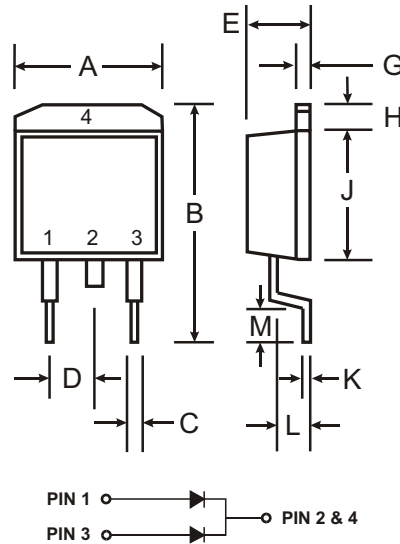



Features

- 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)**



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		

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 
- Polarity: See Diagram
- Marking: See Page 3
- Weight: 1.7 grams (approximate)

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.

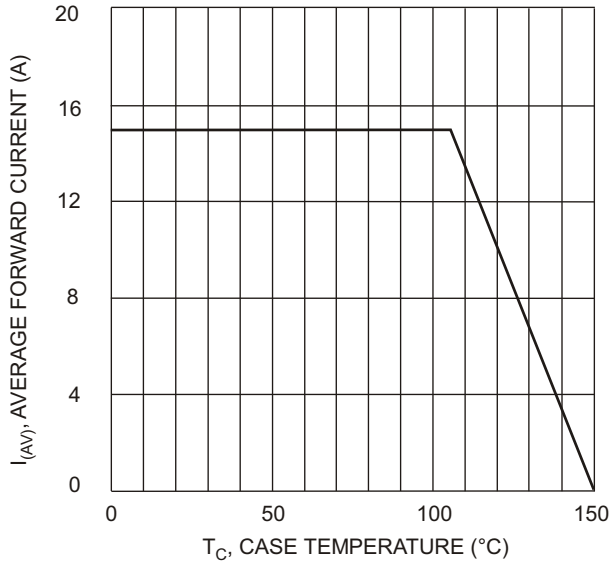


Fig. 1 Forward Current Derating Curve

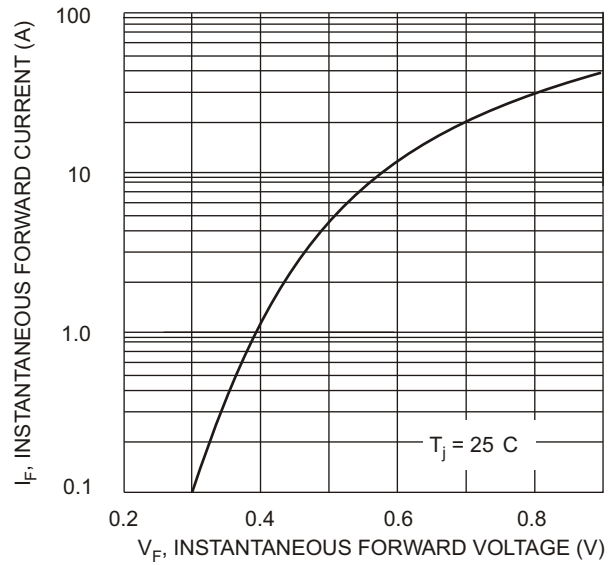


Fig. 2 Typical Fwd Characteristics, per Element

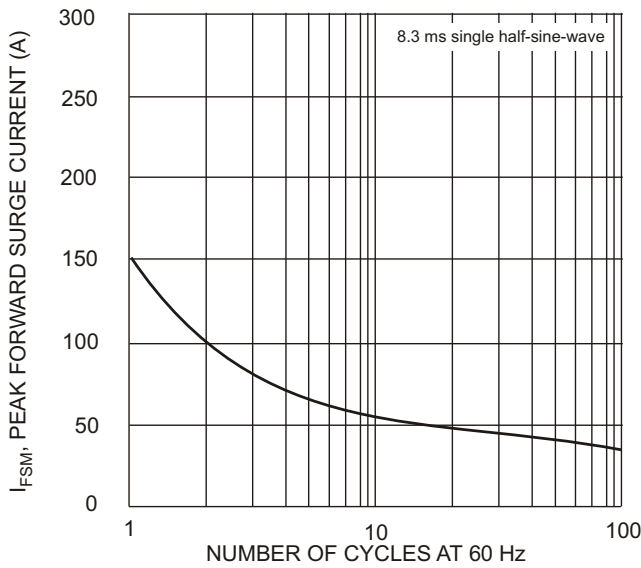


Fig. 3 Max Non-Repetitive Surge Current

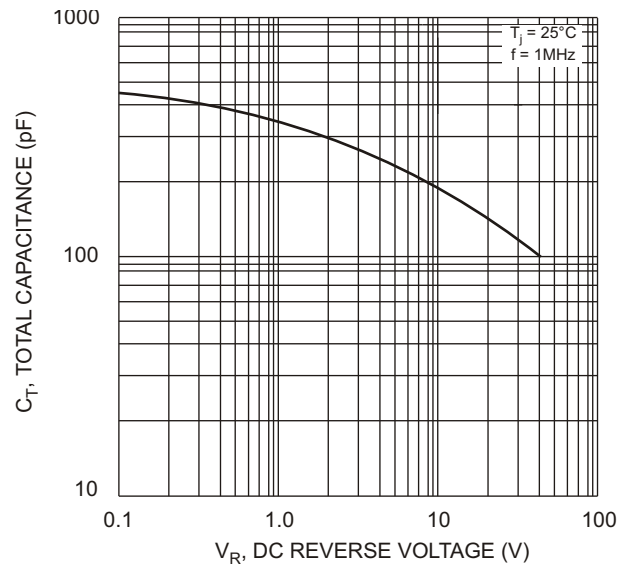


Fig. 4 Typical Total Capacitance

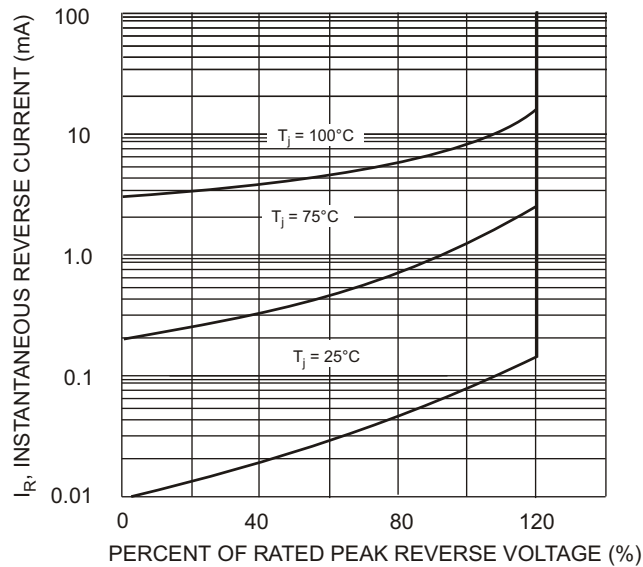


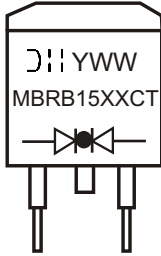
Fig. 5 Typical Reverse Characteristics, per element

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
 ⎓ = 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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