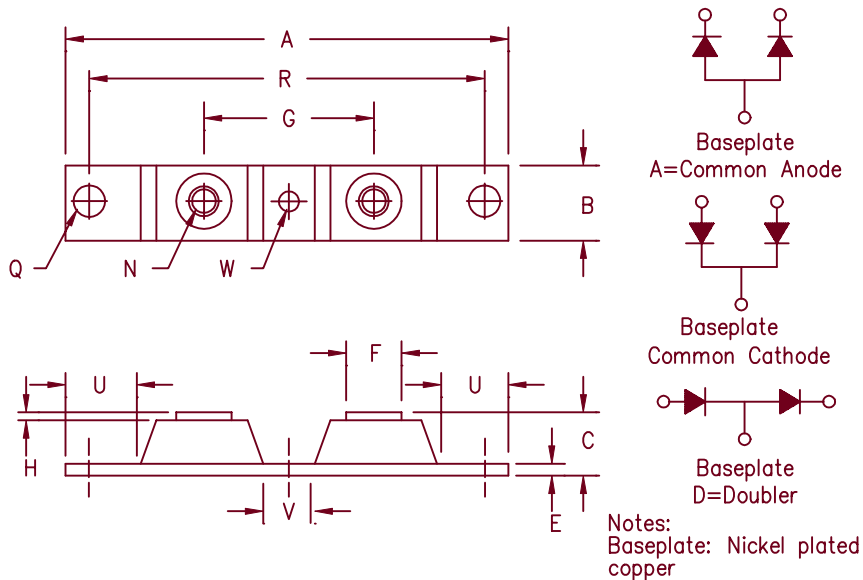


Schottky PowerMod

CPT30080–CPT300100



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
CPT30080*	80V	80V
CPT30090*	90V	90V
CPT300100*	100V	100V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 300 Amperes/80 to 100 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

Average forward current per pkg	I _{F(AV)} 300 Amps	T _C = 112°C, Square wave, R _{θJC} = 0.20°C/W
Average forward current per leg	I _{F(AV)} 150 Amps	T _C = 112°C, Square wave, R _{θJC} = 0.40°C/W
Maximum surge current per leg	I _{FSM} 2000 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} 0.98 Volts	I _{FM} = 200A: T _J = 25°C*
Max peak forward voltage per leg	V _{FM} .86 Volts	I _{FM} = 200A: T _J = 175°C*
Max peak reverse current per leg	I _{RM} 75 mA	V _{RRM} , T _J = 125°C*
Max peak reverse current per leg	I _{RM} 4.0 mA	V _{RRM} , T _J = 25°C
Typical junction capacitance per leg	C _J 3000 pF	V _R = 5.0V, T _C = 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
Operating junction temp range	T _J	–55°C to 175°C
Max thermal resistance per leg	R _{θJC}	0.40°C/W Junction to case
Max thermal resistance per pkg	R _{θJC}	0.20°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 hole must be torqued first		
Weight		2.8 ounces (75 grams) typical

