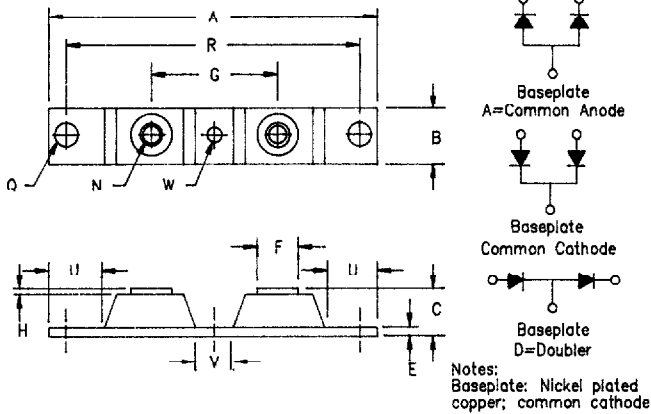


# Schottky PowerMod

## CPT30035 — CPT30050



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
CPT30035*	35V	35V
CPT30040*	40V	40V
CPT30045*	45V	45V
CPT30050*	50V	50V

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

- Schottky Barrier Rectifier
- Guard Ring Protection
- Common Cathode Center Tap
- 300 Amperes/35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics		
Average forward current per pkg	I <sub>F(AV)</sub> 300 Amps	T <sub>C</sub> = 136°C, Square wave, R <sub>θJC</sub> = 0.20°C/W
Average forward current per leg	I <sub>F(AV)</sub> 150 Amps	T <sub>C</sub> = 136°C, Square wave, R <sub>θJC</sub> = 0.40°C/W
Maximum surge current per leg	I <sub>FSM</sub> 2000 Amps	8.3ms, half sine, T <sub>J</sub> = 175°C
Maximum repetitive reverse current per leg	I <sub>R(RV)</sub> 2 Amps	f = 1 KHZ, 25°C
Max peak forward voltage per leg	V <sub>FM</sub> 0.70 Volts	I <sub>FM</sub> = 200A; T <sub>J</sub> = 125°C*
Max peak forward voltage per leg	V <sub>FM</sub> 0.76 Volts	I <sub>FM</sub> = 200A; T <sub>J</sub> = 25°C*
Max peak reverse current per leg	I <sub>RM</sub> 75 mA	V <sub>R(RM)</sub> , T <sub>J</sub> = 125°C*
Max peak reverse current per leg	I <sub>RM</sub> 4.0 mA	V <sub>R(RM)</sub> , T <sub>J</sub> = 25°C
Typical junction capacitance	C <sub>J</sub> 4600 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 175°C
Operating junction temp range	T <sub>J</sub>	-40°C to 175°C
Max thermal resistance per leg	R <sub>θJC</sub>	0.40°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
Weight		2.8 ounces (75 grams) typical

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

# CPT30035 — CPT30050



Figure 1  
Typical Forward Characteristics — Per Leg

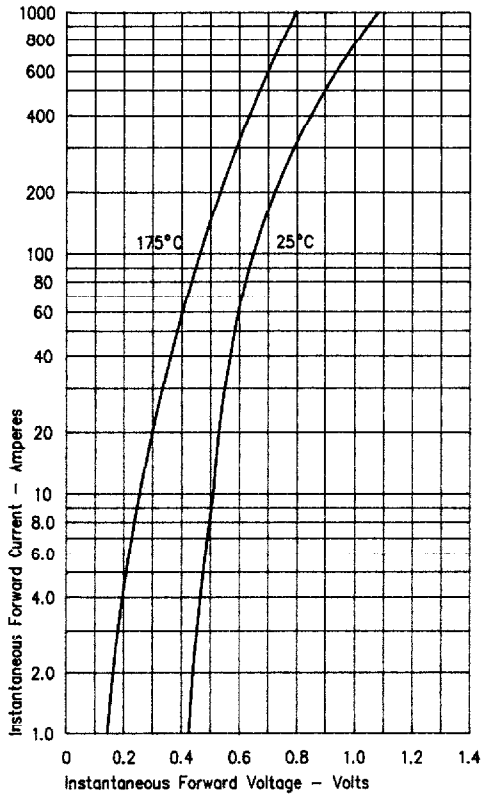


Figure 3  
Typical Junction Capacitance — Per Leg

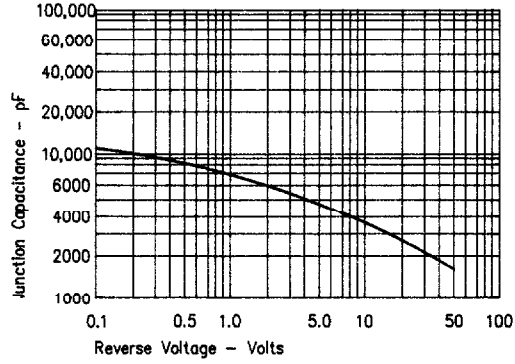


Figure 4  
Forward Current Derating — Per Leg

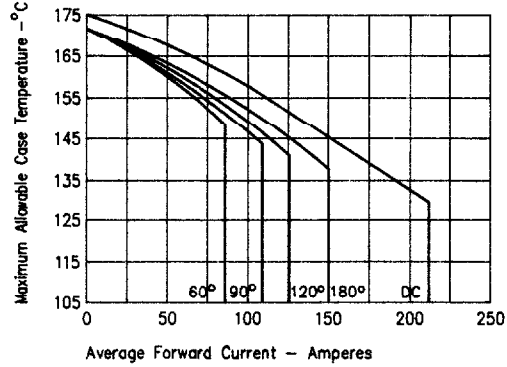


Figure 2  
Typical Reverse Characteristics — Per Leg

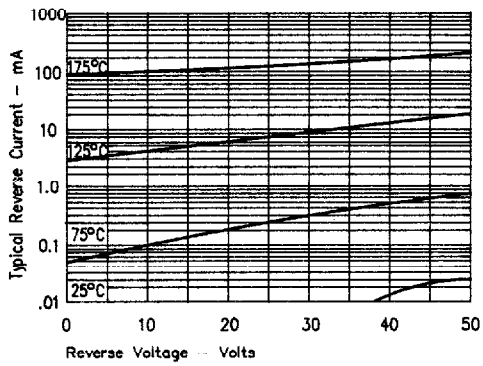


Figure 5  
Maximum Forward Power Dissipation — Per Leg

