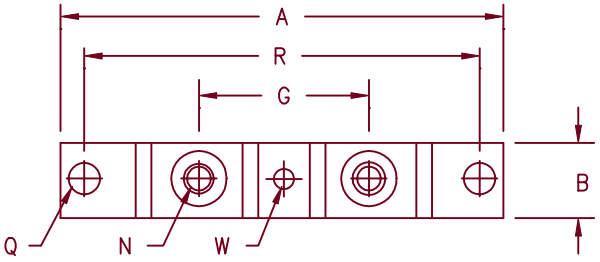
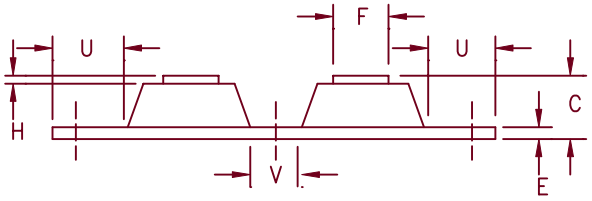
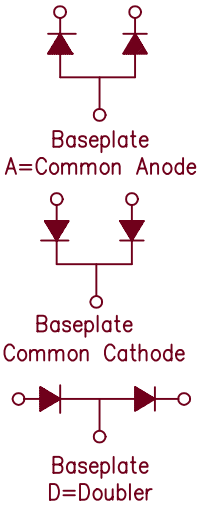
Schottky PowerMod

CPT12035 – CPT12050







Notes:
Baseplate: Nickel plated copper

Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
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
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 Protection
- 120 Amperes/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, $R_{\theta JC}$ = 0.43°C/W
Average forward current per leg	$I_{F(AV)}$ 60 Amps	T_C = 140°C, Square wave, $R_{\theta JC}$ = 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 junction capacitance per leg	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}	−55°C to 175°C
Operation junction temp range	T_J	−55°C to 175°C
Max thermal resistance per leg	$R_{\theta JC}$	0.85°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.43°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.08°C/W Case to sink
Terminal Torque		35–50 inch pounds
Mounting Base Torque (outside holes)		30–40 inch pounds
Mounting Base Torque (center hole) center bolt must be torqued first		8–10 inch pounds
Weight		2.8 ounces (75 grams) typical

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Broomfield, CO. 80020
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3-7-00 Rev. 3

