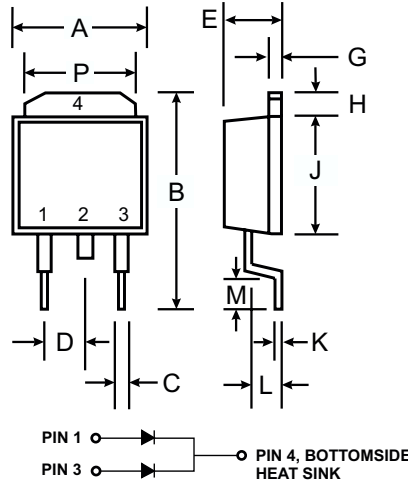


Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- Very Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, OR'ing, and Polarity Protection Applications

Mechanical Data

- Case: DPAK Molded Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: Type Number (See Page 3)
- Weight: 0.4 grams (approx.)
- Ordering Information (See Page 3)



DPAK		
Dim	Min	Max
A	6.3	6.7
B	—	10
C	0.3	0.8
D	2.3 Nominal	
E	2.1	2.5
G	0.4	0.6
H	1.2	1.6
J	5.3	5.7
K	0.5 Nominal	
L	1.3	1.8
M	1.0	—
P	5.1	5.5
All Dimensions in mm		

Maximum Ratings @ 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	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{R(RM)} V _{R(RWM)} V _R	60	V
RMS Reverse Voltage	V _{R(RMS)}	42	V
Average Rectified Output Current @ T _C = 120°C, Per Leg Per Package	I _O	2 4	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load Per Leg (JEDEC Method)	I _{FSM}	60	A
Typical Thermal Resistance Junction to Case Per Leg (Note 1)	R _{θJC}	6	°C/W
Typical Thermal Resistance Junction to Ambient Per Leg (Note 1)	R _{θJA}	80	°C/W
Operating Temperature Range	T _j	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

- Notes: 1. Device mounted on PC board with 14mm² (.013mm thick) copper pad areas.
2. Short duration test pulse used to minimize self-heating effect.

Electrical Characteristics Per Leg @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	60	—	—	V	$I_R = 100\mu\text{A}$
Forward Voltage (Note 2)	V_{FM}	—	—	650 585 780 695	mV	$I_F = 2\text{A}, T_C = 25^\circ\text{C}$ $I_F = 2\text{A}, T_C = 125^\circ\text{C}$ $I_F = 4\text{A}, T_C = 25^\circ\text{C}$ $I_F = 4\text{A}, T_C = 125^\circ\text{C}$
Reverse Current (Note 2)	I_{RM}	—	—	100 10	μA mA	$V_R = 60\text{V}, T_C = 25^\circ\text{C}$ $V_R = 60\text{V}, T_C = 125^\circ\text{C}$
Total Capacitance	C_T	—	—	180	pF	$f = 1\text{MHz}, V_R = 4.0\text{VDC}$