CPT30080—CPT300100

Figure 1
Typical Forward Characteristics – Per Leg

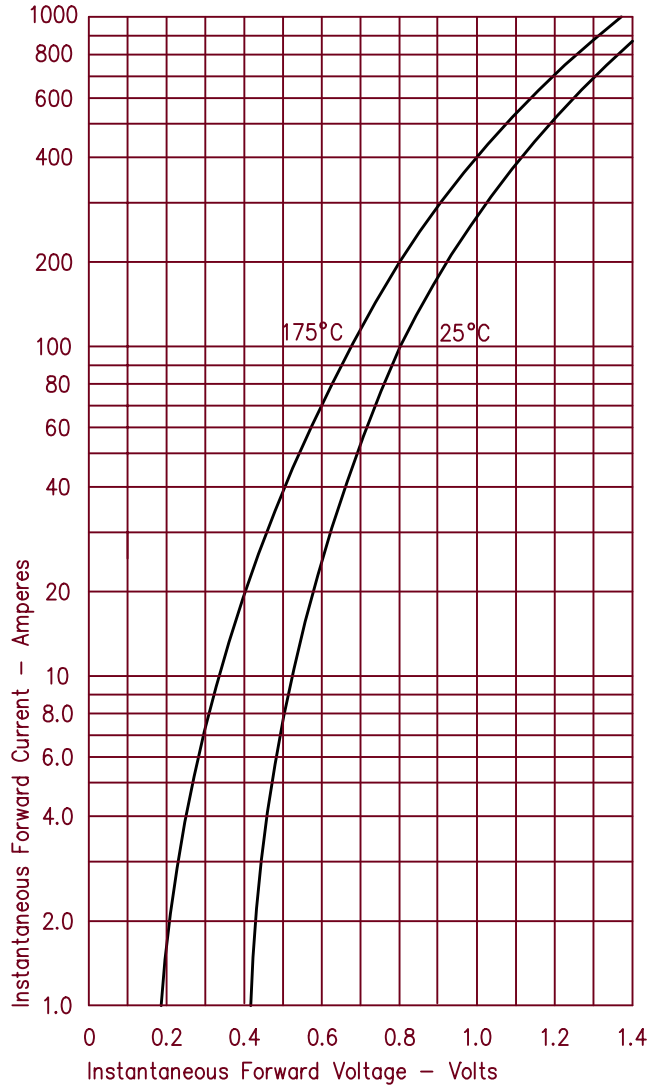


Figure 2
Typical Reverse Characteristics – Per Leg

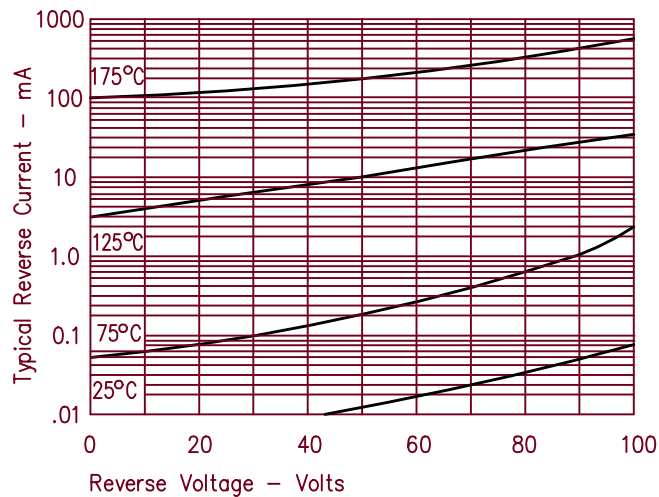


Figure 3
Typical Junction Capacitance – Per Leg

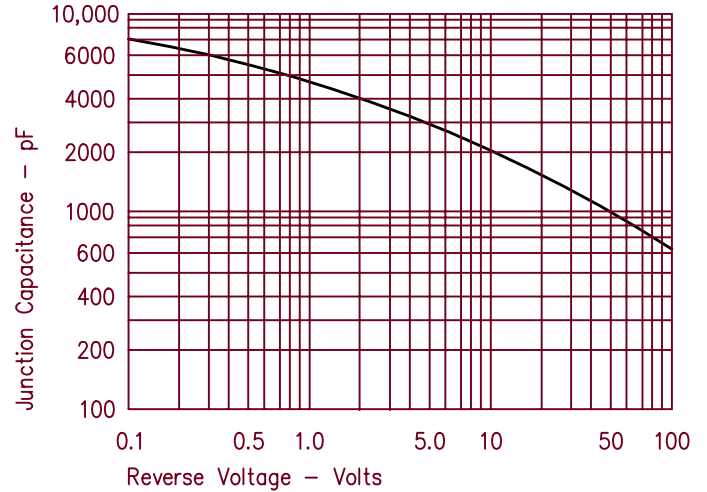


Figure 4
Forward Current Derating – Per Leg

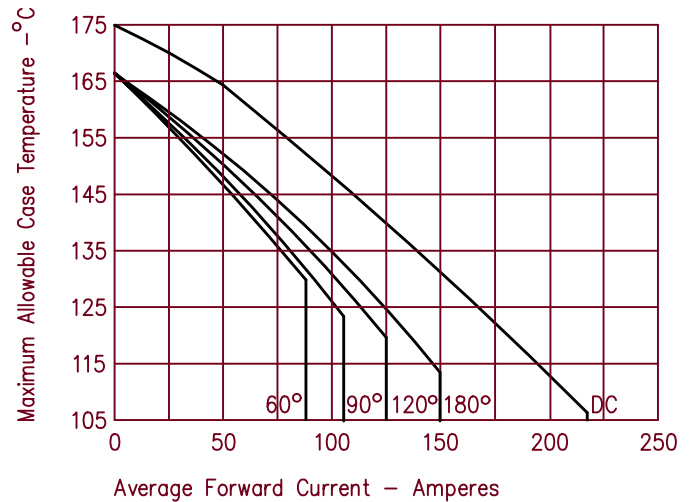


Figure 5
Maximum Forward Power Dissipation – Per Leg

