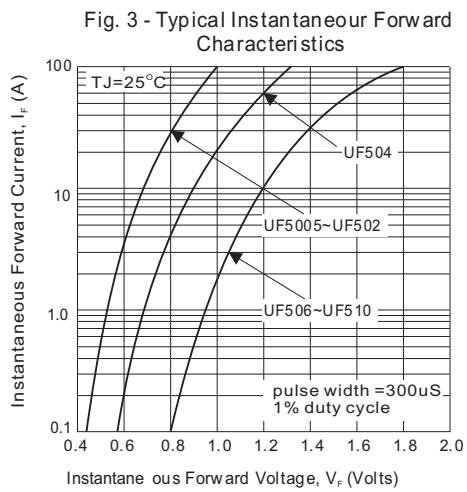
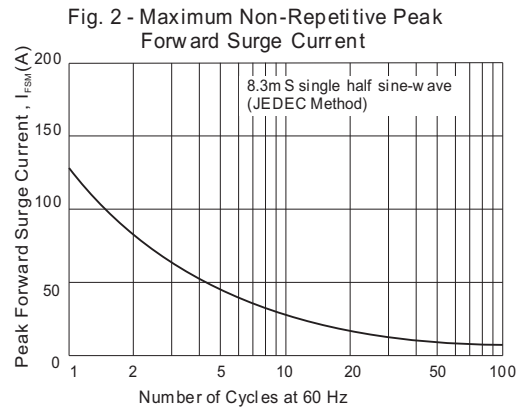
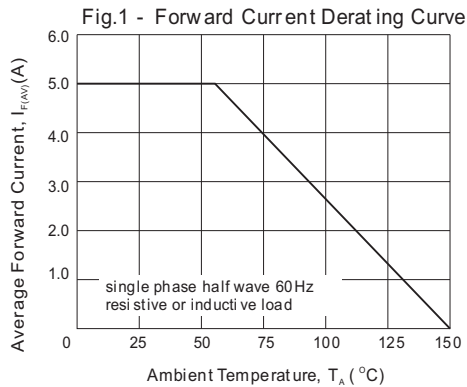
Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current		$I_o$			5.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			125	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^\circ\text{C}$	$I_R$			5.0	uA
	$V_R = V_{RRM}$ $T_A = 125^\circ\text{C}$				100	
Storage temperature		$T_{STG}$	-55		+150	°C

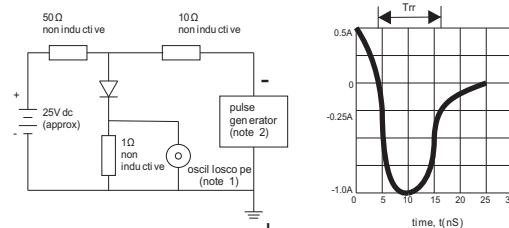
Symbol	Marking code	Max. repetitive peak reverse voltage $V_{RRM}$ (V)	Max. RMS voltage $V_{RMS}$ (V)	Max. DC blocking voltage $V_R$ (V)	Max. forward voltage @5A, $T_A = 25^\circ\text{C}$ $V_F$ (V)	Max. reverse recovery time(1) $T_{rr}$ (ns)	Operating temperature $T_J$ (°C)
UF5005	UF5005	50	35	50	1.0	50	-55 ~ +150
UF501	UF501	100	70	100			
UF502	UF502	200	140	200			
UF504	UF504	400	280	400	1.40	75	
UF506	UF506	600	420	600			
UF508	UF508	800	560	800			
UF510	UF510	1000	700	1000	1.70		

Note : 1.  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$

### Rating and characteristic curves



**Fig. 6 - Test Circuit Diagram and Reverse Recovery Time Characteristic**



Note: 1. rise time=7nS Max. input impedance=1M $\Omega$ , 22pF  
2. rise time=10nS Max. source impedance=80 $\Omega$

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