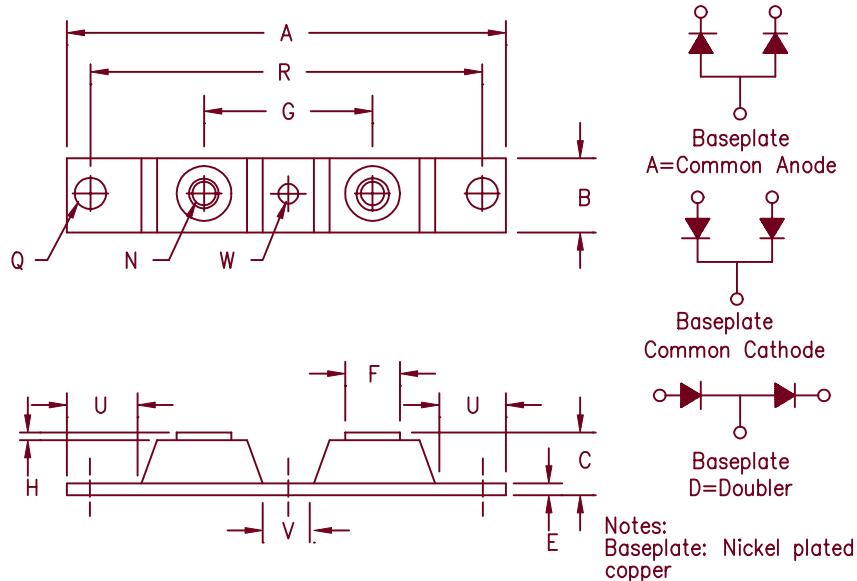


# Schottky PowerMod

## CPT20130 — CPT20145



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	---	---	---	1/4-28 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.

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

### Electrical Characteristics

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

\*Pulse test: Pulse width 300 usec, Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ C$ to $150^\circ C$
Operating junction temp range	$T_J$	$-55^\circ C$ to $150^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$0.40^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.08^\circ C/W$ 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

