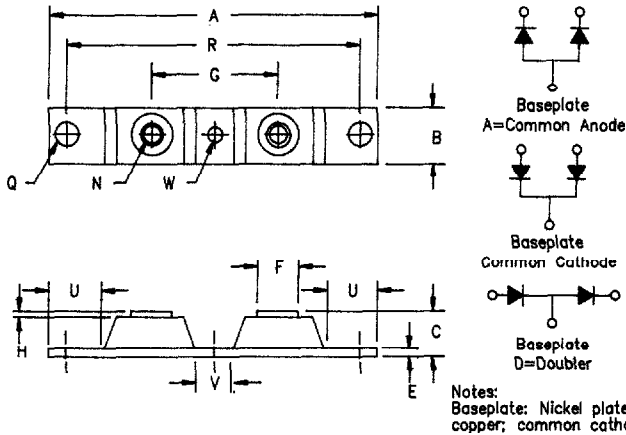


Schottky PowerMod CPT 120



Dim.	Inches		Millimeters		Notes
	Min.	Max.	Min.	Max.	
A	---	3.630	---	92.20	
B	0.700	0.800	17.78	20.32	
C	---	0.625	---	15.87	
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	---	0.050	---	1.27	
N	---	---	---	---	1/4-28
Q	0.280	0.310	6.86	7.11	Dia.
R	3.150	BSC	80.01	BSC	
U	0.600	---	15.24	---	
V	0.330	0.350	8.38	8.89	
W	0.170	0.190	4.32	4.82	Dia.
Y	46.10	BSC	1.815	BSC	

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT12035*	35V	35V
CPT12040*	40V	40V
CPT12045*	45V	45V
CPT12050*	50V	50V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring for Reverse Protection
- V_{RRM} 35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

Average forward current per pkg	I _{F(AV)} 120 Amps	T _C = 140°C, Square wave, R _{θJC} = 0.425°C/W
Average forward current per leg	I _{F(AV)} 60 Amps	T _C = 140°C, Square wave, R _{θJC} = 0.85°C/W
Maximum surge current per leg	I _{FSM} 1000 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} .63 Volts	I _{FM} = 120A: T _J = 175°C*
Max peak forward voltage per leg	V _{FM} .80 Volts	I _{FM} = 120A: T _J = 25°C*
Max peak reverse current per leg	I _{RM} 40 mA	V _{RRM} , T _J = 125°C*
Max peak reverse current per leg	I _{RM} 3 mA	V _{RRM} , T _J = 25°C
Typical reverse current per leg	I _{RM} 25 μA	V _{RRM} , T _J = 25°C
Typical junction capacitance	C _J 2700 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
Operation junction temp range	T _J	-40°C to 175°C
Max thermal resistance per leg	R _{θJC}	0.85°C/W Junction to case
Max thermal resistance per pkg	R _{θJC}	0.425°C/W Junction to case
Typical thermal resistance per pkg	R _{θJC}	0.8°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 (75 grams) typical

Microsemi Corp.
Colorado

CPT 120



Figure 1
Typical Forward Characteristics - Per Leg

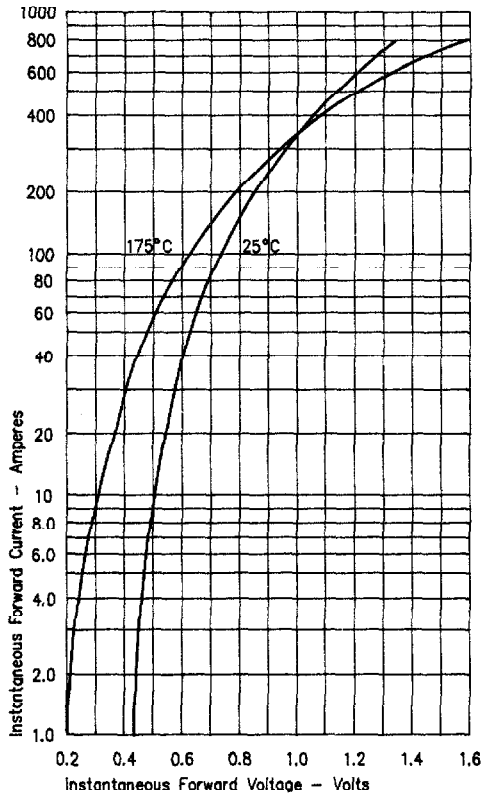


Figure 3
Typical Junction Capacitance - Per Leg

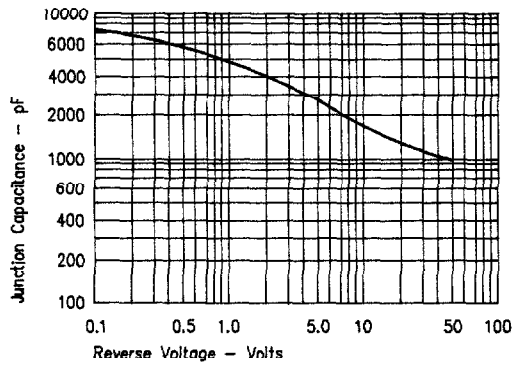


Figure 4
Forward Current Derating - Per Leg

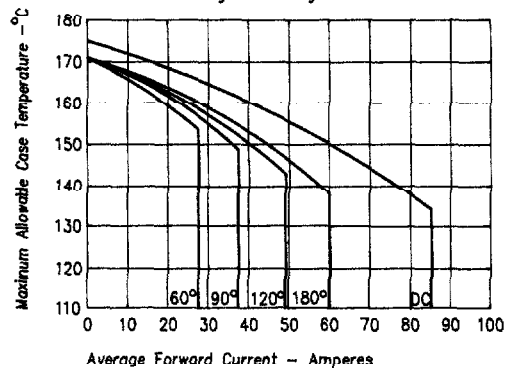


Figure 2
Typical Reverse Characteristics - Per Leg

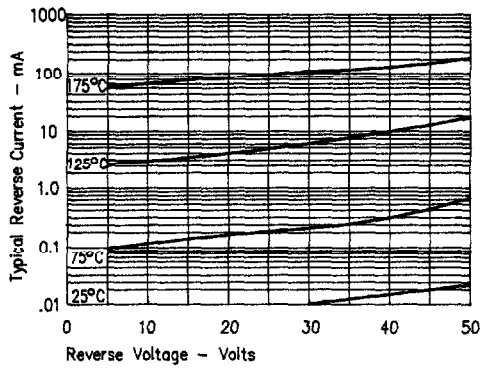


Figure 5
Maximum Forward Power Dissipation - Per Leg

