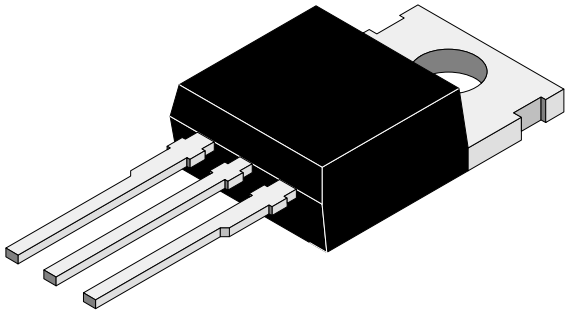
15A Schottky Barrier Rectifier

Features

- Schottky barrier chip
- Guard ring die constuction for transient protection
- Low power loss, high efficiency
- High current capability and low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection application
- Plastic material – UL Recognition flammability classification 94V–0



95 9630

Absolute Maximum Ratings

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage =Working peak reverse voltage =DC Blocking voltage		MBR1530CT	V_{RRM} =V_{RWM} =V_R	30	V
		MBR1535CT		35	V
		MBR1540CT		40	V
		MBR1545CT		45	V
		MBR1550CT		50	V
		MBR1560CT		60	V
Peak forward surge current			I_{FSM}	150	A
Average forward current	T_C=125°C		I_{FAV}	15	A
Junction and storage temperature range			T_j=T_{stg}	–65...+150	°C

Electrical Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=7.5A, T_C=125˚C	MBR1530CT –MBR1545CT	V_F			0.57	V
	I_F=15A, T_C=25˚C		V_F			0.84	V
	I_F=15A, T_C=125˚C		V_F			0.72	V
	I_F=7.5A, T_C=125˚C	MBR1550CT –MBR1560CT	V_F			0.65	V
	I_F=15A, T_C=25˚C		V_F			0.90	V
	I_F=15A, T_C=125˚C		V_F			0.80	V
Reverse current	T_C=25˚C	MBR1530CT –MBR1545CT	I_R			0.1	mA
	T_C=125˚C		I_R			15	mA
	T_C=25˚C	MBR1550CT –MBR1560CT	I_R			1.0	mA
	T_C=125˚C		I_R			50	mA
Diode capacitance	V_R=4V, f=1MHz		C_D		300		pF
Thermal resistance junction to case	T_L=const.		R_{thJC}		1.7		K/W
Voltage rate of change (Rated V_R)		MBR1530CT –MBR1540CT	dV/dt			1000	K/W
		MBR1545CT –MBR1560CT	dV/dt			10000	K/W

Characteristics (T_j = 25°C unless otherwise specified)