CPT12035 – CPT12050

Figure 1
Typical Forward Characteristics – Per Leg

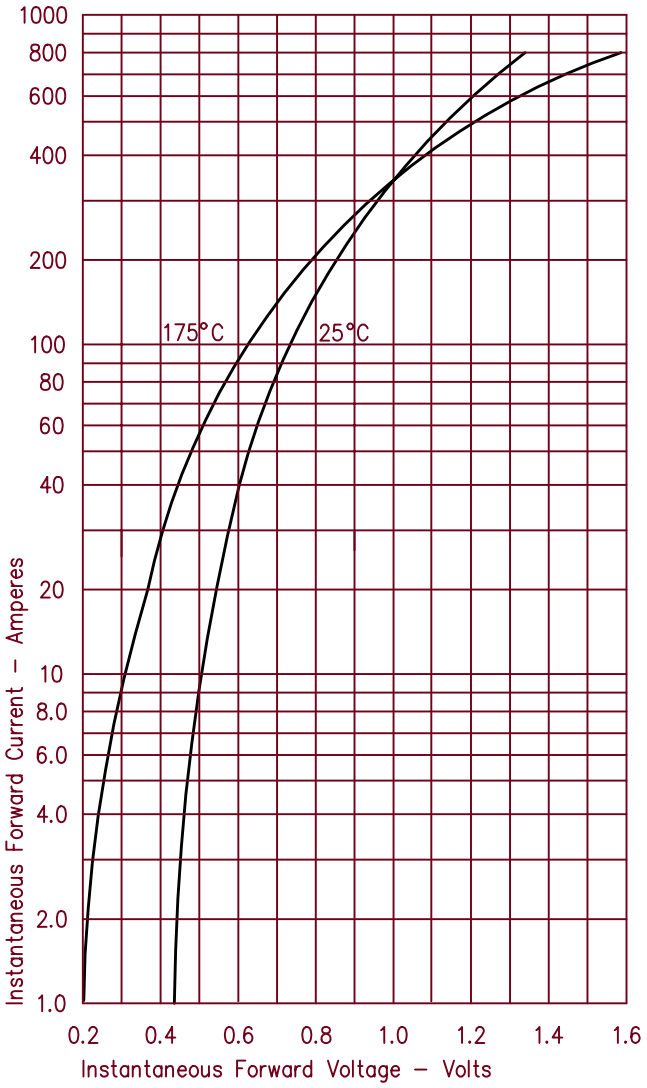


Figure 2
Typical Reverse Characteristics – Per Leg

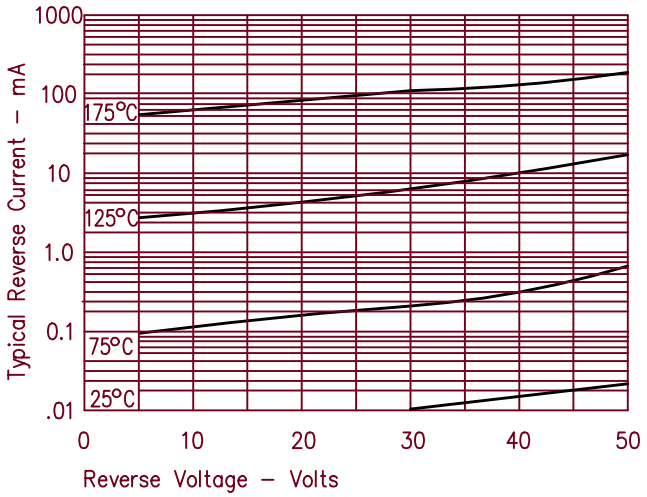


Figure 3
Typical Junction Capacitance – Per Leg

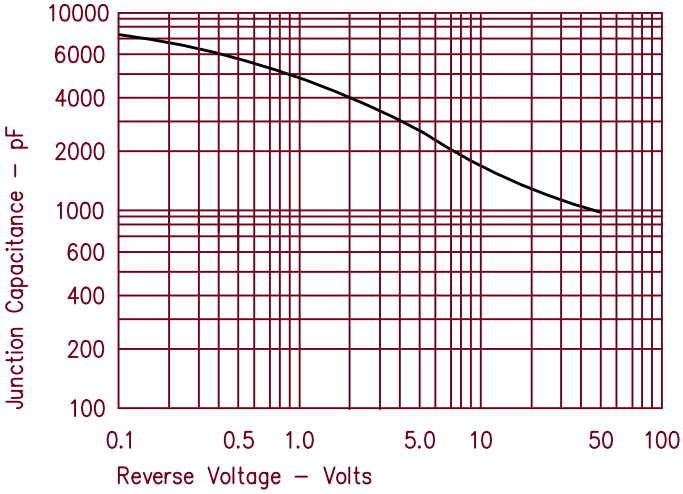


Figure 4
Forward Current Derating – Per Leg

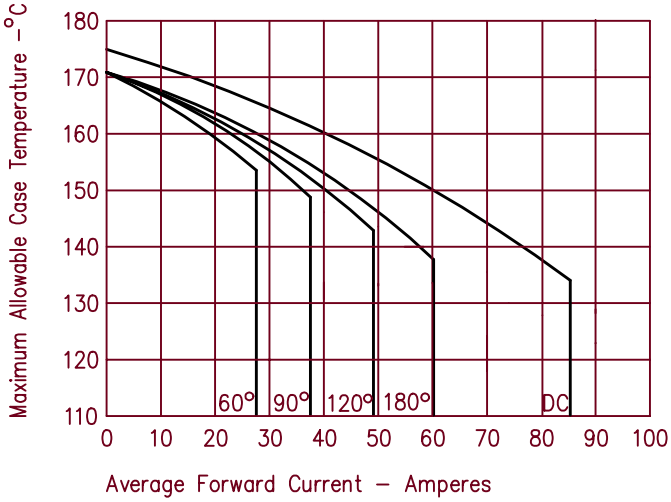


Figure 5
Maximum Forward Power Dissipation – Per Leg

