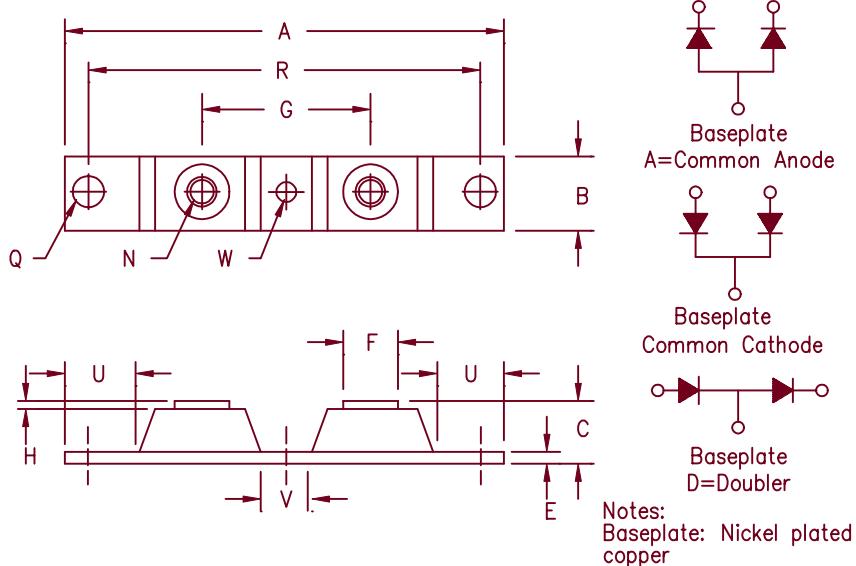


# Schottky PowerMod

## CPT30060



Dim.		Inches	Millimeters			
		Min.	Max.	Min.	Max.	Notes
A	---	3.630	---	92.20		
B	0.700	0.800	17.78	20.32		
C	---	0.630	---	16.00		
E	0.120	0.130	3.05	3.30		
F	0.490	0.510	12.45	12.95		
G	1.375	BSC	34.92	BSC		
H	0.010	---	0.25	---		
N	---	---	---	---		1/4-20
Q	0.275	0.290	6.99	7.37		Dia.
R	3.150	BSC	80.01	BSC		
U	0.600	---	15.24	---		
V	0.312	.340	7.92	8.64		
W	0.180	0.195	4.57	4.95		Dia.

Microsemi Catalog Number	Industry Part Number	Working Reverse Voltage	Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT30060*	MBRP20060CT	60V		60V
	MBRP30060CT			
	MBR20060CT			
	MBR30060CT			

\*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 300 Amperes/60 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

### Electrical Characteristics

Average forward current per pkg	F(AV)	300 Amps	T <sub>C</sub> = 127°C, Square wave, R <sub>θJC</sub> = 0.20°C/W
Average forward current per leg	F(AV)	150 Amps	T <sub>C</sub> = 127°C, Square wave, R <sub>θJC</sub> = 0.40°C/W
Maximum surge current per leg	FSM	2000 Amps	8.3ms, half sine, T <sub>J</sub> = 175°C
Maximum repetitive reverse current per leg	R(OV)	2 Amps	f = 1 KHZ, 25°C, 1 μsec square wave
Max peak forward voltage per leg	V <sub>FM</sub>	.82 Volts	FM = 200A: T <sub>J</sub> = 25°C*
Max peak forward voltage per leg	V <sub>FM</sub>	.68 Volts	FM = 200A: T <sub>J</sub> = 175°C*
Max peak reverse current per leg	RM	75 mA	V <sub>RRM</sub> , T <sub>J</sub> = 125°C*
Max peak reverse current per leg	RM	4.0 mA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Typical junction capacitance per leg	C <sub>J</sub>	4300 pF	V <sub>R</sub> = 5.0V, T <sub>C</sub> = 25°C

\*Pulse test: Pulse width 300 μsec, Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Max thermal resistance per leg	R <sub>θJC</sub>	0.40°C/W Junction to case
Max thermal resistance per pkg	R <sub>θJC</sub>	0.20°C/W Junction to case
Typical thermal resistance (greased)	R <sub>θCS</sub>	0.08°C/W Case to sink
Terminal Torque		35-50 inch pounds
Mounting Base Torque (outside holes)		30-40 inch pounds
Mounting Base Torque (center hole) center hole must be torqued first		8-10 inch pounds
Weight		2.8 ounces (75 grams) typical

