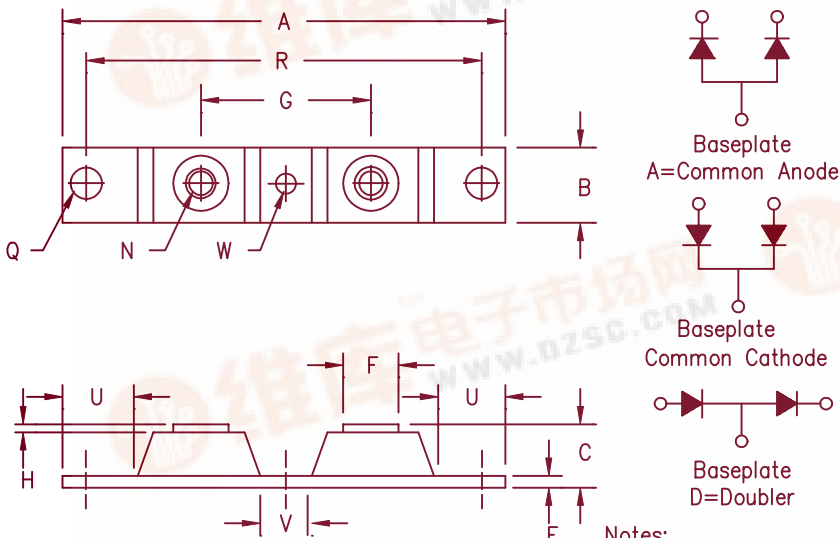


CPT12035 — CPT12050



Notes:
Baseplate: Nickel plated
copper

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
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 _{θJC} = 0.43°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(0V)} 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 _{θJC}	0.85°C/W Junction to case
Max thermal resistance per pkg	R _{θJC}	0.43°C/W Junction to case
Typical thermal resistance (greased)	R _{θCS}	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)		8-10 inch pounds
center bolt must be torqued first		
Weight		2.8 ounces (75 grams) typical



