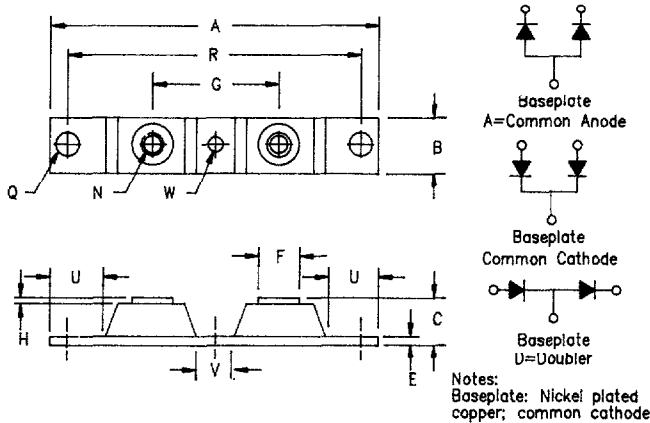


# Schottky PowerMod

## CPT50120 — CPT50140



Dim.	Inches		Millimeters		Notes
	Min.	Max.	Min.	Max.	
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	0.340	7.92	8.64	
W	0.180	0.195	4.57	4.95	Dia.

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT50120*	20V	20V
CPT50125*	25V	25V
CPT50130*	30V	30V
CPT50135*	35V	35V
CPT50140*	40V	40V

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

- Schottky Barrier Rectifier
- Guard Ring Protection
- VRRM 20 to 40 Volts
- 150°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics		
Average forward current per pkg	I <sub>F(AV)</sub> 500 Amps	T <sub>C</sub> = 79°C, Square wave, R <sub>θJC</sub> = 0.12°C/W
Average forward current per leg	I <sub>F(AV)</sub> 250 Amps	T <sub>C</sub> = 79°C, Square wave, R <sub>θJC</sub> = 0.24°C/W
Maximum surge current per leg	I <sub>FSM</sub> 5000 Amps	8.3ms, half sine, T <sub>J</sub> = 150°C
Maximum repetitive reverse current per leg	I <sub>R(OV)</sub> 2 Amps	f = 1 KHZ, 25°C, 1 usec square wave
Max peak forward voltage per leg	V <sub>FM</sub> 0.55 Volts	I <sub>FM</sub> = 250A; T <sub>J</sub> = 25°C
Max peak forward voltage per leg	V <sub>FM</sub> 0.49 Volts	I <sub>FM</sub> = 250A; T <sub>J</sub> = 175°C
Max peak reverse current per leg	I <sub>RM</sub> 4.0 A	V <sub>RRM</sub> , T <sub>J</sub> = 125°C*
Max peak reverse current per leg	I <sub>RM</sub> 12.0 mA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Typical junction capacitance	C <sub>J</sub> 10500 pF	V <sub>R</sub> = 5.0V, T <sub>C</sub> = 25°C

\*Pulse test: Pulse width 300 usec. Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temp range	T <sub>STG</sub>	-40°C to 150°C
Operating junction temp range	T <sub>J</sub>	-40°C to 150°C
Max thermal resistance	R <sub>θJC</sub>	0.24°C/W Junction to case
Typical thermal resistance	R <sub>θCS</sub>	0.08°C/W Case to sink
Terminal Torque		50 inch pounds maximum
Mounting Base Torque (outside holes)		40 inch pounds maximum
Mounting Base Torque (center hole)		10 inch pounds maximum
center hole must be torqued first		
Weight		2.8 ounces (78.3 grams) typical

**Microsemi Corp.**  
**Colorado**

# CPT50120 — CPT50140



Figure 1  
Typical Forward Characteristics — Per Leg

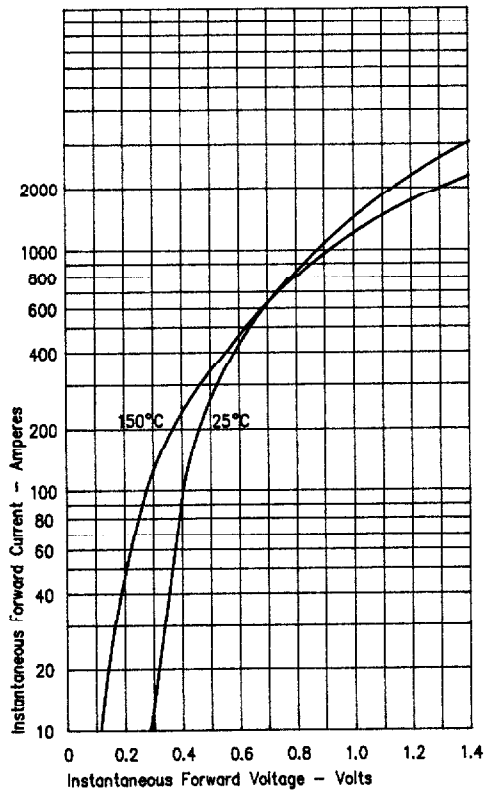


Figure 3  
Typical Junction Capacitance — Per Leg

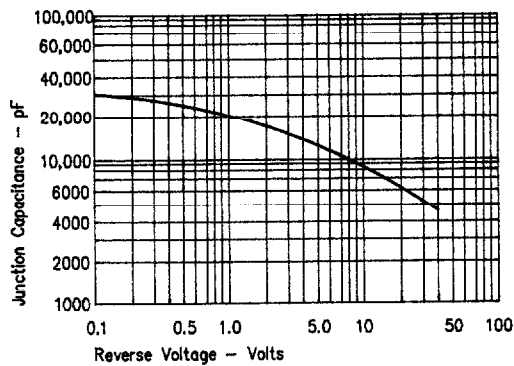


Figure 4  
Forward Current Derating — Per Leg

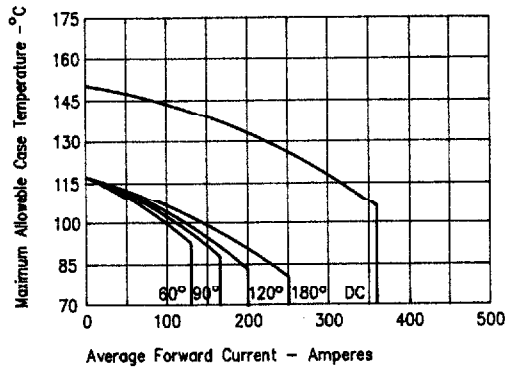


Figure 2  
Typical Reverse Characteristics — Per Leg

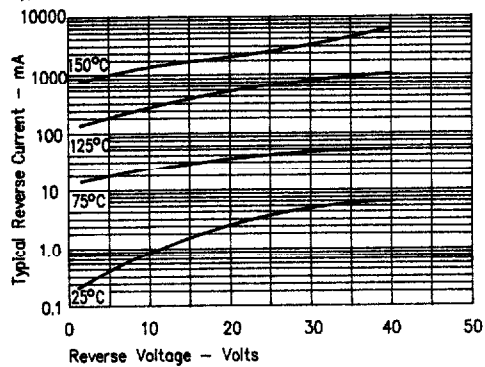


Figure 5  
Maximum Forward Power Dissipation — Per Leg