# CPT30060

Figure 1  
Typical Forward Characteristics – Per Leg

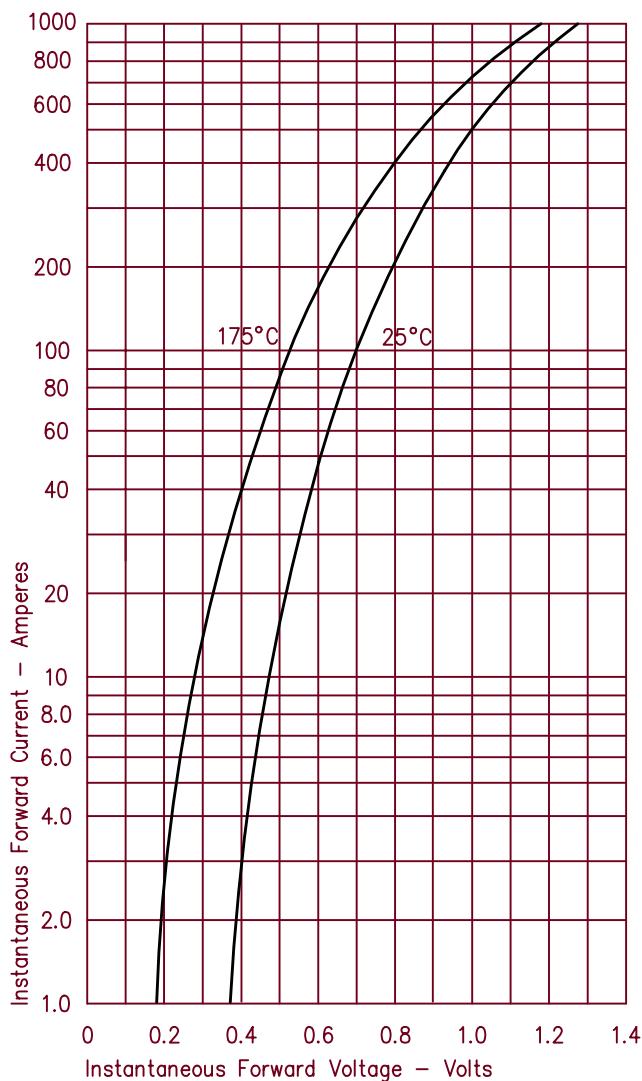


Figure 3  
Typical Junction Capacitance – Per Leg

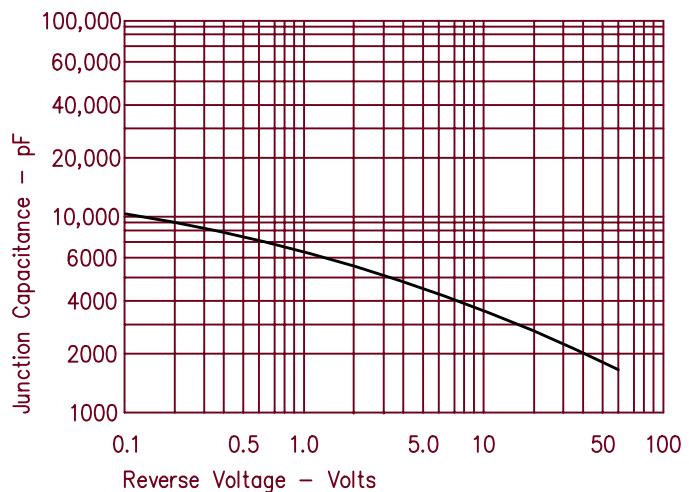


Figure 4  
Forward Current Derating – Per Leg

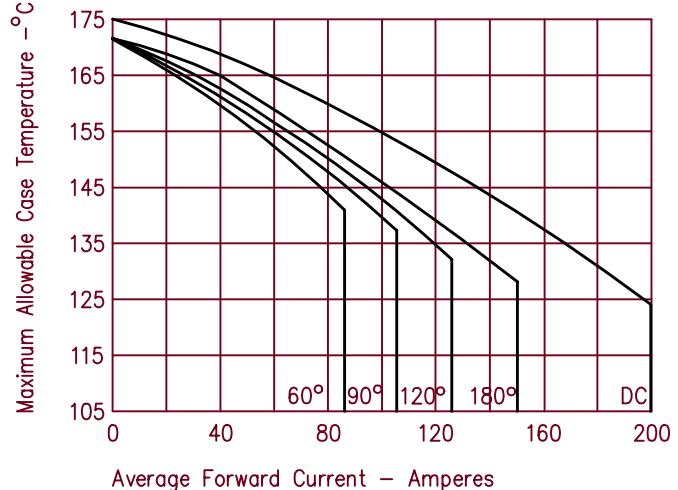


Figure 2  
Typical Reverse Characteristics – Per Leg

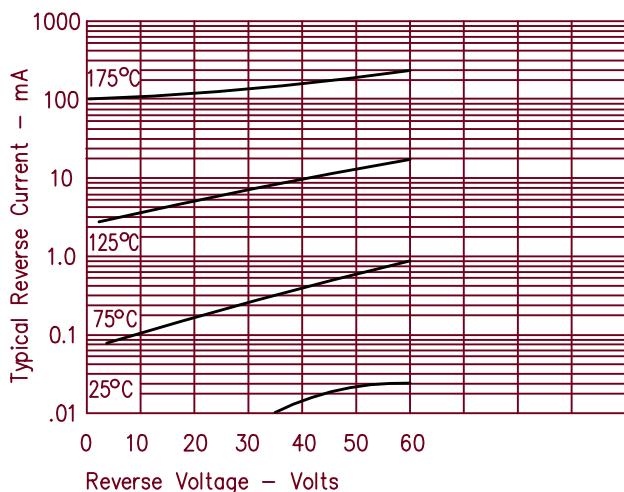


Figure 5  
Maximum Forward Power Dissipation – Per Leg

