

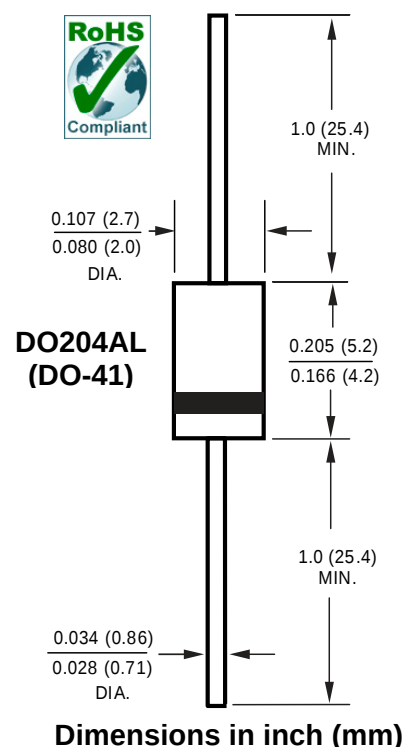
Ultra Fast Recovery Rectifier

Features

- Ultra Fast recovery time with high efficiency
- Low forward voltage drop
- High forward surge current capability
- High temperature soldering guaranteed 265°C/10 seconds
/.037" (9.5mm) lead length, 5lbs (2.3kg) tension
- RoHS compliant

Mechanical Data

Case:	DO-204AL, molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Axial leads, solderable per MIL-STD-202G, Method 208
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.013 Ounce, 0. 3 gram



Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	Unit	Conditions
V_{RRM}	Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
V_{RMS}	Maximum RMS Voltage	35	70	140	280	420	560	700	V	
V_{DC}	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
I_{F(AV)}	Maximum Average Forward Rectified Current	1.0							A	.375" (9.5mm) lead length at $T_A = 55^{\circ}\text{C}$ note 1
I_{FSM}	Peak Forward Surge Current	30							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method) $T_L=110^{\circ}\text{C}$
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to +150							$^{\circ}\text{C}$	

Ultra Fast Recovery Rectifier

UF4001~UF4007

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	Unit	Conditions
V _F	Maximum Instantaneous Forward Voltage	1.0				1.7			V	I _F (AV)= 1.0 A
I _R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	T _A = 25 °C
		50								T _A = 100 °C
T _{rr}	Maximum Reverse Recovery time	50				100			ns	I _F (AV)=0.5 A, I _R =1A,I _{rr} =0.25A
C _J	Typical Junction Capacitance	17							pf	at 1MHz, reversed voltage of 4V
R _{θJA}	Typical Thermal Resistance from Junction to Ambient	60							° C/W	note 2

- Note:** 1. 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
 2. Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted with copper pad area of 0.2" x 0.2" (5x5mm).

