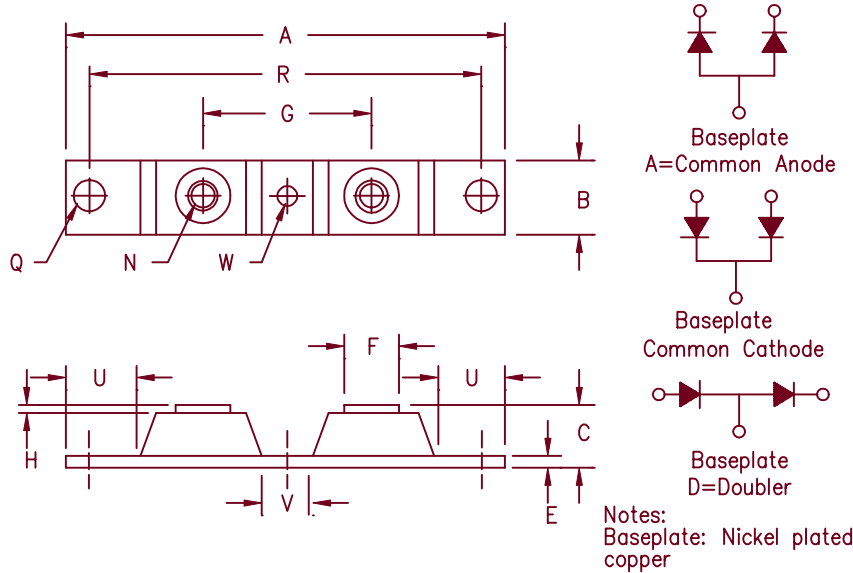


# Schottky PowerMod

## CPT30035 — CPT30050



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	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT30035*	301CNQ035	35V	35V
CPT30040*	301CNQ040	40V	40V
CPT30045*	301CNQ045	45V	45V
	MBRP30045CT		
CPT30050*		50V	50V

\*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 300 Amperes/35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

### Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 300 Amps	$T_C = 136^\circ C$ , Square wave, $R_{\theta JC} = 0.20^\circ C/W$
Average forward current per leg	$I_F(AV)$ 150 Amps	$T_C = 136^\circ C$ , Square wave, $R_{\theta JC} = 0.40^\circ C/W$
Maximum surge current per leg	$I_{FSM}$ 2000 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Maximum repetitive reverse current per leg	$I_R(OV)$ 2 Amps	$f = 1$ KHZ, $25^\circ C$
Max peak forward voltage per leg	$V_{FM}$ 0.70 Volts	$I_{FM} = 200A: T_J = 125^\circ C^*$
Max peak forward voltage per leg	$V_{FM}$ 0.76 Volts	$I_{FM} = 200A: T_J = 25^\circ C^*$
Max peak reverse current per leg	$I_{RM}$ 75 mA	$V_{RRM}, T_J = 125^\circ C^*$
Max peak reverse current per leg	$I_{RM}$ 4.0 mA	$V_{RRM}, T_J = 25^\circ C$
Typical junction capacitance per leg	$C_J$ 4600 pF	$V_R = 5.0V, T_C = 25^\circ C$

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

### Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ C$ to $175^\circ C$
Operating junction temp range	$T_J$	$-55^\circ C$ to $175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$0.40^\circ C/W$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	$0.20^\circ C/W$ 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

