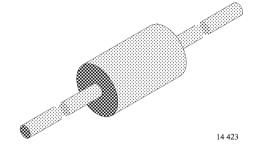


# Vishay Lite-On Power Semiconductor

## 3.0A Ultra-Fast Rectifier

#### **Features**

- Diffused junction
- Ultra-fast switching for high efficiency
- High current capability and low forward voltage drop
- Surge overload rating to 150A peak
- Low reverse leakage current
- Plastic material UL Recognition flammability classification 94V–0



## **Absolute Maximum Ratings**

 $T_i = 25$ °C

Parameter	Test Conditions	Туре	Symbol	Value	Unit
Repetitive peak reverse voltage		UF3001	$V_{RRM}$	50	V
=Working peak reverse voltage		UF3002	=V <sub>RWM</sub>	100	V
=DC Blocking voltage		UF3003	=V <sub>R</sub>	200	V
		UF3004		400	V
		UF3005		600	V
		UF3006		800	V
		UF3007		1000	V
Peak forward surge current			I <sub>FSM</sub>	150	Α
Average forward current	T <sub>A</sub> =55°C		I <sub>FAV</sub>	3	Α
Junction and storage temperature range			T <sub>j</sub> =T <sub>stg</sub>	<i>−</i> 65+150	°C

### **Electrical Characteristics**

 $T_i = 25$ °C

Parameter	Test Conditions	Туре	Symbol	Min	Тур	Max	Unit
Forward voltage	I <sub>F</sub> =3A	UF3001-3003	$V_{F}$			1	V
		UF3004	$V_{F}$			1.3	V
		UF3005-3007	$V_{F}$			1.7	V
Reverse current	T <sub>A</sub> =25°C		I <sub>R</sub>			5	μΑ
	T <sub>A</sub> =100°C		I <sub>R</sub>			100	μΑ
Reverse recovery time	$I_{F}=1A$ , $I_{R}=0.5A$ ,	UF3001-3004	t <sub>rr</sub>			50	ns
	I <sub>rr</sub> =0.25A	UF3005-3007	t <sub>rr</sub>			75	ns
Diode capacitance	V <sub>R</sub> =4V, f=1MHz	UF3001-3004	CD		75		рF
		UF3005-3007	$C_{D}$		50		рF
Thermal resistance junction to ambient			R <sub>thJA</sub>		35		K/W

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# **Characteristics** $(T_j = 25^{\circ}C \text{ unless otherwise specified})$

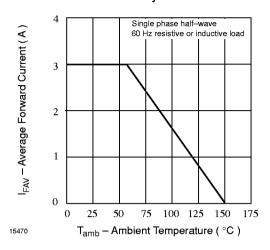


Figure 1. Max. Average Forward Current vs.
Ambient Temperature

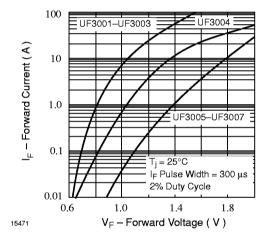


Figure 2. Typ. Forward Current vs. Forward Voltage

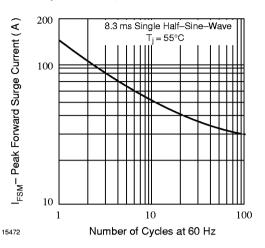


Figure 3. Max. Peak Forward Surge Current vs. Number of Cycles

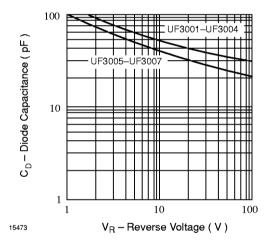


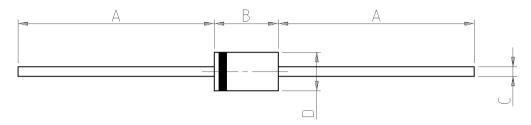
Figure 4. Typ. Diode Capacitance vs. Reverse Voltage

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# Vishay Lite-On Power Semiconductor

### **Dimensions in mm**



	D0-201AD				
Dim	Min	Max			
Α	25.40	-			
В	7.20	9.50			
(	1.20	1.30			
D	4.80	5.30			
AL	All Dimensions in mm				



14445

Case: molded plastic Polarity: cathode band Approx. weight: 1.1 grams Mounting position: any Marking: type number

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### UF3001-UF3007

## Vishay Lite-On Power Semiconductor



#### **Ozone Depleting Substances Policy Statement**

It is the policy of Vishay Semiconductor GmbH to

- 1. Meet all present and future national and international statutory requirements.
- 2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

**Vishay Semiconductor GmbH** has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

- 1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
- 2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
- 3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

**Vishay Semiconductor GmbH** can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay-Telefunken products for any unintended or unauthorized application, the buyer shall indemnify Vishay-Telefunken against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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