

# High Efficiency Rectifier **multicomp**PRO



## 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 <sub>RRM</sub>	50	100	200	400	800	1000	V
Max. RMS Voltage	V <sub>RMS</sub>	35	70	140	280	560	700	V
Max. DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	800	1000	V
Max. Average Forward Rectified Current @T <sub>A</sub> = 75°C	I <sub>(AV)</sub>	1.0						A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30						A
Peak Forward Voltage at 1A DC	V <sub>F</sub>	1			1.3	1.7		V
Maximum DC Reverse Current @T <sub>J</sub> = 25°C at Rated DC Blocking Voltage @T <sub>J</sub> = 100°C	I <sub>R</sub>	5 100						µA
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	50				75		nS
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	20				10		pF
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	25						°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150						°C
Storage Temperature Range	T <sub>STG</sub>							

**Notes :** 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{RR} = 0.25\text{A}$   
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

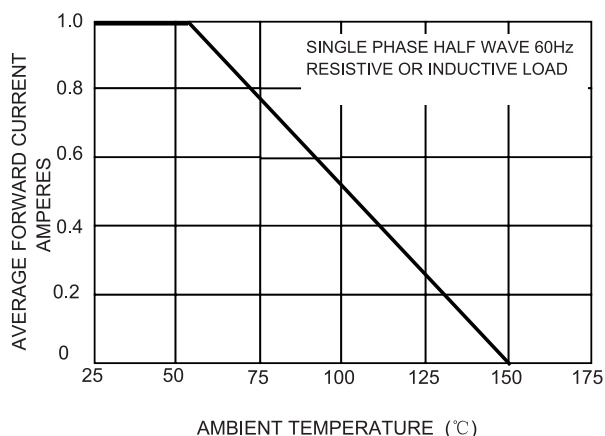


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

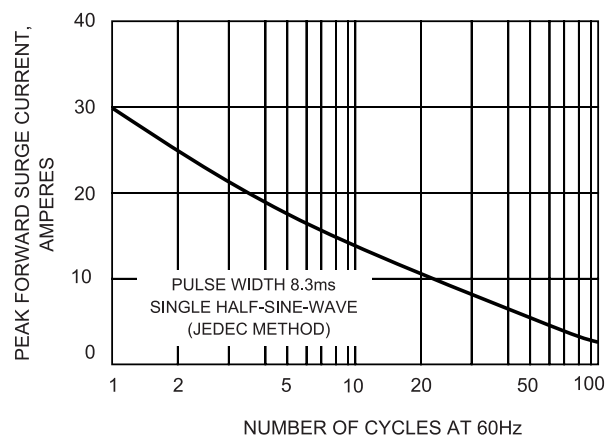


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

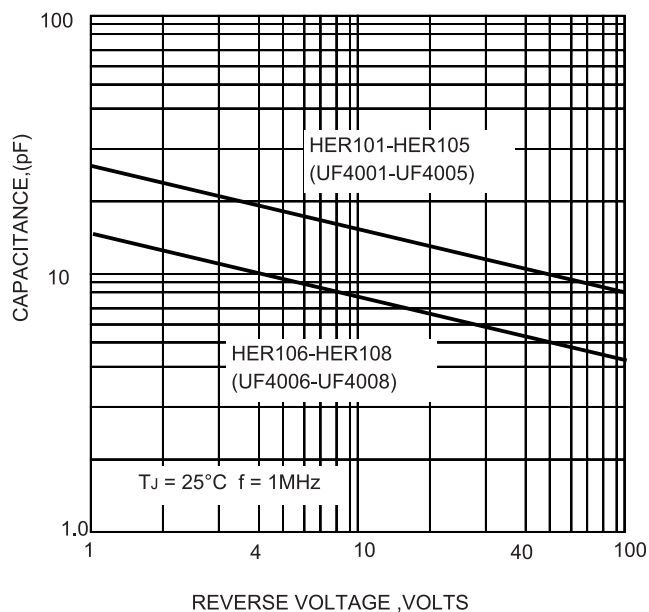
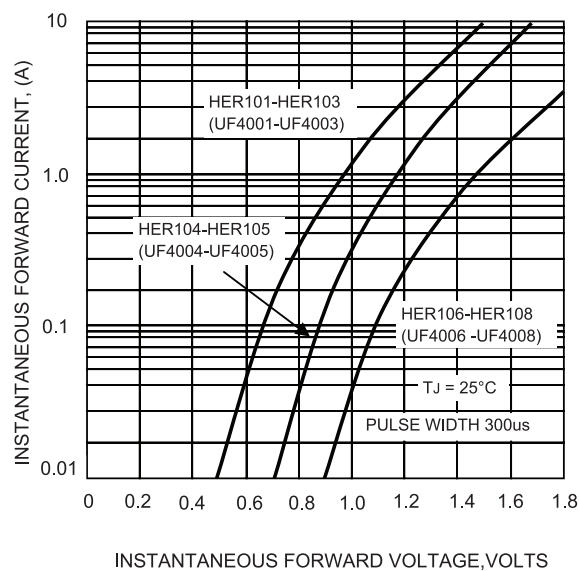
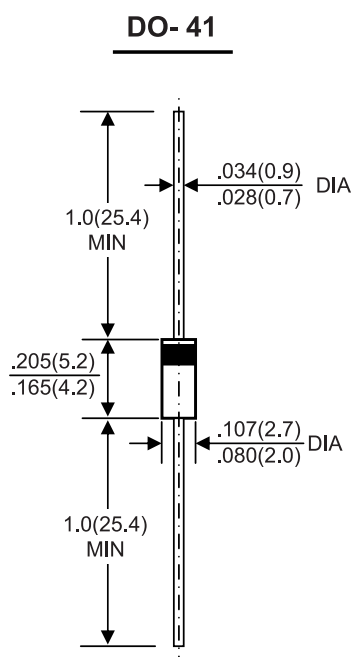


FIG.4-TYPICAL FORWARD CHARACTERISTICS



# High Efficiency Rectifier multicomp<sup>PRO</sup>

## Dimensions:



Dimensions : Inches (Millimetres)

## Part Number Table

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

**Important Notice :** This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.

Newark.com/multicomp-pro  
Farnell.com/multicomp-pro  
Element14.com/multicomp-pro

**multicomp<sup>PRO</sup>**