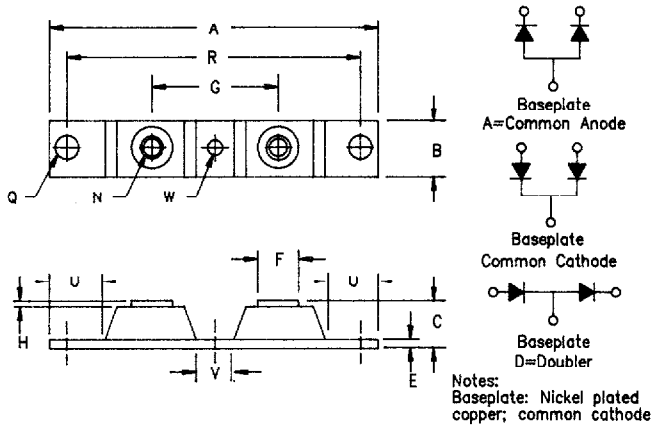


Schottky PowerMod

CPT30080, CPT30090



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
CPT30080*	80V	80V
CPT30090*	90V	90V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- VRRM 90 volts
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics		
Average forward current per pkg	I _{F(AV)} 300 Amps	T _C = 112°C, Square wave, R _{θJC} = 0.20°C/W
Average forward current per leg	I _{F(AV)} 150 Amps	T _C = 112°C, Square wave, R _{θJC} = 0.40°C/W
Maximum surge current per leg	I _{FSM} 2000 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} 0.98 Volts	I _{FM} = 200A; T _J = 25°C
Max peak forward voltage per leg	V _{FM} 0.86 Volts	I _{FM} = 200A; T _J = 175°C
Max peak reverse current per leg	I _{RM} 75 mA	V _R = 5.0V, T _J = 25°C
Max peak reverse current per leg	I _{RM} 4.0 mA	V _R = 5.0V, T _J = 125°C*
Typical junction capacitance	C _J 3000 pF	V _R = 5.0V, T _J = 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 per leg	R _{θJC}	0.40°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
Weight		2.8 ounces (78.3 grams) typical

