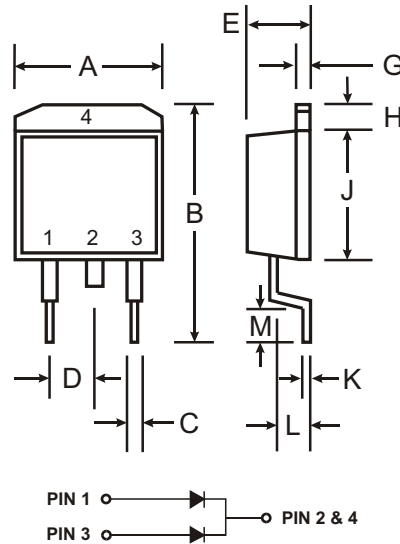


Features

Guard Ring Die Construction for Transient Protection
 Low Power Loss, High Efficiency
 High Surge Capability
 High Current Capability and Low Forward Voltage Drop
 Surge Overload Rating to 150A Peak
 For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
Lead Free Finish, RoHS Compliant (Note 4)

Mechanical Data

Case: D²PAK
 Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
 Moisture Sensitivity: Level 1 per J-STD-020C
 Terminals: Finish Tin. Solderable per MIL-STD-202, Method 208 **(e3)**
 Polarity: See Diagram
 Marking: See Page 3
 Weight: 1.7 grams (approximate)



D ² PAK		
Dim	Min	Max
A	9.65	10.69
B	14.60	15.88
C	0.51	1.14
D	2.29	2.79
E	4.37	4.83
G	1.14	1.40
H	1.14	1.40
J	8.25	9.25
K	0.30	0.64
L	2.03	2.92
M	2.29	2.79
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Characteristic	Symbol	MBRB 1530CT	MBRB 1535CT	MBRB 1540CT	MBRB 1545CT	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	35	40	45	V
Working Peak Reverse Voltage	V _{RWM}					
DC Blocking Voltage	V _R					
RMS Reverse Voltage	V _{R(RMS)}	21	24.5	28	31.5	V
Average Rectified Output Current @ T _C = 105°C	I _O	15				A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150				A
Forward Voltage, per Element @ I _F = 7.5A	V _{FM}	0.7				V
Voltage Rate of Change	dv/dt	10,000				V/μs
Peak Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage (Note 3) @ T _A = 100°C	I _{RM}	0.1 15				mA
Maximum Reverse Recovery Time (Note 2)	t _{rr}	30				ns
Typical Total Capacitance (Note 1)	C _T	250				pF
Typical Thermal Resistance Junction to Terminal	R _{JT}	3.0				°C/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150				°C

- Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 2. Reverse recovery test conditions: I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A (see figure 1).
 3. 300μs pulse width, 2% duty cycle.
 4. RoHS revision 13.2.2003. High Temperature Solder Exemption Applied, see EU Directive Annex Note 7.

