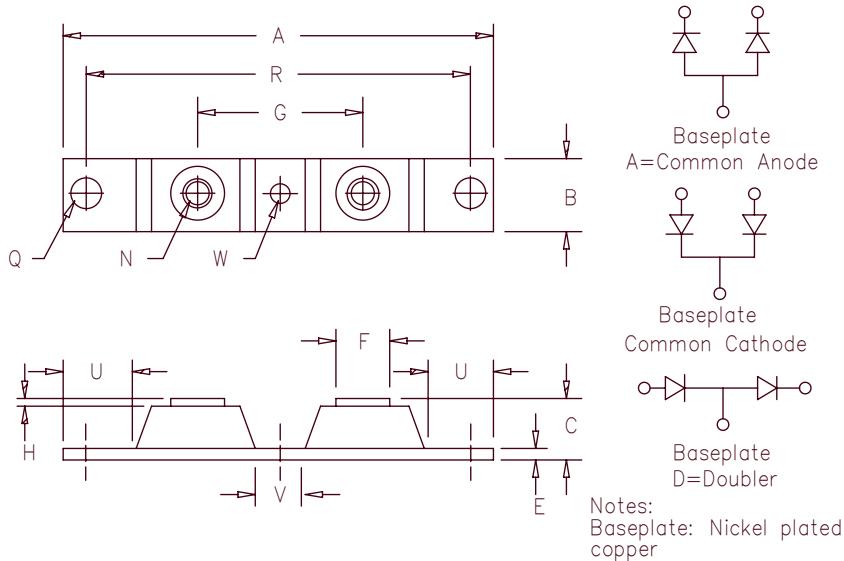


Schottky PowerMod

CPT30035 – CPT30050



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	---	---	---	---	1/4-20
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 Reverse Voltage	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
- ROHS Compliant

Electrical Characteristics

Average forward current per pkg	IF(AV) 300 Amps	T _C = 136°C, Square wave, R _{θJC} = 0.20°C/W
Average forward current per leg	IF(AV) 150 Amps	T _C = 136°C, Square wave, R _{θJC} = 0.40°C/W
Maximum surge current per leg	IFSM 2000 Amps	8.3ms, half sine, T _J = 175°C
Maximum repetitive reverse current per leg	IR(OV) 2 Amps	f = 1 KHZ, 25°C
Max peak forward voltage per leg	VFM 0.70 Volts	IFM = 200A: T _J = 125°C*
Max peak forward voltage per leg	VFM 0.76 Volts	IFM = 200A: T _J = 25°C*
Max peak reverse current per leg	IRM 75 mA	V _{RRM} , T _J = 125°C*
Max peak reverse current per leg	IRM 4.0 mA	V _{RRM} , T _J = 25°C
Typical junction capacitance per leg	C _J 4600 pF	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 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) center hole must be torqued first		8–10 inch pounds
Weight		2.8 ounces (75 grams) typical

