

Preliminary Data Sheet
POWERTAP II
SWITCHMODE™ Power Rectifiers

... using the Schottky Barrier principle with a platinum barrier metal. These state-of-the-art devices have the following features:

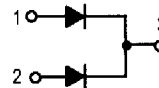
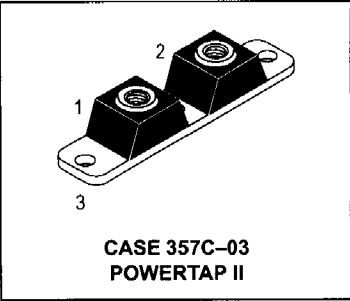
- Dual Diode Construction — May Be Paralleled for Higher Current Output
- Guardring for Stress Protection
- Low Forward Voltage
- 175°C Operating Junction Temperature
- Guaranteed Reverse Avalanche

Mechanical Characteristics:

- Case: Epoxy, Molded with metal heatsink base
- Weight: 80 grams (approximately)
- Finish: All External Surfaces Corrosion Resistant
- Top Terminal Torque: 25–40 lb-in max
- Base Plate Torques: See procedure given in the Package Outline Section
- Shipped 25 units per foam
- Marking: B30045T, B30060T

MBRP30045CT
MBRP30060CT

**SCHOTTKY BARRIER
RECTIFIERS**
300 AMPERES
45 to 60 VOLTS



MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Peak Repetitive Reverse Voltage	V _{RRM}		Volts
Working Peak Reverse Voltage	V _{RWM}	45	
DC Blocking Voltage	V _R	60	
Average Rectified Forward Current (Rated V _R) T _C = 140°C	I _{F(AV)}	300	Amps
		150	
Peak Repetitive Forward Current, Per Leg (Rated V _R , Square Wave, 20 kHz), T _C = 140°C	I _{FRM}	300	Amps
Non-Repetitive Peak Surge Current Per Leg (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I _{FSM}	2500	Amps
Peak Repetitive Reverse Current, Per Leg (2.0 μs, 1.0 kHz) See Figure 6.	I _{RRM}	2.0	Amps
Operating Junction Temperature	T _J	-55 to +175	°C
Storage Temperature	T _{stg}	-55 to +150	°C
Voltage Rate of Change (Rated V _R)	dv/dt	10000	V/μs

THERMAL CHARACTERISTICS PER LEG

Thermal Resistance, Junction to Case	R _{θJC}	0.45	°C/W
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ELECTRICAL CHARACTERISTICS PER LEG

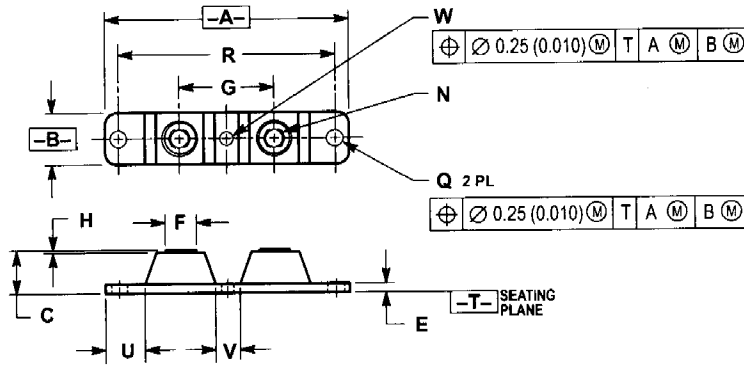
Instantaneous Forward Voltage (1) (i _F = 150 Amps, T _J = 25°C)	v _F	0.70	Volts
(i _F = 300 Amps, T _J = 25°C)		0.82	
(i _F = 150 Amps, T _J = 25°C)		0.79	
(i _F = 300 Amps, T _J = 25°C)		0.89	
Instantaneous Reverse Current (1) (Rated dc Voltage, T _J = 125°C)	i _R	75	mA
(Rated dc Voltage, T _J = 25°C)		0.8	



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MBRP30045CT MBRP30060CT

PACKAGE DIMENSIONS



- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
 2. CONTROLLING DIMENSION: INCH.
 3. TERMINAL PENETRATION: 5.97 (0.235) MAXIMUM.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	3.450	3.635	87.63	92.33
B	0.700	0.810	17.78	20.57
C	0.615	0.640	15.53	16.26
E	0.120	0.130	3.05	3.30
F	0.435	0.445	11.05	11.30
G	1.370	1.380	34.80	35.05
H	0.007	0.030	0.18	0.76
N	1/4-20UNC-2B	1/4-20UNC-2B		
Q	0.270	0.285	6.86	7.32
R	31.50 BSC		80.01 BSC	
U	0.600	0.630	15.24	16.00
V	0.330	0.375	8.39	9.52
W	0.170	0.190	4.32	4.82

**CASE 357C-03
ISSUE C**