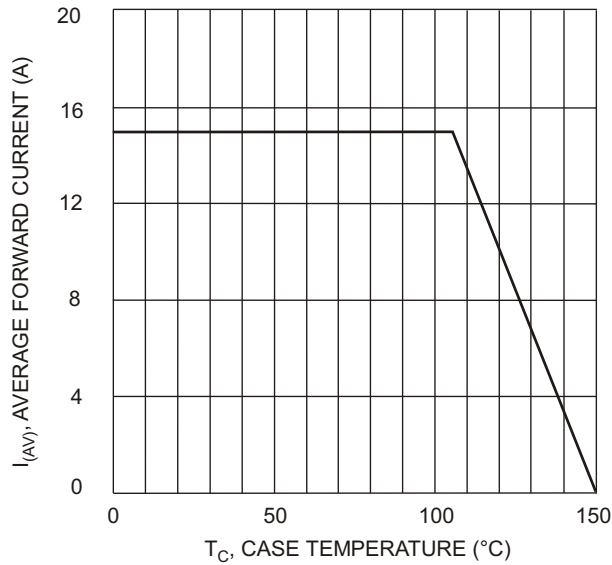


Fig. 1 Forward Current Derating Curve

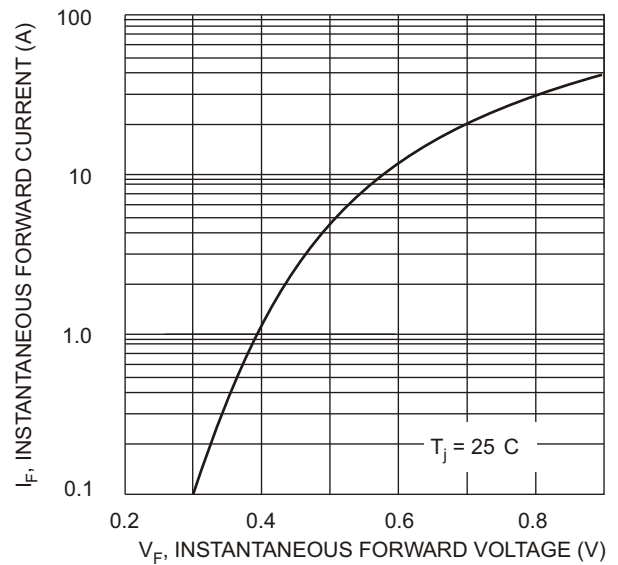


Fig. 2 Typical Fwd Characteristics, per Element

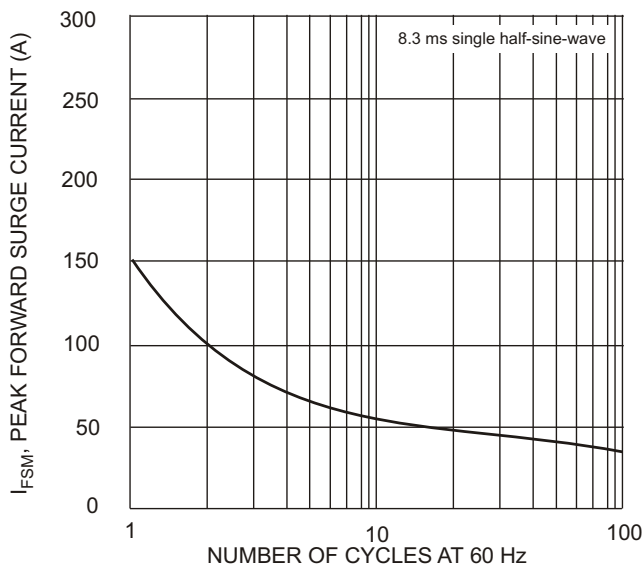


Fig. 3 Max Non-Repetitive Surge Current

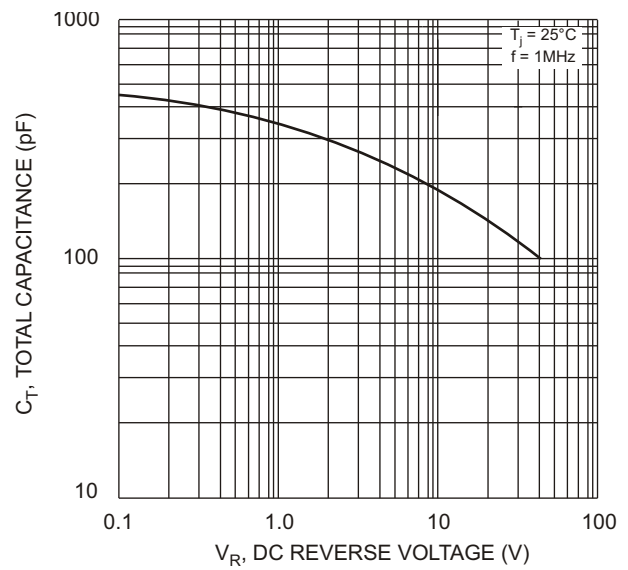


Fig. 4 Typical Total Capacitance

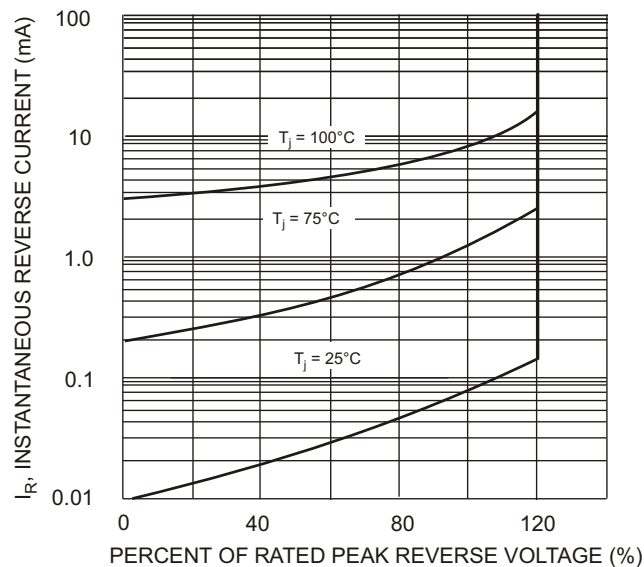
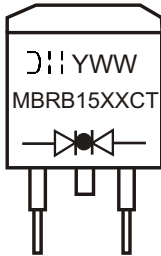


Fig. 5 Typical Reverse Characteristics, per element

Ordering Information (Note 6)

Device	Packaging	Shipping
MBRB1530CT-T	D ² PAK	800/Tape & Reel, 13-inch
MBRB1535CT-T	D ² PAK	800/Tape & Reel, 13-inch
MBRB1540CT-T	D ² PAK	800/Tape & Reel, 13-inch
MBRB1545CT-T	D ² PAK	800/Tape & Reel, 13-inch

Notes: 6. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

MBRB15XXCT = Product type marking code where
XX = 30, 35, 40 or 45, depending on device type
Diodes logo = Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52

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