

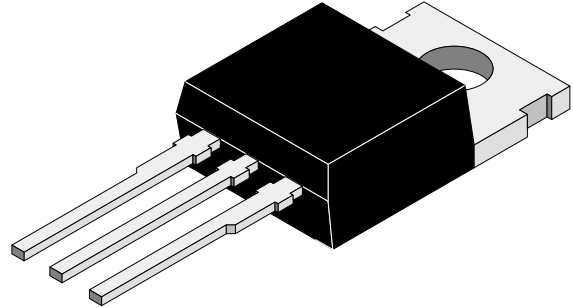


KERSEMI

MBR1530CT–MBR1560CT

Features

- Schottky barrier chip
- Guard ring die construction 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

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

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	$T_C=125^\circ\text{C}$		I_{FAV}	15	A
Junction and storage temperature range			$T_j=T_{stg}$	-65...+150	$^\circ\text{C}$

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

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=7.5\text{A}, T_C=125^\circ\text{C}$	MBR1530CT	V_F			0.57	V
	$I_F=15\text{A}, T_C=25^\circ\text{C}$	-MBR1545CT	V_F			0.84	V
	$I_F=15\text{A}, T_C=125^\circ\text{C}$		V_F			0.72	V
	$I_F=7.5\text{A}, T_C=125^\circ\text{C}$	MBR1550CT	V_F			0.65	V
	$I_F=15\text{A}, T_C=25^\circ\text{C}$	-MBR1560CT	V_F			0.90	V
	$I_F=15\text{A}, T_C=125^\circ\text{C}$		V_F			0.80	V
Reverse current	$T_C=25^\circ\text{C}$	MBR1530CT	I_R			0.1	mA
	$T_C=125^\circ\text{C}$	-MBR1545CT	I_R			15	mA
	$T_C=25^\circ\text{C}$	MBR1550CT	I_R			1.0	mA
	$T_C=125^\circ\text{C}$	-MBR1560CT	I_R			50	mA
Diode capacitance	$V_R=4\text{V}, f=1\text{MHz}$		C_D		300		pF
Thermal resistance junction to case	$T_L=\text{const.}$		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 ($T_j = 25^\circ\text{C}$ unless otherwise specified)

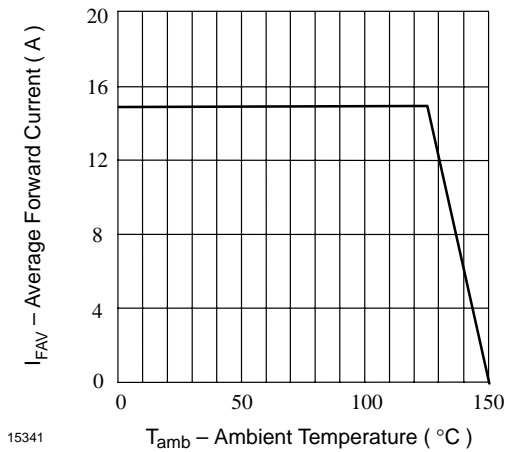


Figure 1. Max. Average Forward Current vs. Ambient Temperature

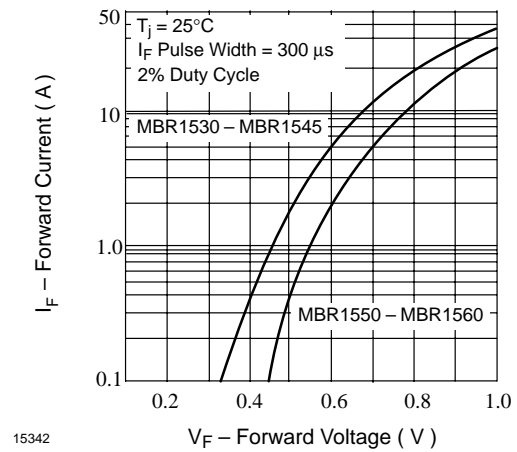
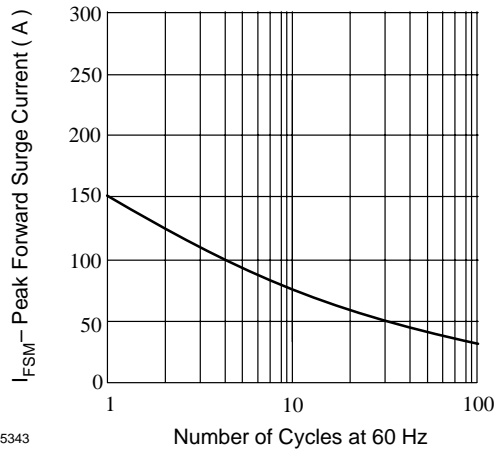