Microsemi Corp.
Colorado

CPT30080, CPT30090



Figure 1
Typical Forward Characteristics - Per Leg

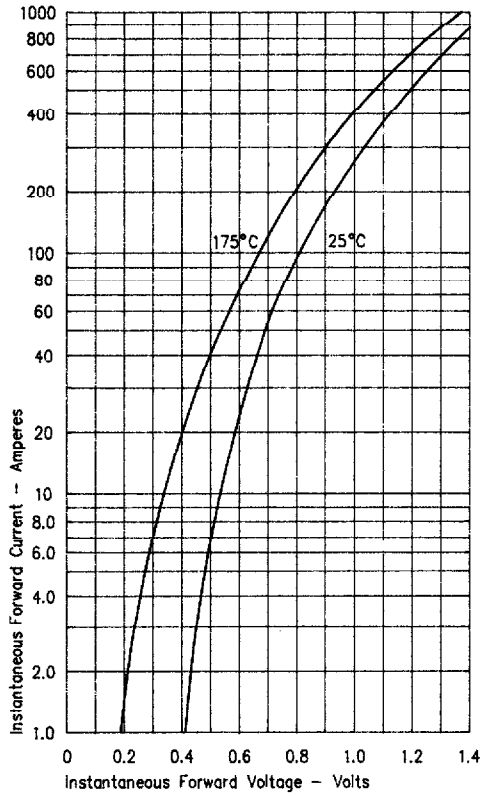


Figure 3
Typical Junction Capacitance - Per Leg

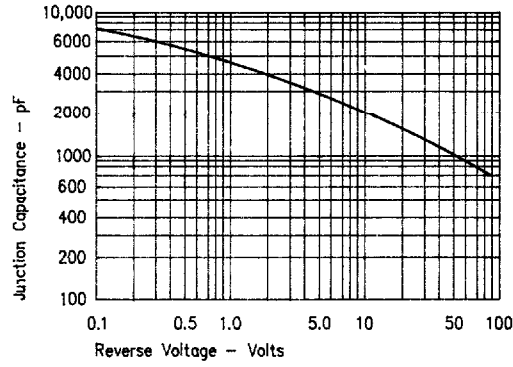


Figure 4
Forward Current Derating - Per Leg

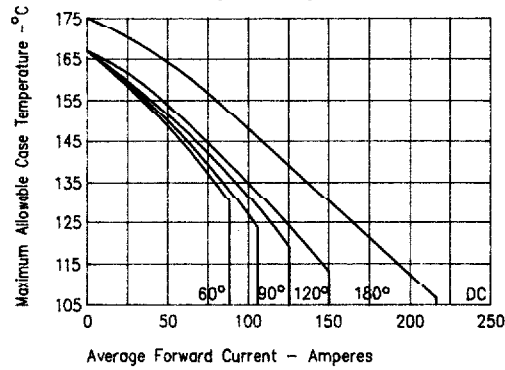


Figure 2
Typical Reverse Characteristics - Per Leg

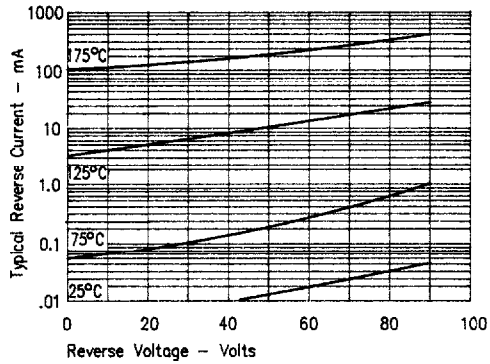
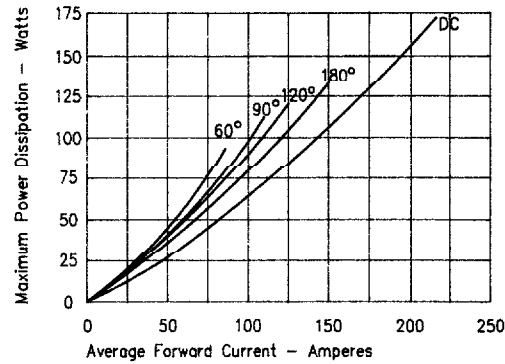
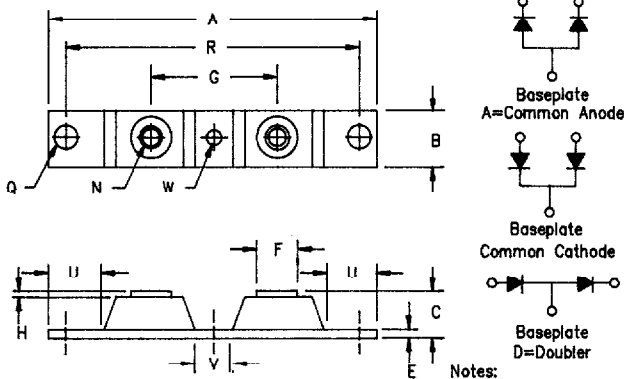


Figure 5
Maximum Forward Power Dissipation - Per Leg



Schottky PowerMod

CPT40035 — CPT40050



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 Dia.
Q	0.275	0.290	6.99	7.37	
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.

Notes:
Baseplate: Nickel plated copper, common cathode

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT40035*	35V	35V
CPT40040*	40V	40V
CPT40045*	45V	45V
CPT40050*	50V	50V

*Add Suffix A for Common Anode, D for Diabler

- 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)} 400 Amps	T _C = 127°C, Square wave, R _{θJC} = 0.16°C/W
Average forward current per leg	I _{F(AV)} 200 Amps	T _C = 127°C, Square wave, R _{θJC} = 0.32°C/W
Maximum surge current per leg	I _{FSM} 3000 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 usec square wave
Max peak forward voltage per leg	V _{FM} 0.78 Volts	I _{FM} = 200A; T _J = 25°C*
Max peak forward voltage per leg	V _{FM} 0.62 Volts	I _{FM} = 200A; T _J = 175°C*
Max peak reverse current per leg	I _{RM} 100 mA	V _{RRM, T_J} = 125°C*
Max peak reverse current per leg	I _{RM} 5.0 mA	V _{RRM, T_J} = 25°C
Typical junction capacitance	C _J 7200 pF	V _R = 5.0V, T _C = 25°C

