



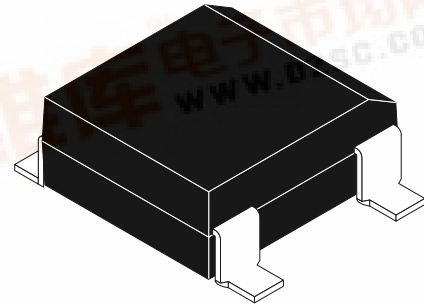
DF15005S–DF1510S

Vishay Lite-On Power Semiconductor

1.5A Surface Mount Glass Passivated Bridge Rectifier

Features

- Glass passivated die construction
- Diffused junction
- Low forward voltage drop, high current capability
- Surge overload rating to 50A peak
- Designed for surface mount application
- Plastic material – UL Recognition flammability classification 94V–0
- This series is UL listed under recognized component index, file number E95060



14 482

Absolute Maximum Ratings

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage =Working peak reverse voltage =DC Blocking voltage		DF15005S	V_{RRM} = V_{RWM} = V_R	50	V
		DF1501S		100	V
		DF1502S		200	V
		DF1504S		400	V
		DF1506S		600	V
		DF1508S		800	V
		DF1510S		1000	V
Peak forward surge current			I_{FSM}	50	A
Average forward current	$T_A = 40^\circ\text{C}$		I_{FAV}	1.5	A
Junction and storage temperature range			$T_j = T_{stg}$	-65...+150	$^\circ\text{C}$

Electrical Characteristics

$T_j = 25^\circ\text{C}$

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 1.5\text{A}$		V_F			1.1	V
Reverse current	$T_A = 25^\circ\text{C}$		I_R			10	μA
	$T_A = 125^\circ\text{C}$		I_R			500	μA
I^2t Rating for fusing			I^2t			10.4	A^2s
Diode capacitance	$V_R = 4\text{V}$, $f = 1\text{MHz}$		C_D		25		pF
Thermal resistance junction to ambient	on PC board with 5mm^2		R_{thJA}		74		K/W

