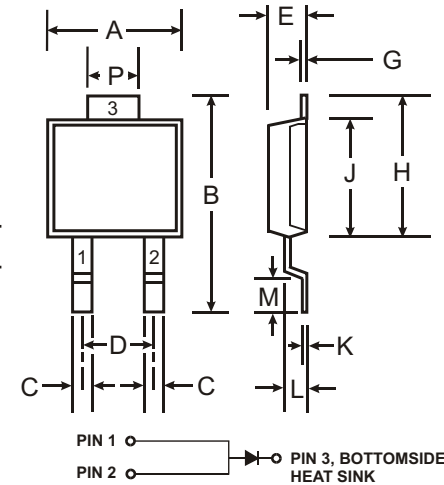


Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- Low Reverse Current
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: POWERMITE®3, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Moisture sensitivity: Level 1 per J-STD-020A
- Polarity: See Diagram
- Marking: Type Number
- Weight: 0.072 grams (approx.)



POWERMITE®3		
Dim	Min	Max
A	4.03	4.09
B	6.40	6.61
C	.889 NOM	
D	1.83 NOM	
E	1.10	1.14
G	.178 NOM	
H	5.01	5.17
J	4.37	4.43
K	.178 NOM	
L	.71	.77
M	.36	.46
P	1.73	1.83
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 _{RRM} V _{RWM} V _R	60	V
RMS Reverse Voltage	V _{R(RMS)}	42	V
Average Rectified Output Current (See also figure 4)	I _O	7	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method) @ T _C = 55°C	I _{FSM}	100	A
Typical Thermal Resistance Junction to Soldering Point	R _{θJS}	2.5	°C/W
Operating Temperature Range	T _J	-65 to +125	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V _{(BR)R}	60	—	—	V	I _R = 0.5mA
Forward Voltage (Note 1)	V _F	—	0.49 0.38 0.57 0.46	0.52 — 0.60 —	V	I _F = 3.5A, T _J = 25°C I _F = 3.5A, T _J = 125°C I _F = 7A, T _J = 25°C I _F = 7A, T _J = 125°C
Reverse Current (Note 1)	I _R	—	5 10	200 20	μA mA	T _J = 25°C, V _R = 60V T _J = 125°C, V _R = 60V
Total Capacitance	C _T	—	375	—	pF	f = 1.0MHz, V _R = 4.0V DC

Notes: 1. Short duration test pulse used to minimize self-heating effect.