CPT30035 – CPT30050

Figure 1
Typical Forward Characteristics – Per Leg

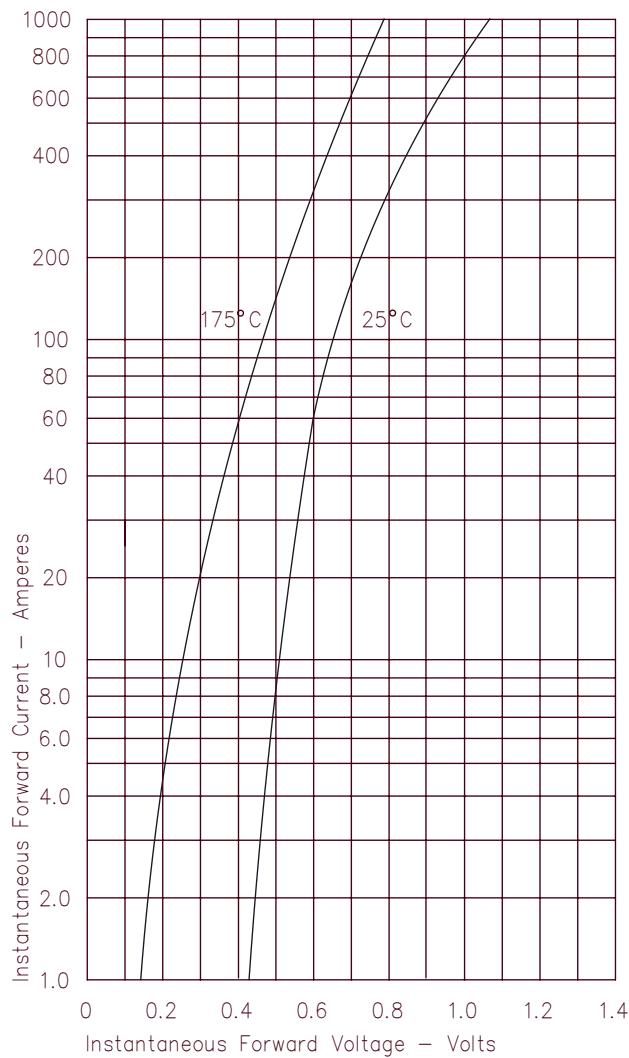


Figure 2
Typical Reverse Characteristics – Per Leg

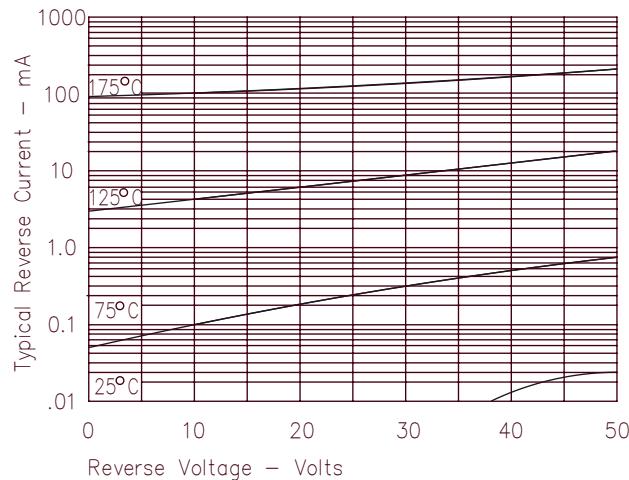


Figure 3
Typical Junction Capacitance – Per Leg

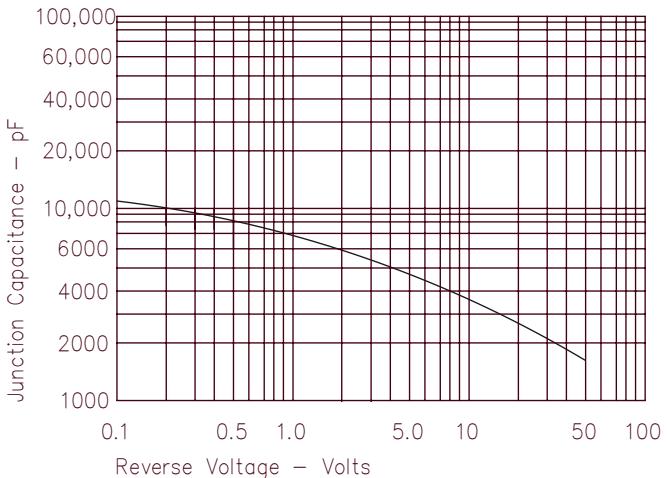


Figure 4
Forward Current Derating – Per Leg

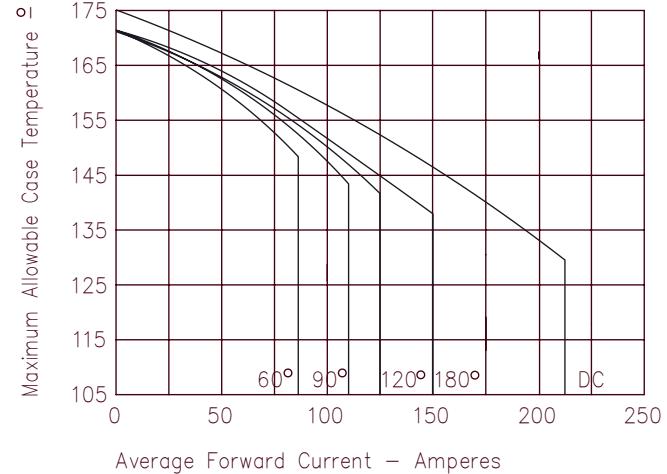
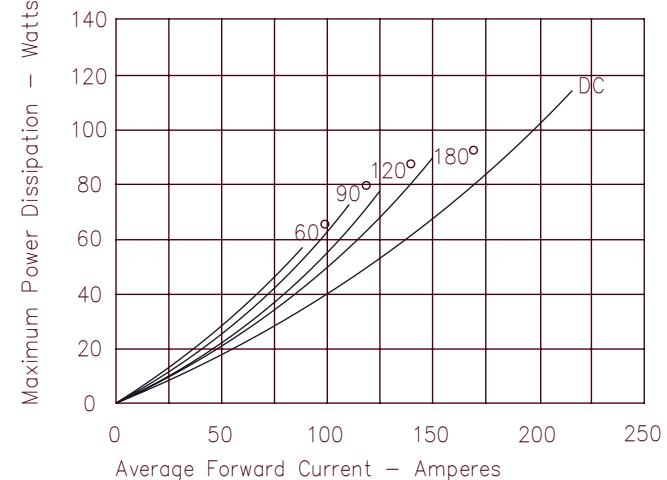


Figure 5
Maximum Forward Power Dissipation – Per Leg



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