Typical Characteristics Curves

Fig.1- Forward Current Derating Curve

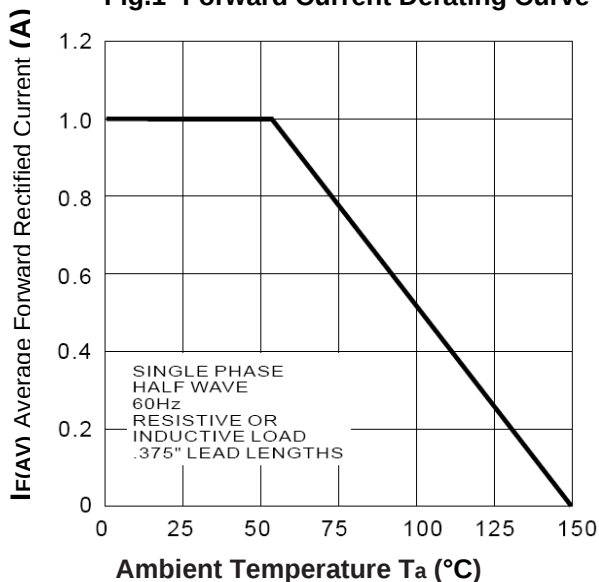


Fig.2- Max. Non-Repetitive Forward Surge Current

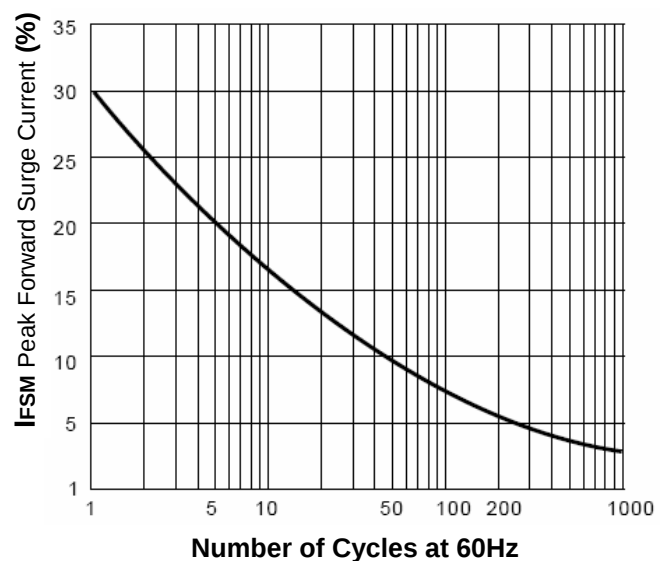


Fig.3- Typical Instantaneous Forward Characteristics

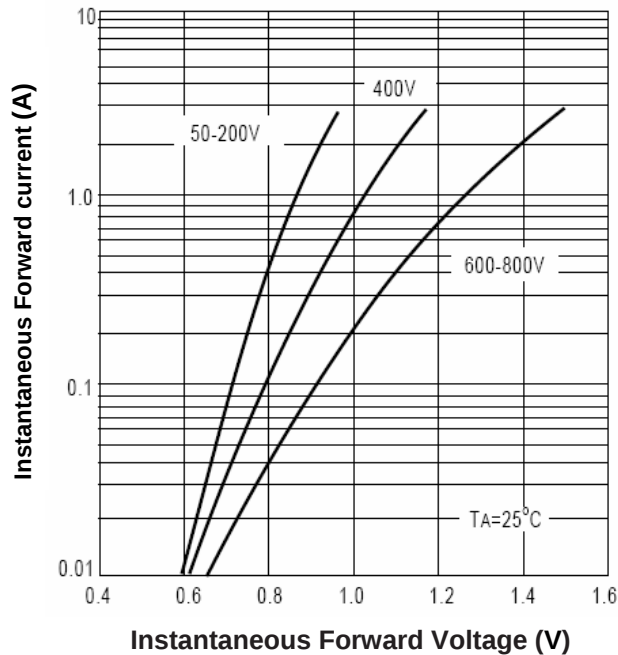


Fig.5- Typical Reverse Characteristics

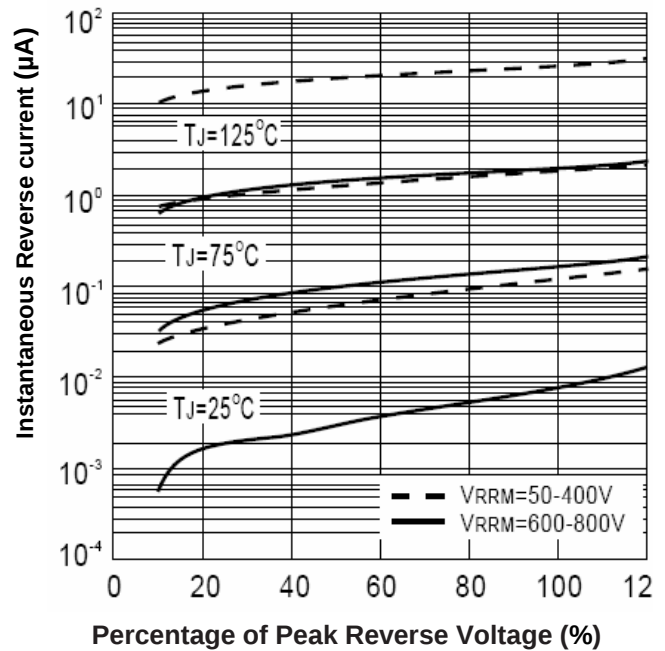
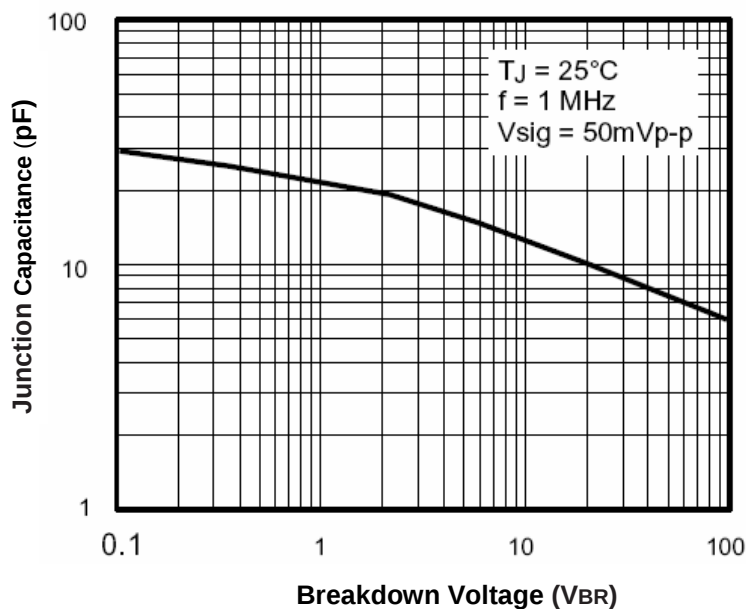


Fig.6- Typical Junction Capacitance



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