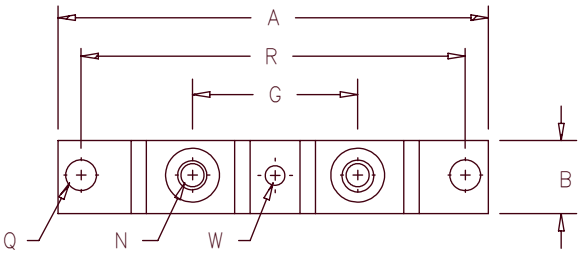
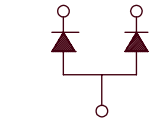
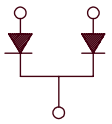
Schottky PowerMod

CPT20130 – CPT20145





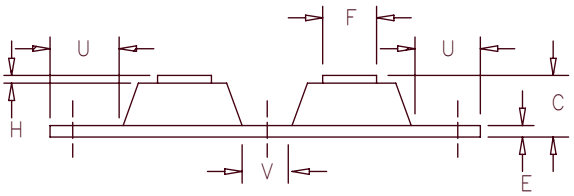
Baseplate
A=Common Anode



Baseplate
Common Cathode



Baseplate
D=Doubler



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	---	---	---	---	1/4–28
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	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT20130*	MBR20030CT	30V	30V
CPT20135*	200CNQ035 224CNQ035 MBR20035CT	35V	35V
CPT20140*	200CNQ040 224CNQ040 MBR20040CT	40V	40V
CPT20145*	200CNQ045 224CNQ045 MBR20045CT	45V	45V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 200 Amperes/30 to 45 Volts
- 150° C Junction Temperature
- Reverse Energy Tested
- ROHS Compliant

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 200 Amps	T_C = 99°C, Square wave, $R_{\theta JC}$ = .20°C/W
Average forward current per leg	$I_{F(AV)}$ 100 Amps	T_C = 99°C, Square wave, $R_{\theta JC}$ = .40°C/W
Maximum surge current per leg	I_{FSM} 2000 Amps	8.3ms, half sine, T_J = 125°C
Maximum repetitive reverse current per leg	$I_{R(OV)}$ 2 Amps	f = 1 KHZ, 25°C
Max peak forward voltage per leg	V_{FM} 0.68 Volts	I_{FM} = 200A: T_J = 25°C*
Max peak forward voltage per leg	V_{FM} 0.64 Volts	I_{FM} = 200A: T_J = 125°C*
Max peak reverse current per leg	I_{RM} 1100mA	V_{RRM}, T_J = 125°C*
Max peak reverse current per leg	I_{RM} 4.0mA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 5500pF	V_R = 5.0V, T_C = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	−55°C to 150°C
Operating junction temp range	T_J	−55°C to 150°C
Max thermal resistance per leg	$R_{\theta JC}$	0.40°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)		8–10 inch pounds
center hole must be torqued first		
Weight		2.8 ounces (75 grams) typical