Figure 2. Typ. Forward Current vs. Forward Voltage



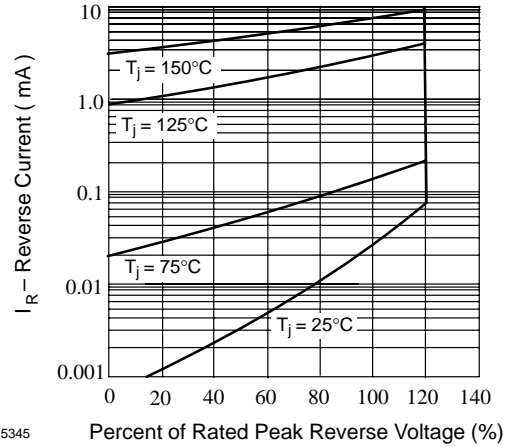
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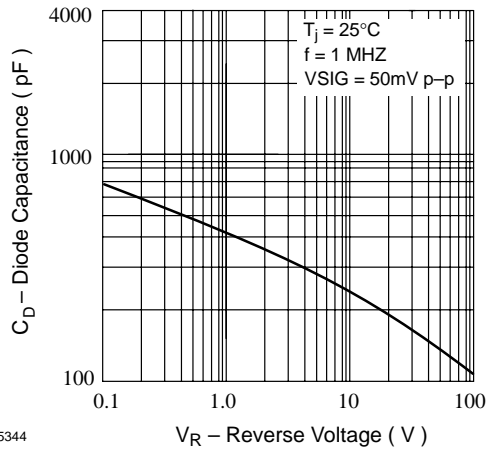
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Figure 3. Max. Peak Forward Surge Current vs. Number of Cycles



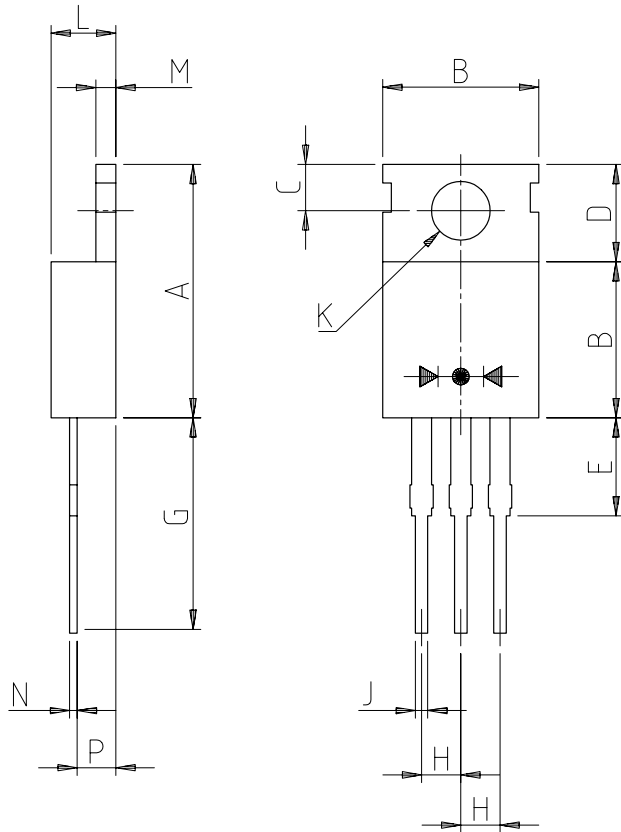
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Figure 5. Typ. Reverse Current vs. Percent of Rated Peak Reverse Voltage

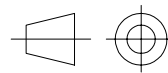


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Figure 4. Typ. Diode Capacitance vs. Reverse Voltage



T0-220AB		
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