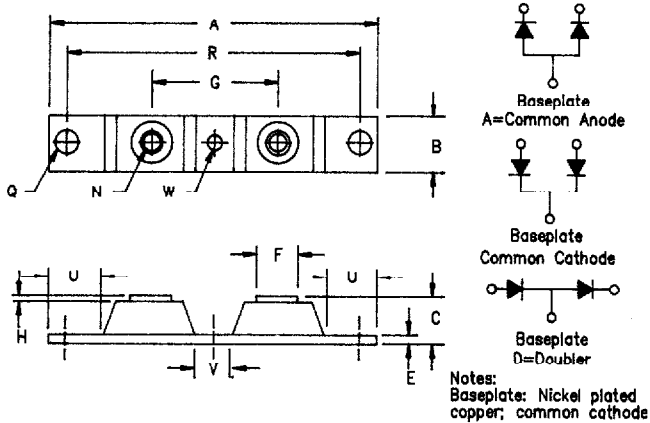


Schottky PowerMod

CPT50035 — CPT50050



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	0.185	4.57	4.95 Dia.

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT50035*	35V	35V
CPT50040*	40V	40V
CPT50045*	45V	45V
CPT50050*	50V	50V

*Add SUFFIX A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- VRRM 35 to 50 volts
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

Average forward current per pkg	I _{F(AV)} 500 Amps	T _C = 134°C, Square wave, R _{θJC} = 0.12°C/W
Average forward current per leg	I _{F(AV)} 250 Amps	T _C = 134°C, Square wave, R _{θJC} = 0.24°C/W
Maximum surge current per leg	I _{FSM} 5000 Amps	8.3ms, half sine, T _J = 175°C
Maximum repetitive reverse current per leg	I _{R(OV)} 2 Amps	f = 1 KHZ, 25°C, 1 μsec square wave
Max peak forward voltage per leg	V _{FM} 0.70 Volts	I _{FM} = 250A; T _J = 25°C
Max peak forward voltage per leg	V _{FM} 0.55 Volts	I _{FM} = 250A; T _J = 175°C
Max peak reverse current per leg	I _{RM} 200 mA	V _{RRM} , T _J = 125°C*
Max peak reverse current per leg	I _{RM} 8.0 mA	V _{RRM} , T _J = 25°C
Typical junction capacitance	C _J 9800 pF	V _R = 5.0V, T _C = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T _{STG}	-40°C to 175°C
Operating junction temp range	T _J	-40°C to 175°C
Max thermal resistance	R _{θJC}	0.24°C/W Junction to case
Typical thermal resistance	R _{θCS}	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

CPT50035 — CPT50050



Figure 1
Typical Forward Characteristics - Per Leg

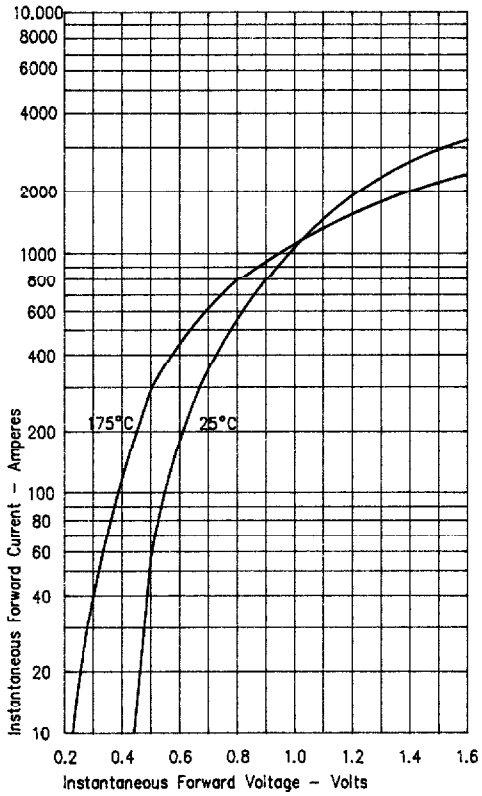


Figure 3
Typical Junction Capacitance - Per Leg

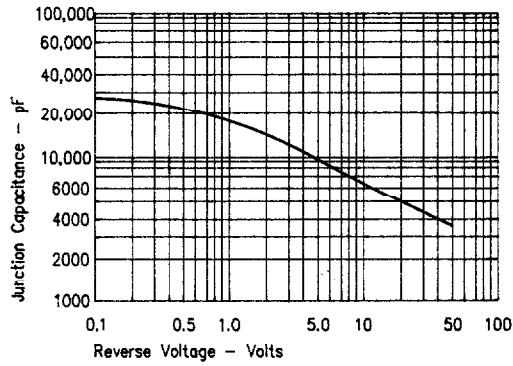


Figure 4
Forward Current Derating - Per Leg

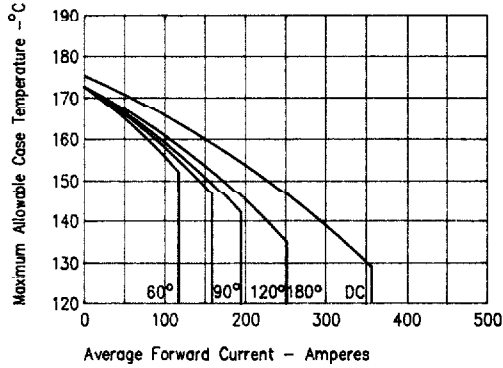


Figure 2
Typical Reverse Characteristics - Per Leg

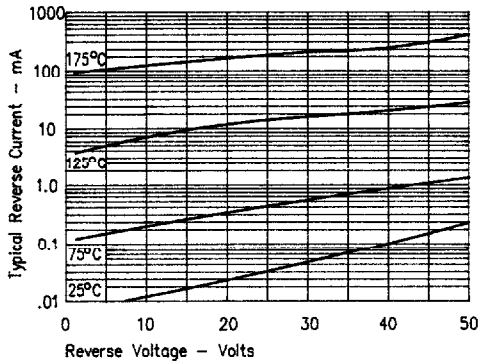


Figure 5
Maximum Forward Power Dissipation - Per Leg