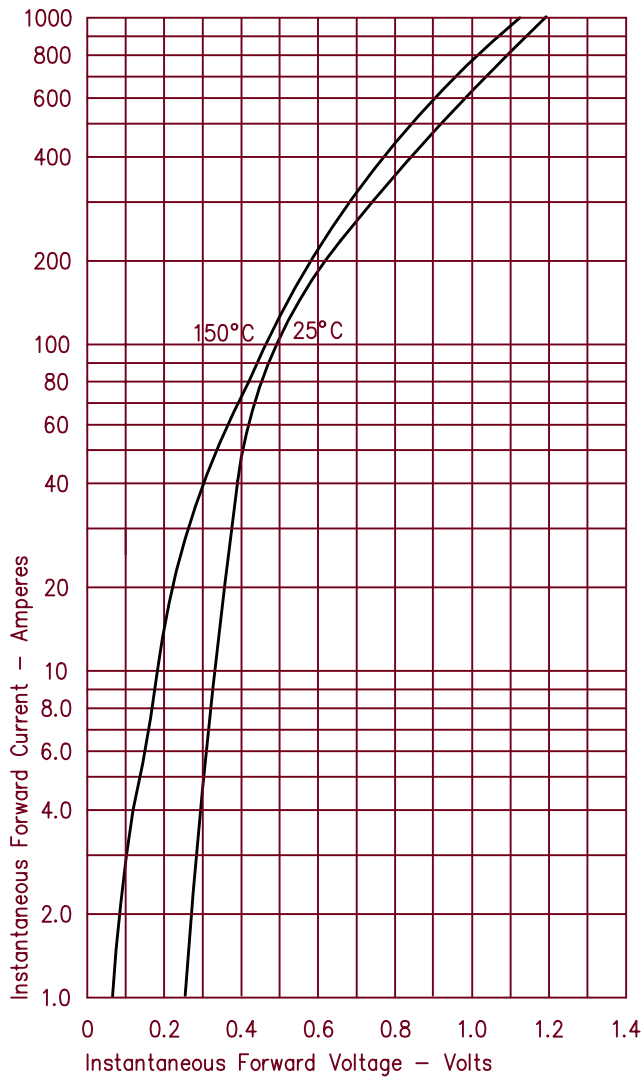


Figure 3  
Typical Junction Capacitance – Per Leg

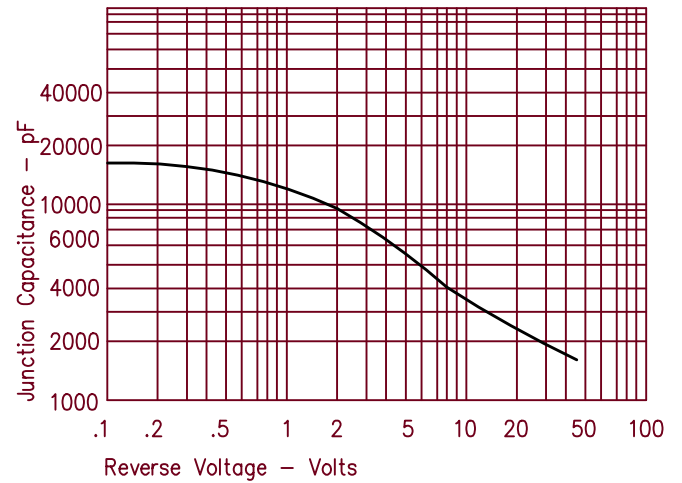


Figure 4  
Forward Current Derating – Per Leg

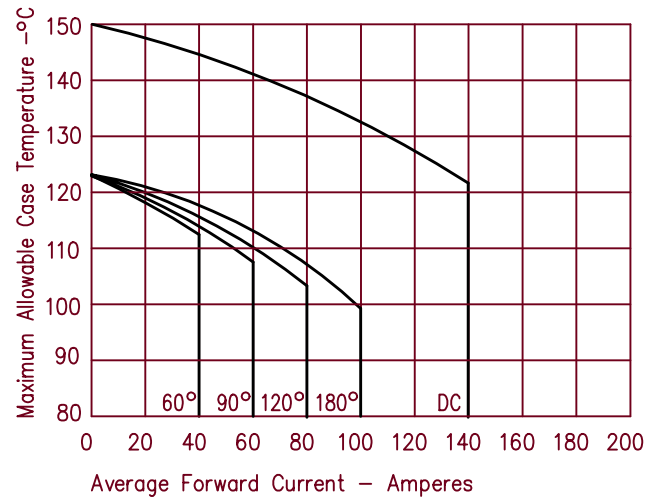


Figure 2  
Typical Reverse Characteristics – Per Leg

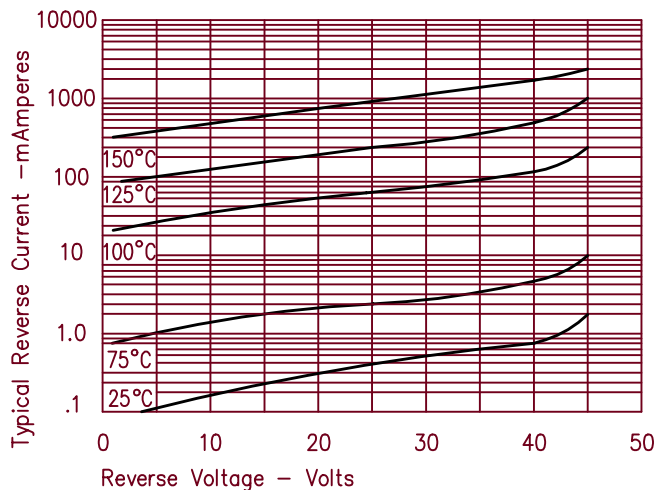


Figure 5  
Maximum Forward Power Dissipation – Per Leg

