

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

UF4001 THRU UF4007

ULTRA FAST SILICON RECTIFIER
1.0 AMPS, 50 THRU 1000 VOLTS

JEDEC DO-41 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR UF4001 series types are silicon ultra fast recovery rectifiers designed for those applications requiring extremely fast recovery times at a low cost.

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

	<u>SYMBOL</u>	<u>UF</u> <u>4001</u>	<u>UF</u> <u>4002</u>	<u>UF</u> <u>4003</u>	<u>UF</u> <u>4004</u>	<u>UF</u> <u>4005</u>	<u>UF</u> <u>4006</u>	<u>UF</u> <u>4007</u>	<u>UNITS</u>
Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R	50	100	200	400	600	800	1000	V
RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Forward Current($T_A=75^\circ\text{C}$)	I_O				1.0				A
Peak Forward Surge Current (8.3 ms single half sine wave)	I_{FSM}				30				A
Operating and Storage Junction Temperature	T_J, T_{stg}				-65 to +150				$^\circ\text{C}$
Thermal Resistance	Θ_{JA}				50				$^\circ\text{C}/\text{W}$

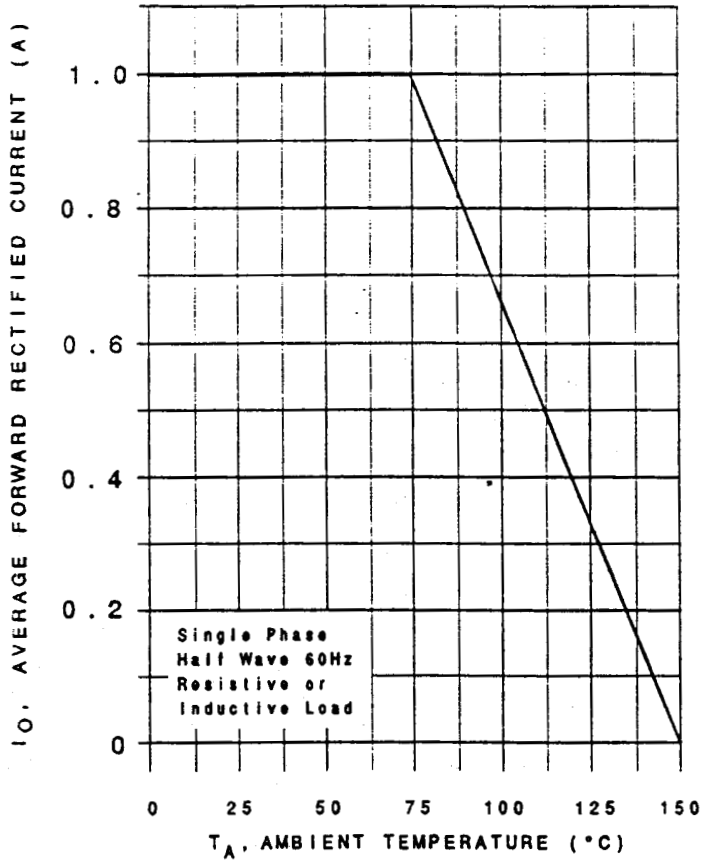
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
I_R	$V_R=\text{Rated } V_{RRM}$			10	μA
I_R	$V_R=\text{Rated } V_{RRM}, T_A=100^\circ\text{C}$			100	μA
V_F	$I_F=1.0\text{A}$ (50V THRU 400V)			1.0	V
V_F	$I_F=1.0\text{A}$ (600V THRU 1000V)			1.7	V
t_{rr}	$I_R=1.0\text{A}, I_F=0.5\text{A}$, Rec. to 0.25A (50V THRU 400V)			50	ns
t_{rr}	$I_R=1.0\text{A}, I_F=0.5\text{A}$, Rec. to 0.25A (600V THRU 1000V)			75	ns
C_j	$V_R=4.0\text{V}$, $f=1.0\text{ MHz}$ (50V THRU 400V)		20		pF
C_j	$V_R=4.0\text{V}$, $f=1.0\text{ MHz}$ (600V THRU 1000V)		10		pF

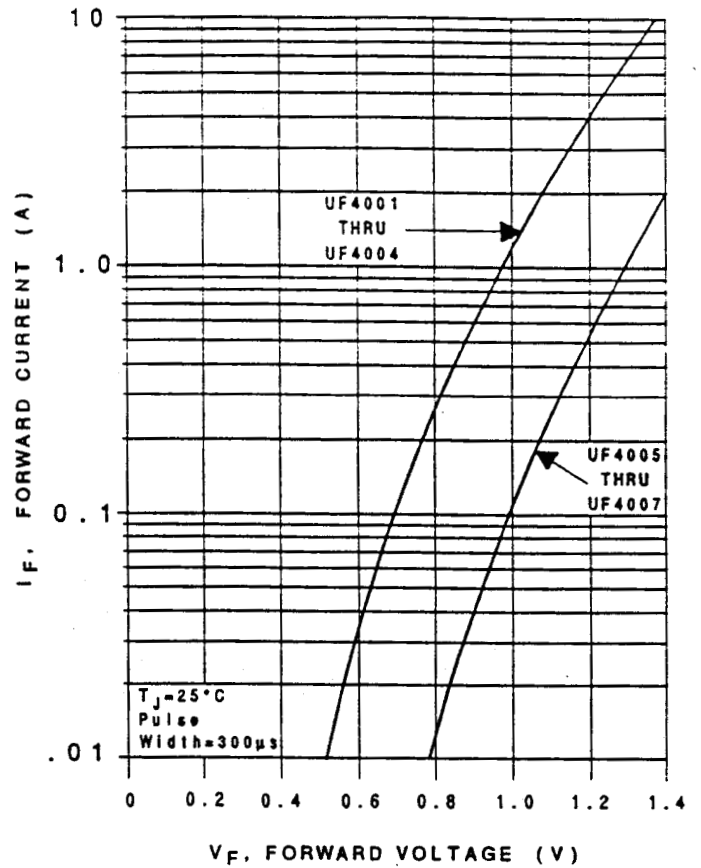
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UF4001 SERIES RATING AND CHARACTERISTICS CURVES

FORWARD DERATING CURVE



TYPICAL FORWARD CHARACTERISTICS



JEDEC DO-41 CASE - MECHANICAL OUTLINE

All Dimensions in Inches (mm).