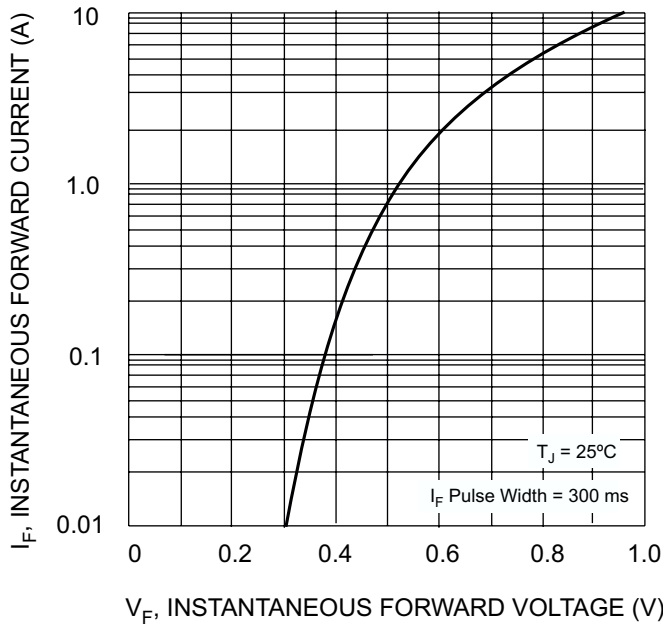


Fig. 1 Typical Forward Characteristics

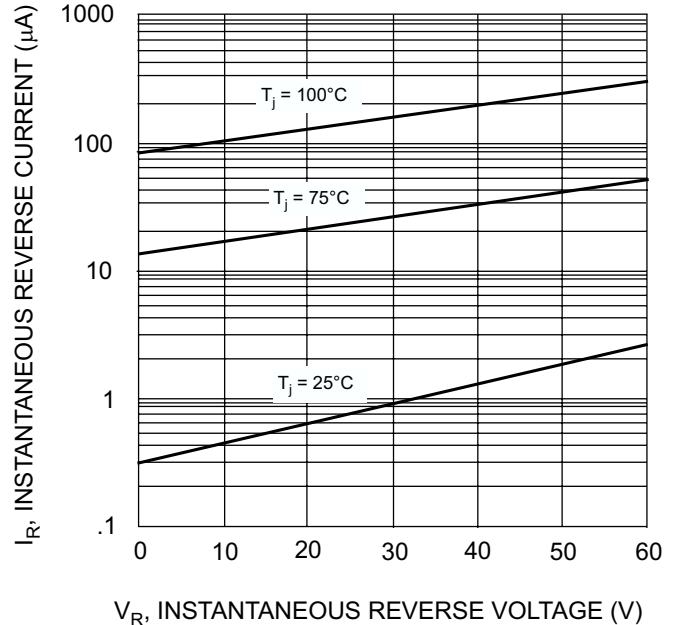


Fig. 2 Typical Reverse Characteristics Per Leg

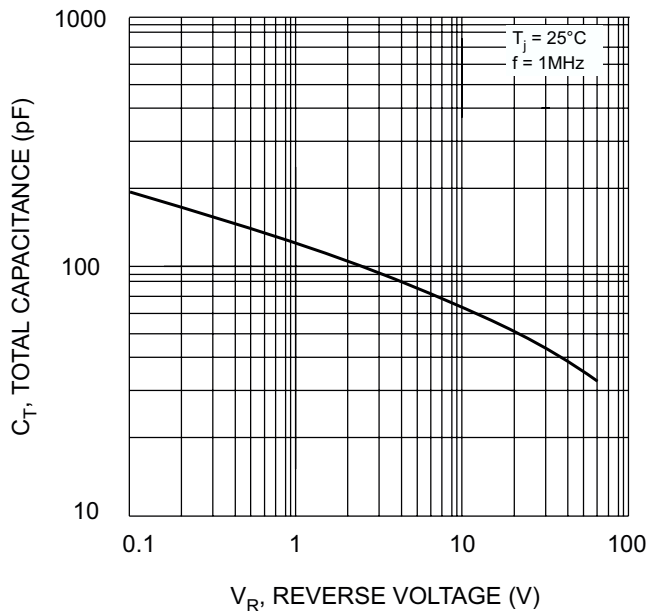


Fig. 3 Typical Total Capacitance vs. Reverse Voltage

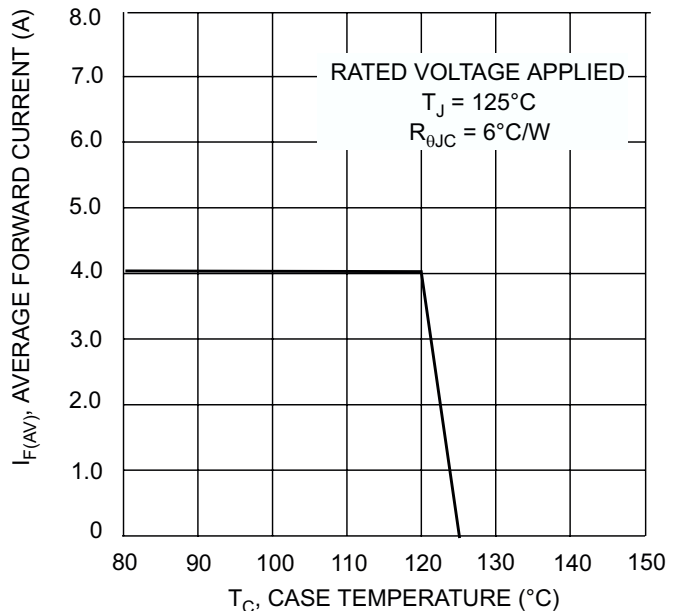
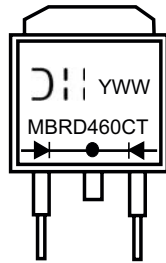


Fig. 4 Current Derating, Infinite Heatsink, per leg

Ordering Information (Note 3)

Device	Packaging	Shipping
MBRD460CT-T	DPAK	2500/Tape & Reel

- Notes:
1. Device mounted on PC board with 14mm² (.013mm thick) copper pad areas.
 2. Short duration test pulse used to minimize self-heating effect.
 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

MBRD460CT = Product type marking code
D||| = Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52