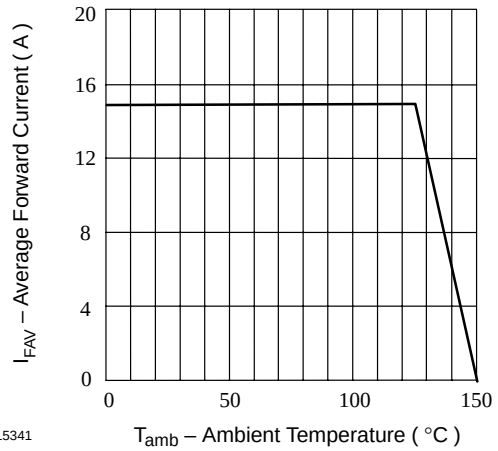


Figure 1. Max. Average Forward Current vs. Ambient Temperature

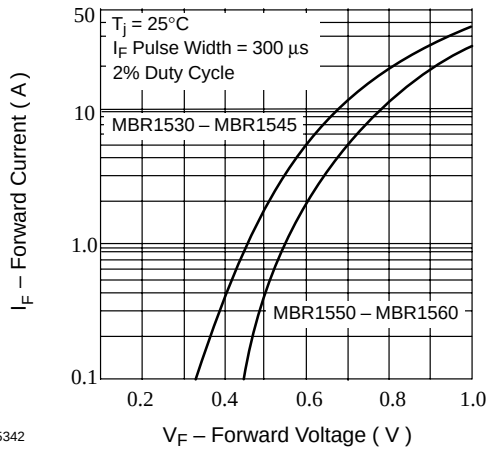


Figure 2. Typ. Forward Current vs. Forward Voltage

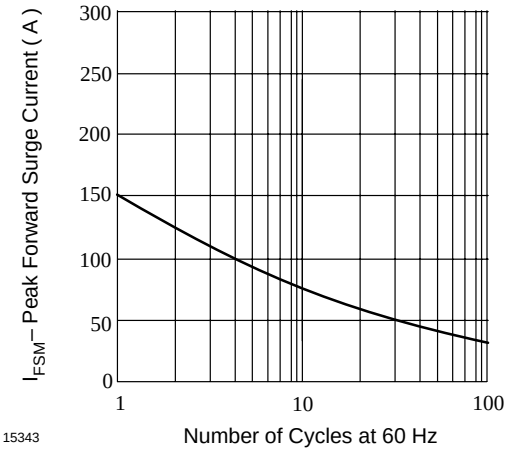


Figure 3. Max. Peak Forward Surge Current vs. Number of Cycles

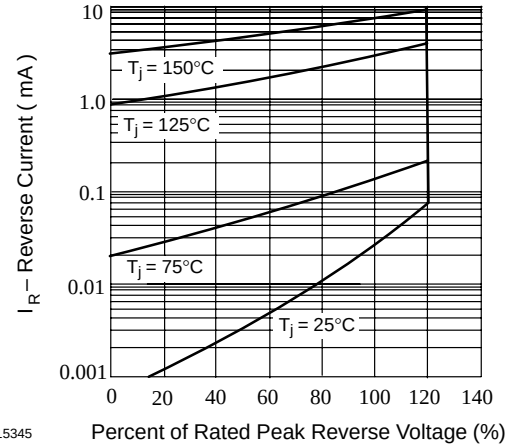


Figure 5. Typ. Reverse Current vs. Percent of Rated Peak Reverse Voltage

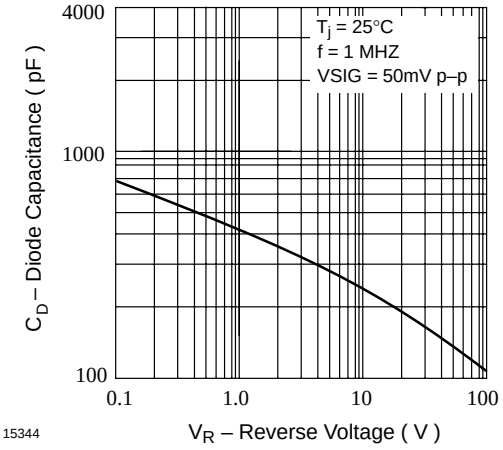
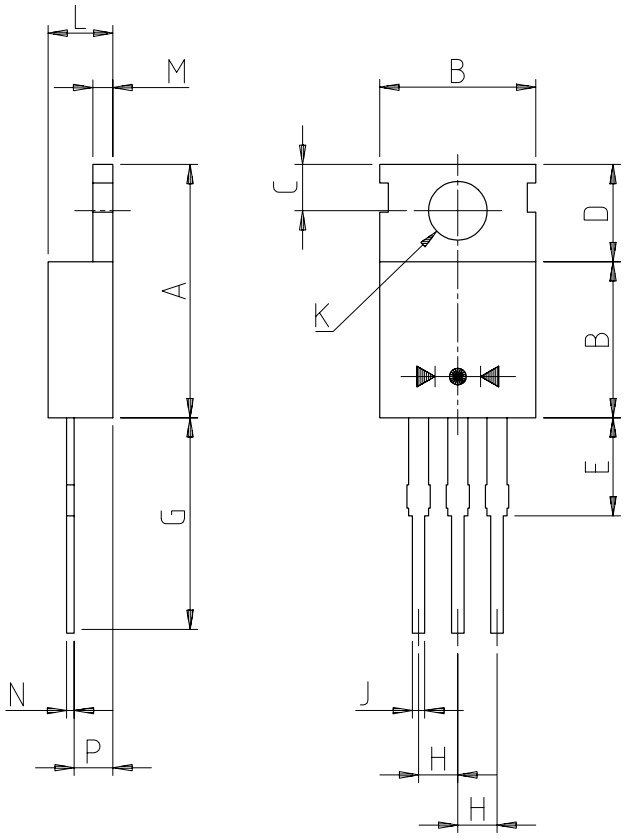
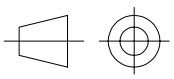


Figure 4. Typ. Diode Capacitance vs. Reverse Voltage

Dimensions in mm



TO-220AB		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	-	6.25
G	12.70	14.73
H	2.29	2.79
J	0.51	1.14
K	⌀3.53	⌀4.09
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
All Dimensions in mm		



technical drawings
according to DIN
specifications

14468

Case: molded plastic
Polarity: as marked on body
Approx. weight: 2.24 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.

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