# CPT30035 – CPT30050

Figure 1  
Typical Forward Characteristics – Per Leg

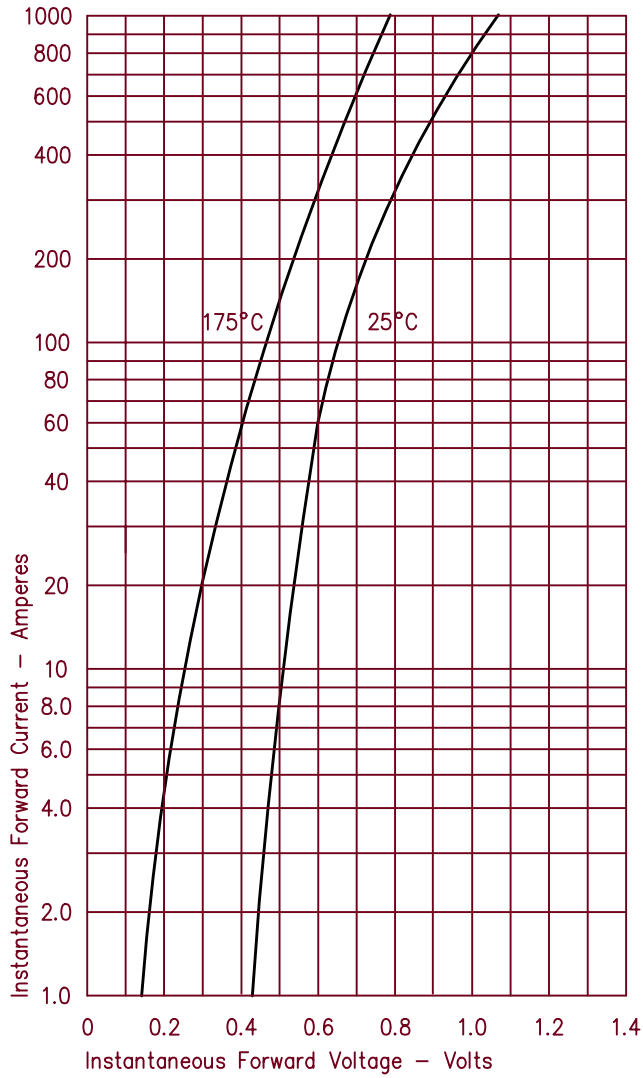


Figure 3  
Typical Junction Capacitance – Per Leg

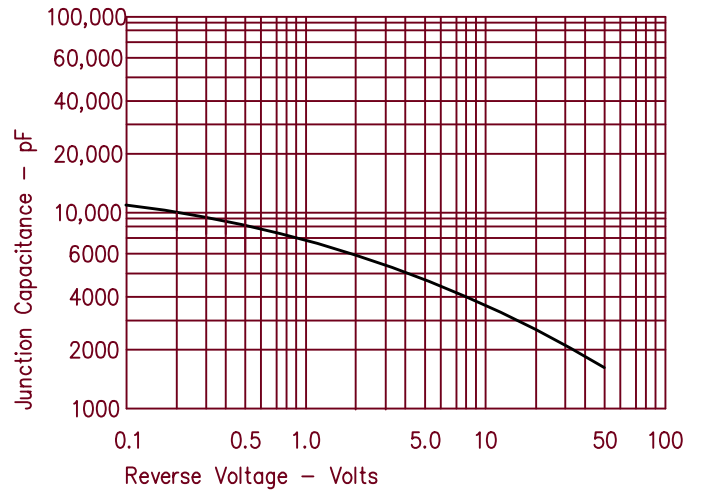


Figure 4  
Forward Current Derating – Per Leg

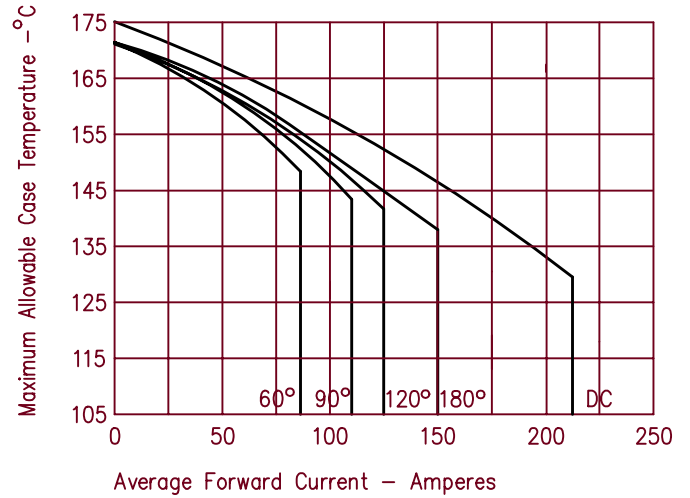


Figure 2  
Typical Reverse Characteristics – Per Leg

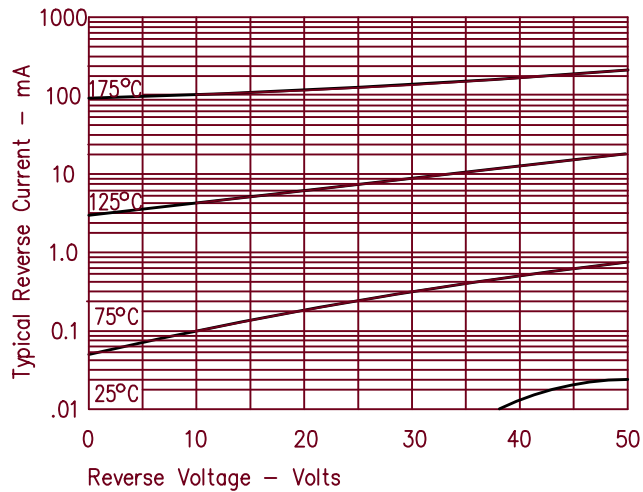


Figure 5  
Maximum Forward Power Dissipation – Per Leg

