



Features

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

Mechanical Data

Case	: JEDEC DO-41 molded plastic
Polarity	: Colour band denotes cathode
Weight	: 0.012 ounces, 0.34 grams
Mounting Position	: Any
Reverse Voltage	: 50 to 1000 Volts
Forward Current	: 1 Ampere

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%

Characteristics	Symbol	UF4001	UF4002	UF4003	UF4005	UF4007	UF4008	Unit
Max. Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	800	1000	V
Max. RMS Voltage	V_{RMS}	35	70	140	280	560	700	V
Max. DC Blocking Voltage	V_{DC}	50	100	200	400	800	1000	V
Max. Average Forward Rectified Current @ $T_A = 75^\circ C$	$I_{(AV)}$	1.0						A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I_{FSM}	30						A
Peak Forward Voltage at 1A DC	V_F	1		1.3		1.7		V
Maximum DC Reverse Current @ $T_J = 25^\circ C$ at Rated DC Blocking Voltage @ $T_J = 100^\circ C$	I_R	5 100						μA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	50				75		nS
Typical Junction Capacitance (Note 2)	C_J	20				10		pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	25						$^\circ C/W$
Operating Temperature Range	T_J	-55 to +150						$^\circ C$
Storage Temperature Range	T_{STG}							

- Notes** :
1. Measured with $I_F = 0.5A$, $I_R = 1A$, $I_{RR} = 0.25A$
 2. Measured at 1MHz and applied reverse voltage of 4V DC
 3. Thermal resistance junction to ambient.
 4. The typical data above is for reference only

Rating and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

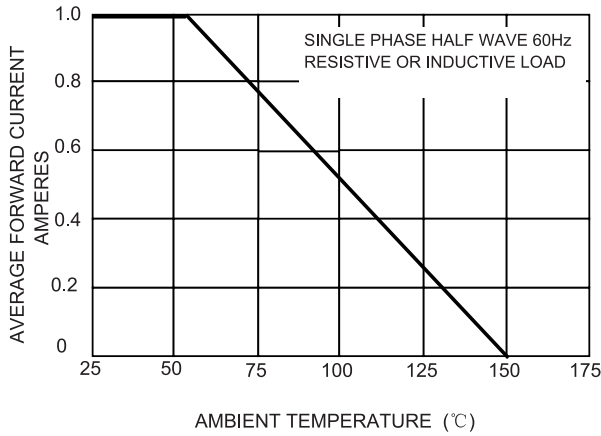


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

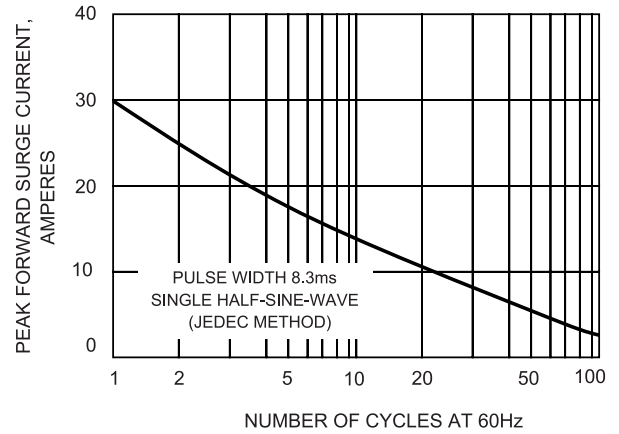


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

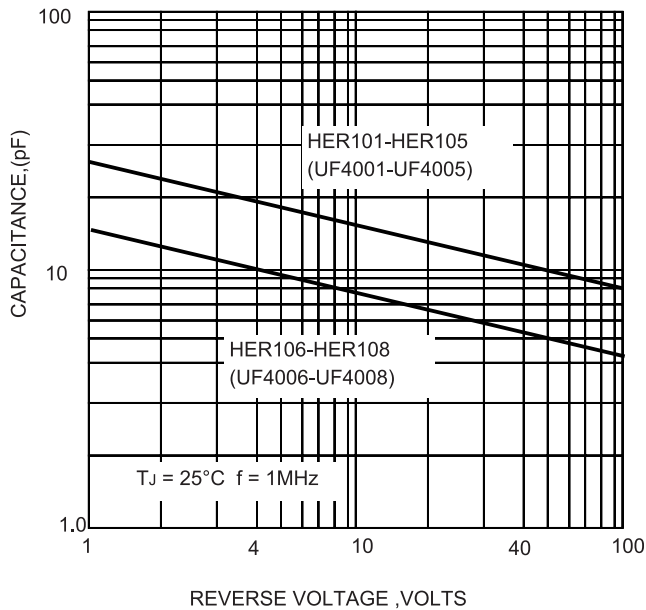
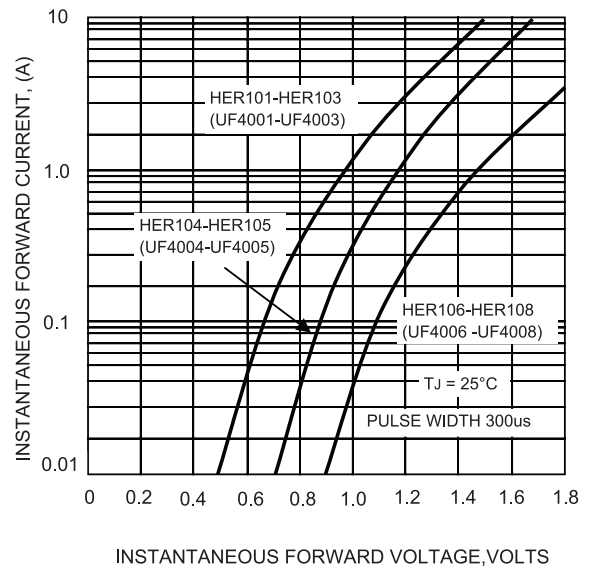


FIG.4-TYPICAL FORWARD CHARACTERISTICS

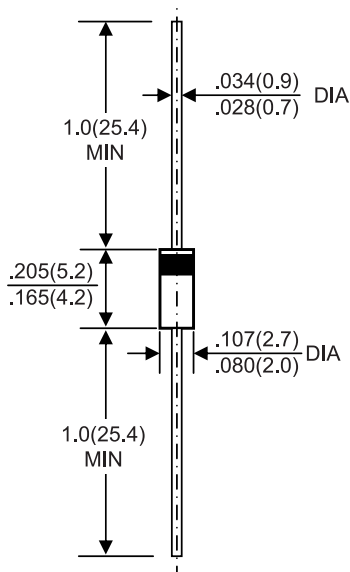


High Efficiency Rectifier



Dimensions:

DO- 41



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
High Efficiency Rectifiers (Ultra Fast)	UF4001
	UF4002
	UF4003
	UF4005
	UF4007
	UF4008

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