CPT12035 — CPT12050

Figure 1
Typical Forward Characteristics – Per Leg

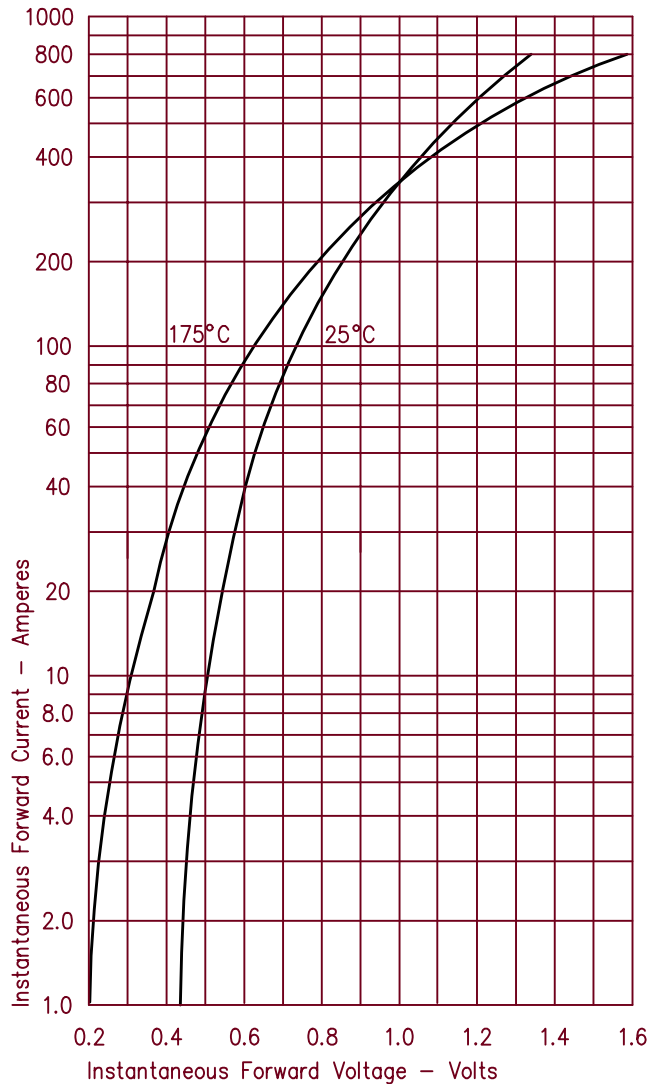


Figure 2
Typical Reverse Characteristics – Per Leg

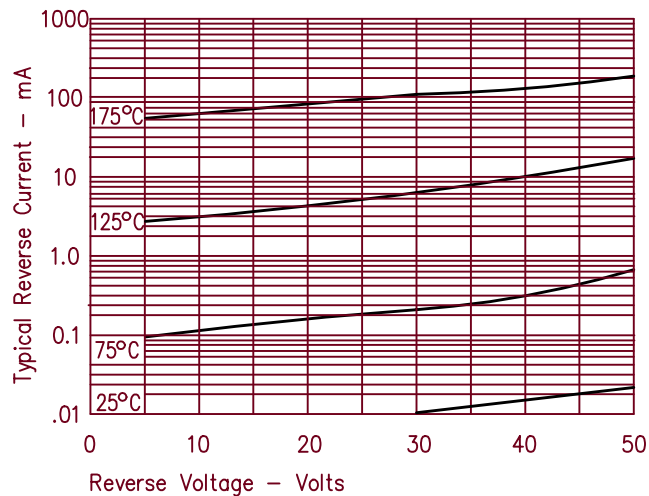


Figure 3
Typical Junction Capacitance – Per Leg

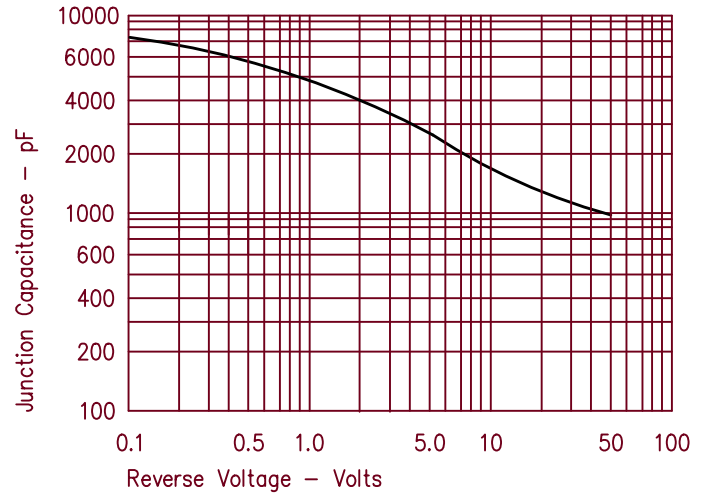


Figure 4
Forward Current Derating – Per Leg

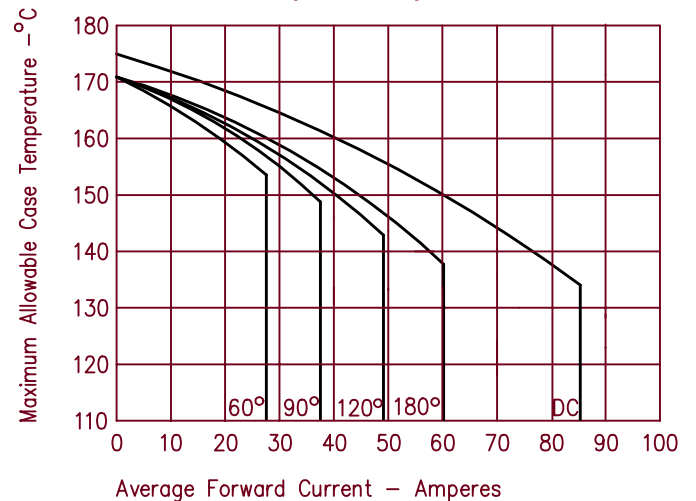


Figure 5
Maximum Forward Power Dissipation – Per Leg