*Pulse test: Pulse width 300 usec, 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}	0.32°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

CPT40035 — CPT40050



Figure 1
Typical Forward Characteristics — Per Leg

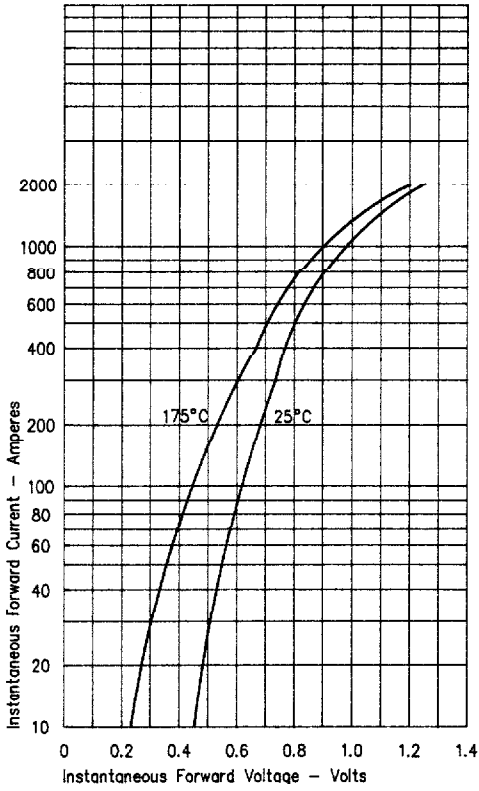


Figure 3
Typical Junction Capacitance — Per Leg

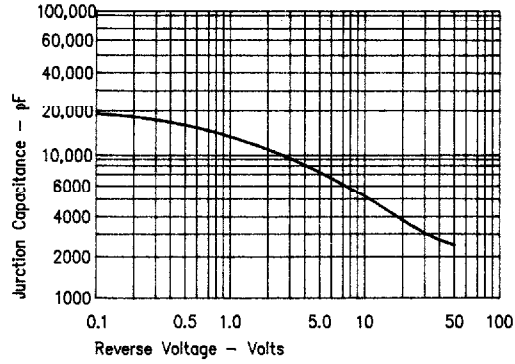


Figure 4
Forward Current Derating — Per Leg

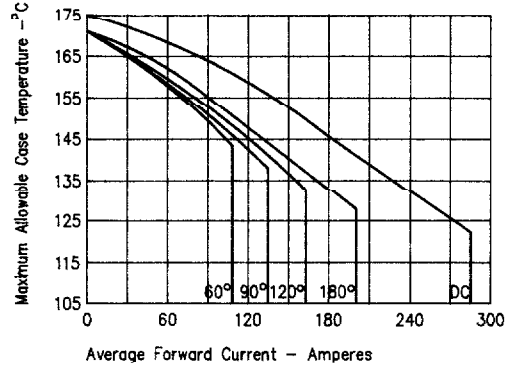


Figure 2
Typical Reverse Characteristics — Per Leg

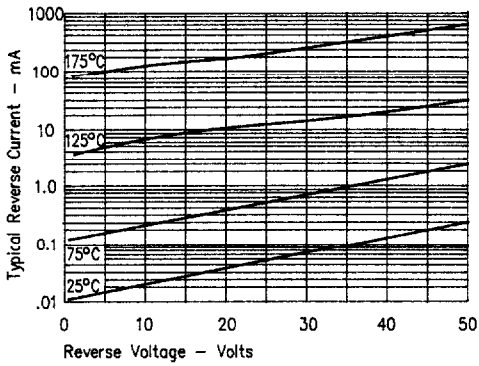


Figure 5
Maximum Forward Power Dissipation — Per Leg

