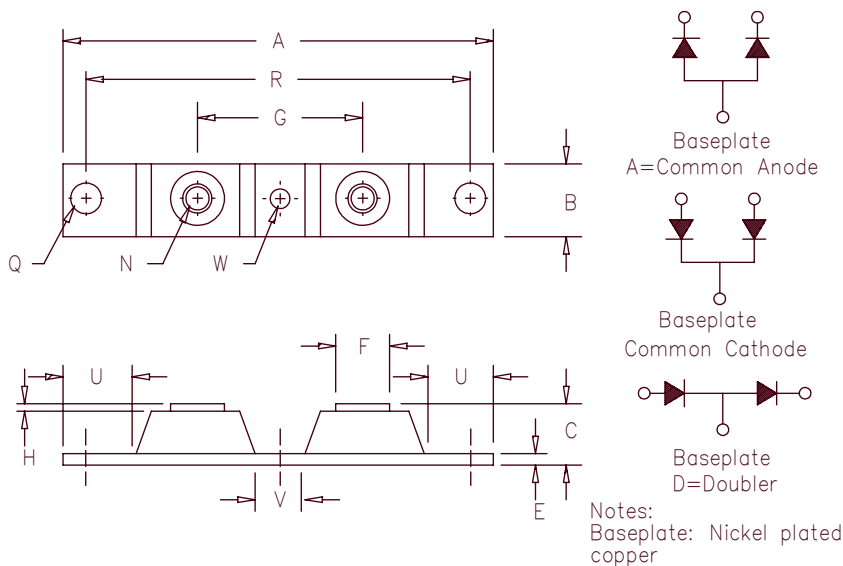


Schottky PowerMod

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	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
CPT30080*	303CNQ080 MBR30080CT	80V	80V
CPT30090*		90V	90V
CPT300100*	303CNQ0100 MBR300100CT	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
- ROHS Compliant

Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 300 Amps	$T_C = 112^\circ C$, Square wave, $R_{\theta JC} = 0.20^\circ C/W$
Average forward current per leg	$I_F(AV)$ 150 Amps	$T_C = 112^\circ C$, 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	$f = 1\text{ KHZ}$, $25^\circ C$, $1\mu sec$ square wave
Max peak forward voltage per leg	V_{FM} 0.98 Volts	$I_{FM} = 200A: T_J = 25^\circ C^*$
Max peak forward voltage per leg	V_{FM} .86 Volts	$I_{FM} = 200A: T_J = 175^\circ C^*$
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 3000 pF	$V_R = 5.0V, T_C = 25^\circ C$

*Pulse test: Pulse width 300 μsec , 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		35–40 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