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

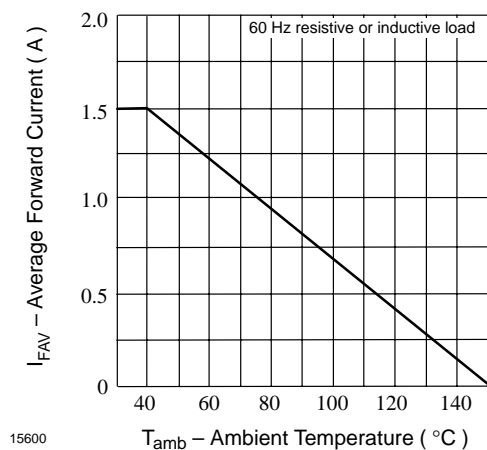


Figure 1. Max. Average Forward Current vs. Ambient Temperature

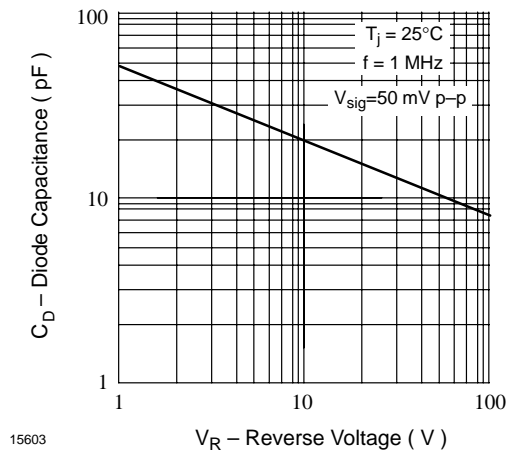


Figure 4. Typ. Diode Capacitance vs. Reverse Voltage

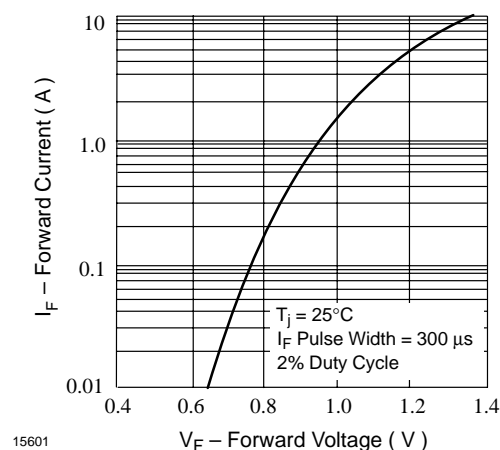


Figure 2. Typ. Forward Current vs. Forward Voltage

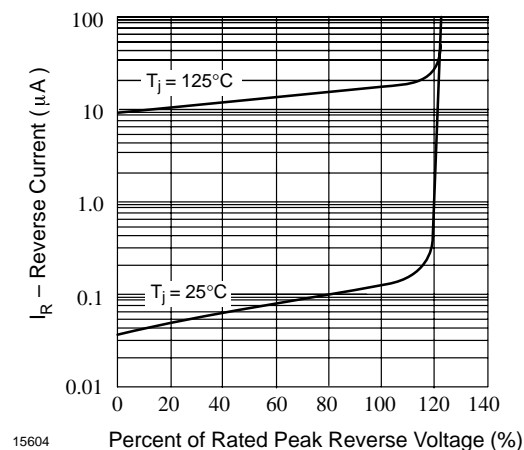


Figure 5. Typ. Reverse Current vs. Percent of Rated Peak Reverse Voltage

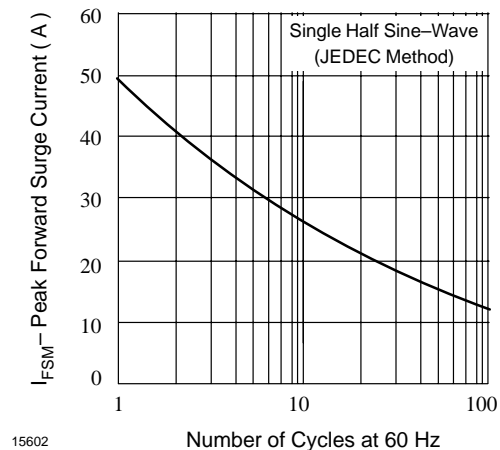


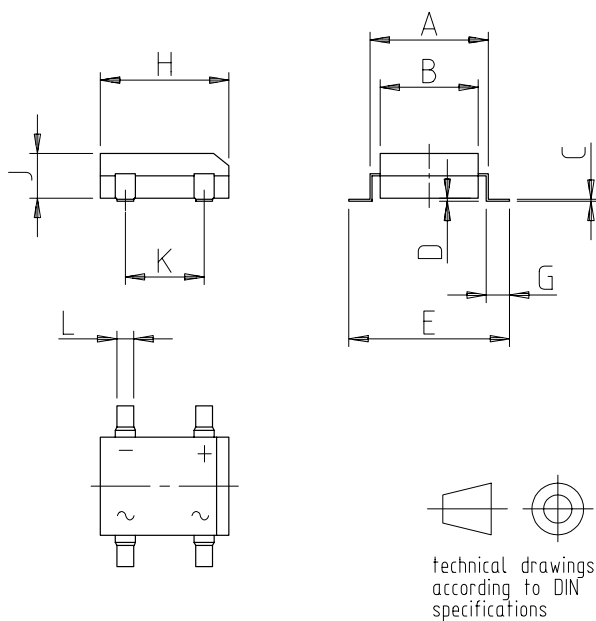
Figure 3. Max. Peak Forward Surge Current vs. Number of Cycles



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Dimensions in mm



14467

DF-S		
Dim	Min	Max
A	7.40	7.90
B	6.20	6.50
C	0.009	0.25
D	0.076	0.33
E	-	10.40
G	1.02	1.53
H	8.13	8.51
J	2.40	3.40
K	5.00	5.20
L	1.00	1.20
All Dimensions in mm		

Case: molded plastic
Polarity: as marked on case
Approx. weight: 0.38 grams
Mounting position: any
Marking: type number



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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