CPT20130 – CPT20145

Figure 1
Maximum Forward Characteristics – Per Leg

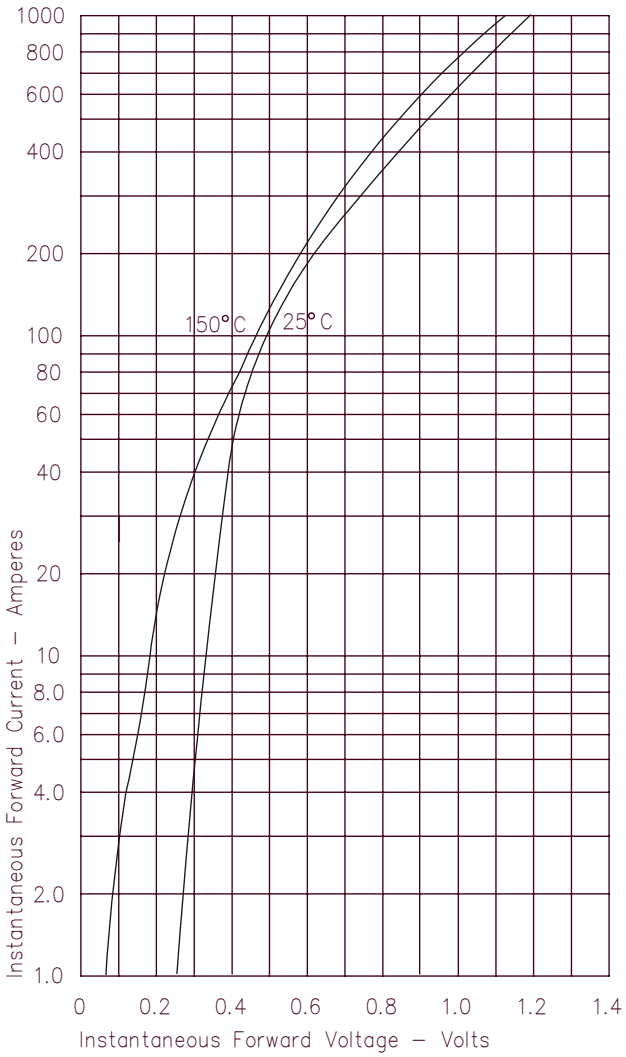


Figure 3
Typical Junction Capacitance – Per Leg

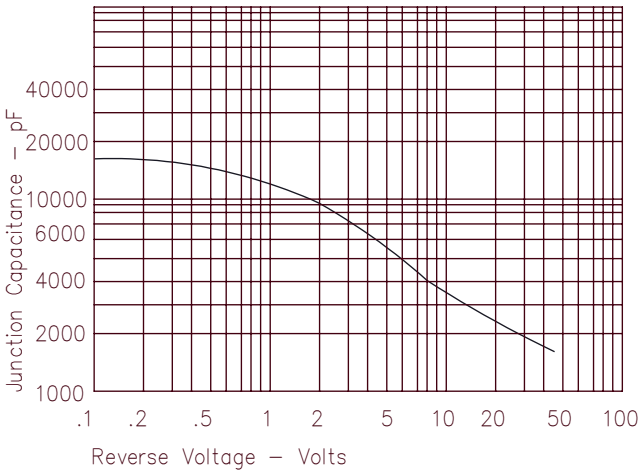


Figure 4
Forward Current Derating – Per Leg

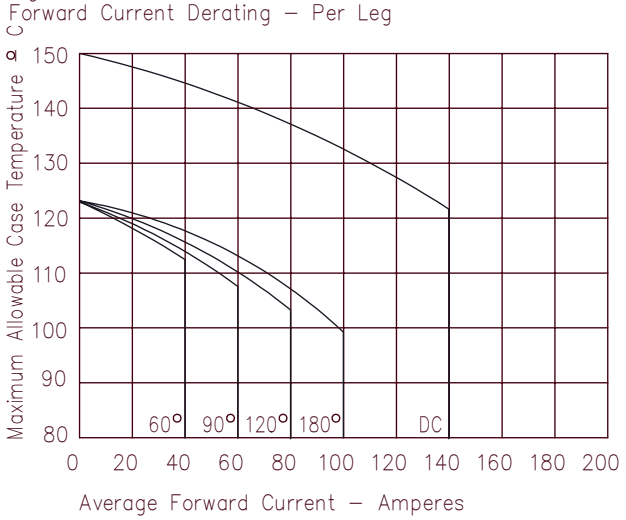


Figure 2
Typical Reverse Characteristics – Per Leg

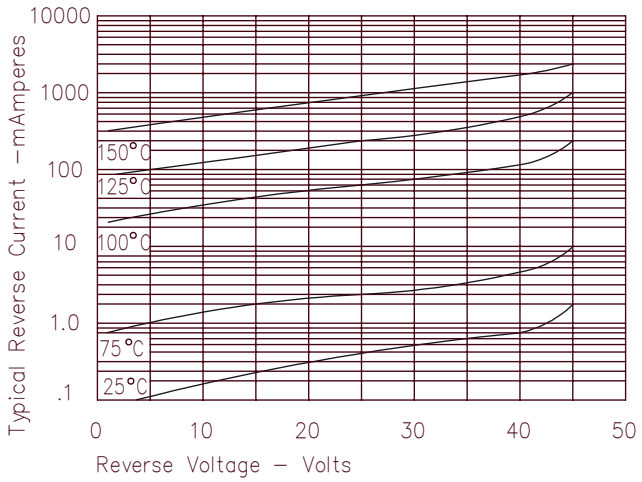


Figure 5
Maximum Forward Power Dissipation – Per Leg