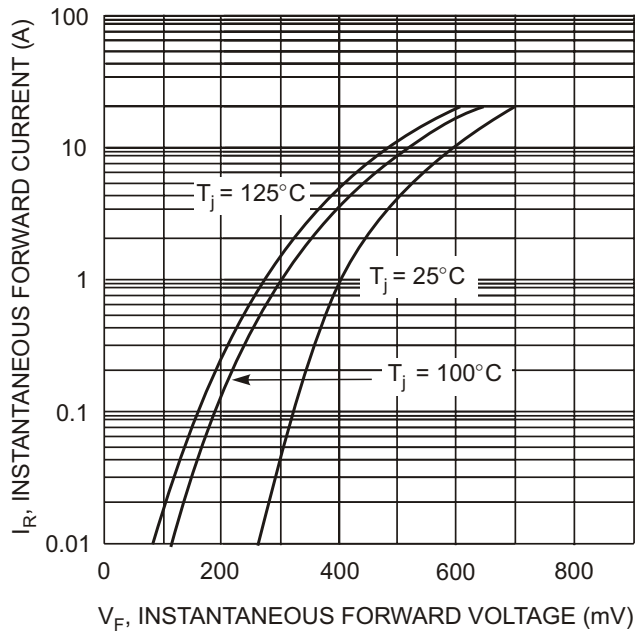


Fig. 1 Typical Forward Characteristics

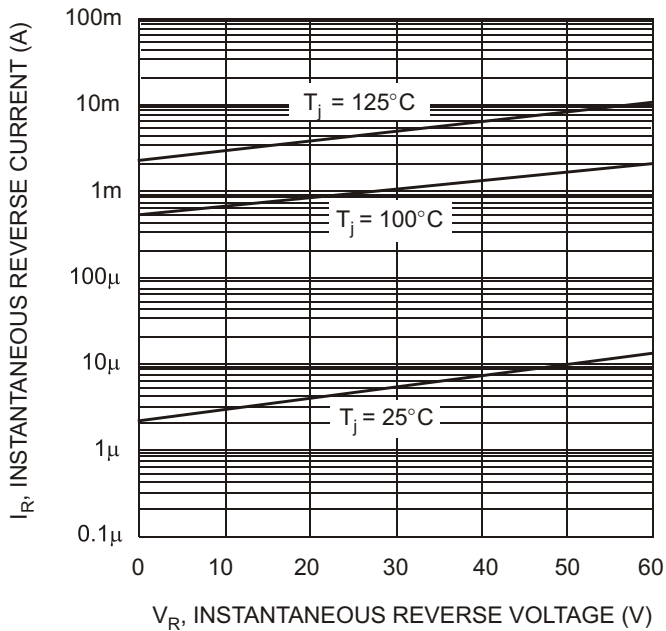


Fig. 2 Typical Reverse Characteristics

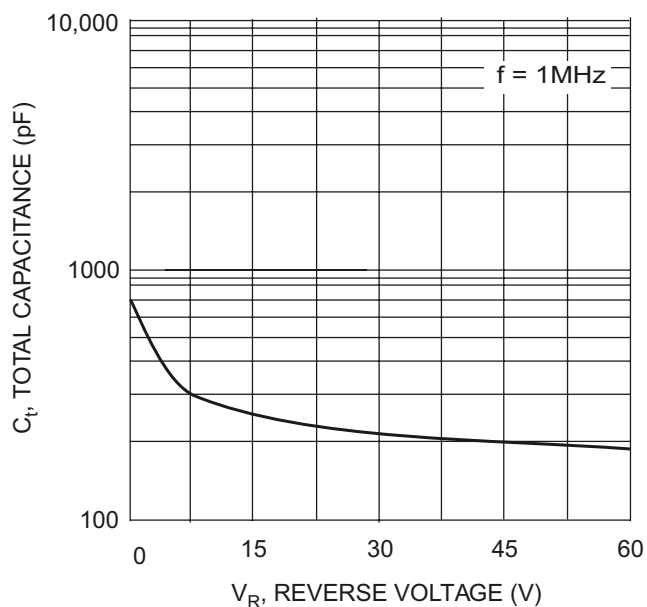
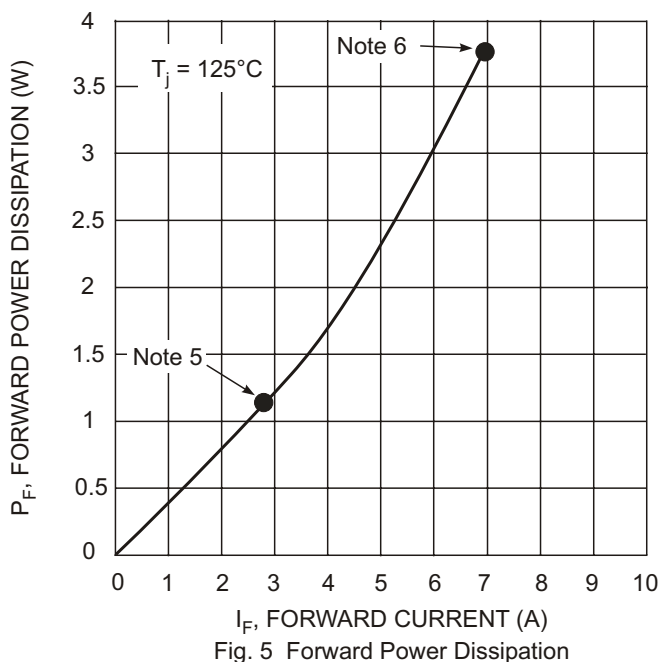
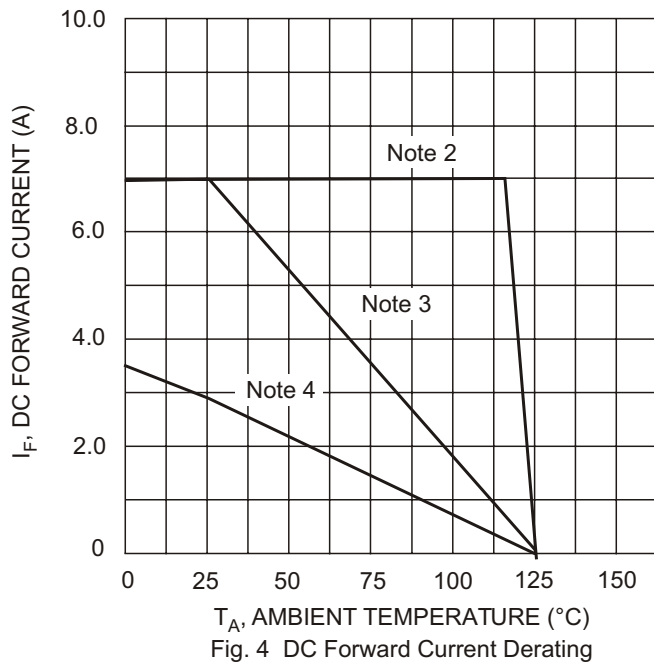


Fig. 3 Typical Total Capacitance vs. Reverse Voltage

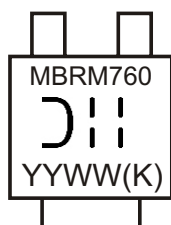


Ordering Information (Note 7)

Device	Packaging	Shipping
MBRM760-13	POWERMITE®3	5000/Tape & Reel

- Notes:
2. $T_A = T_{\text{SOLDERING POINT}}$, $R_{\theta JS} = 2.5^\circ\text{C/W}$, $R_{\theta SA} = 0^\circ\text{C/W}$.
 3. Device mounted on GETEK substrate, 2"x2", 2 oz. copper, double-sided, cathode pad dimensions 0.75" x 1.0", anode pad dimensions 0.25" x 1.0". $R_{\theta JA}$ in range of 25-30°C/W.
 4. Device mounted on FR-4 substrate, 2"x2", 2 oz. copper, single-sided, pad layout as per Diodes Inc. suggested pad layout document AP02001 which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>. $R_{\theta JA}$ in range of 85-90°C/W.
 5. Maximum power dissipation when the device is mounted in accordance to the conditions described in Note 4.
 6. Maximum power dissipation when the device is mounted in accordance to the conditions described in Note 3.
 7. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



MBRM760 = Product type marking code
 D||| = Manufacturers' code marking
 YYWW = Date code marking
 YY = Last digit of year ex: 2 for 2002
 WW = Week code 01 to 52
 (K) = Factory Designator

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