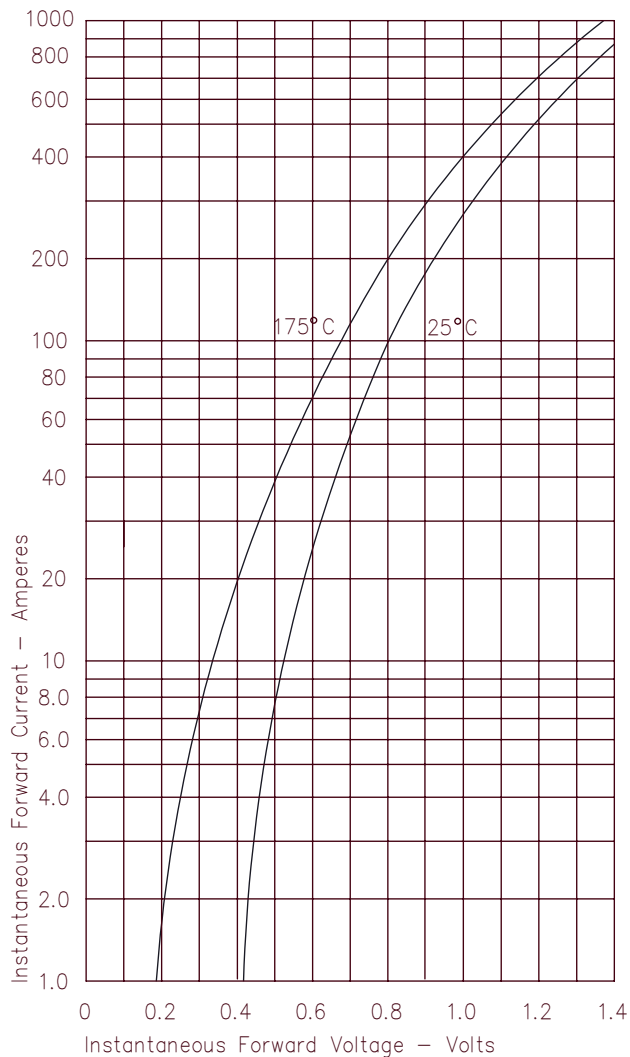


Figure 3
Typical Junction Capacitance – Per Leg

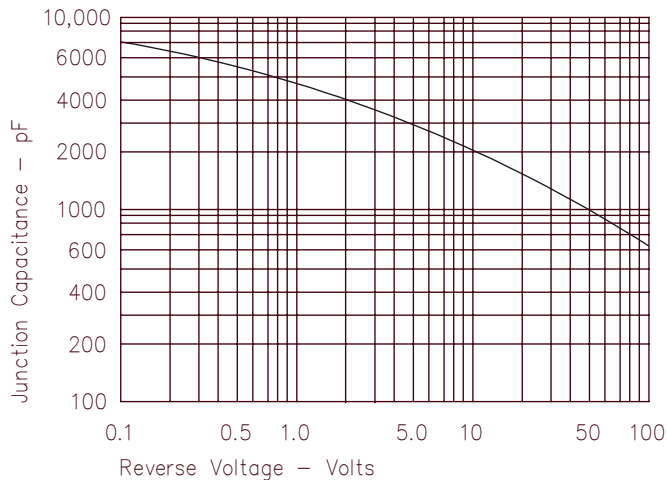


Figure 4
Forward Current Derating – Per Leg

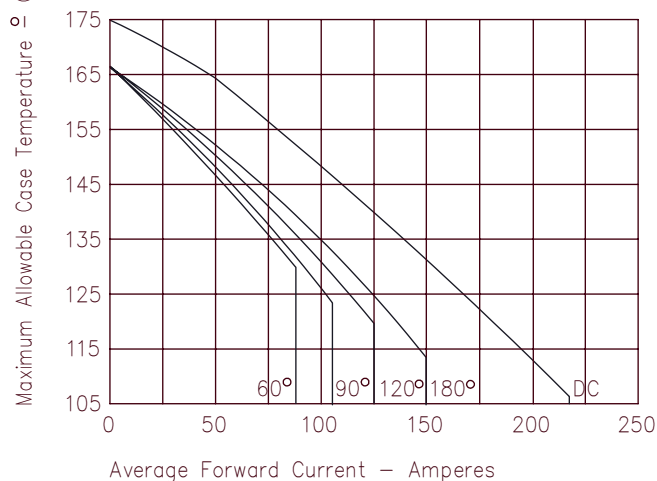


Figure 2
Typical Reverse Characteristics – Per Leg

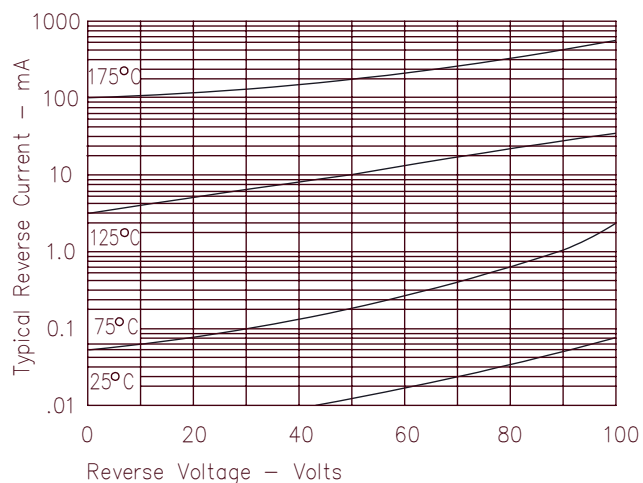
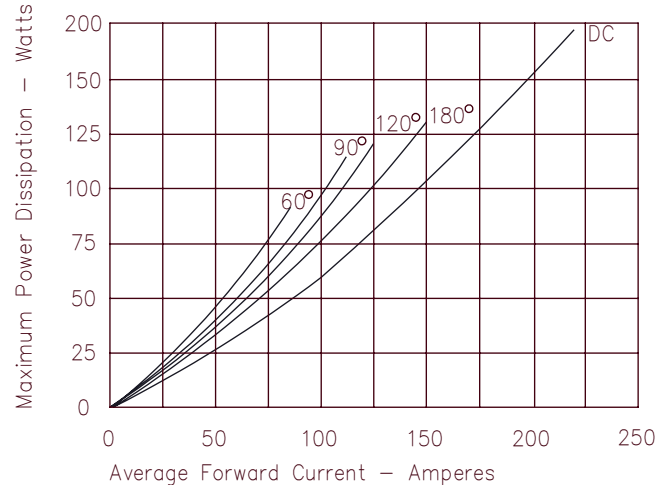


Figure 5
Maximum Forward Power Dissipation – Per Leg



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