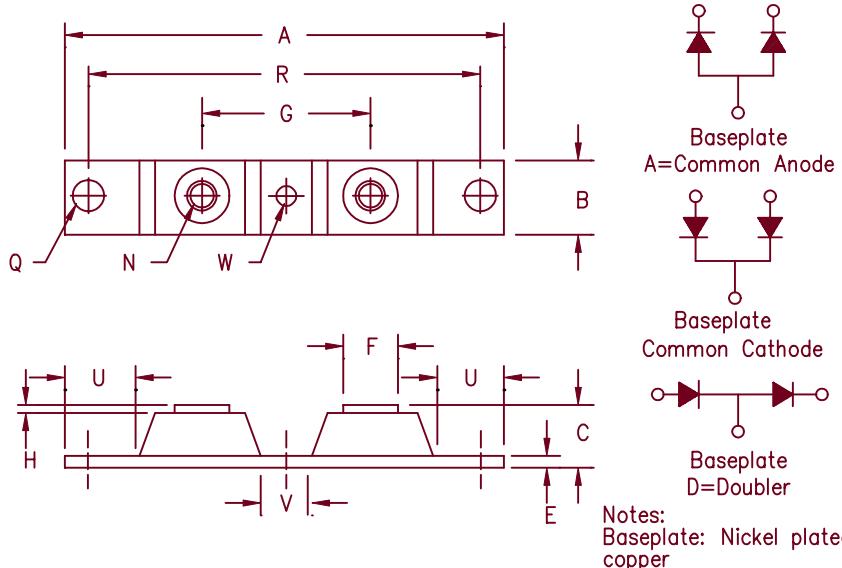


Schottky PowerMod

CPT40130 — CPT40145



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
CPT40130*	MBR40030CT	30V	30V	30V
CPT40135*	400CNQ035	35V	35V	35V
CPT40140*	400CNQ040	40V	40V	40V
CPT40145*	400CNQ045 MBRP40045CTL	45V	45V	45V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 400 Amperes/30 to 45 Volts
- 150°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

Average forward current per pkg	I _{F(AV)} 400 Amps	T _C = 79°C, Square wave, R _{θJC} = 0.16°C/W
Average forward current per leg	I _{F(AV)} 200 Amps	T _C = 79°C, Square wave, R _{θJC} = 0.32°C/W
Maximum surge current per leg	I _{FSM} 3000 Amps	8.3ms, half sine, T _J = 150°C
Maximum repetitive reverse current per leg	I _{R(OV)} 2 Amps	f = 1 KHZ, 25°C, 1 usec square wave
Max peak forward voltage per leg	V _{FM} 0.57 Volts	I _{FM} = 200A:T _J = 25°C*
Max peak forward voltage per leg	V _{FM} 0.49 Volts	I _{FM} = 200A:T _J = 150°C*
Max peak reverse current per leg	I _{RM} 3.5 A	V _{RRM} , T _J = 125°C*
Max peak reverse current per leg	I _{RM} 10 mA	V _{RRM} , T _J = 25°C*
Typical junction capacitance per leg	C _J 7000 pF	V _R = 5.0V, T _C = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T _{STG}	-55°C to 150°C
Operating junction temp range	T _J	-55°C to 150°C
Max thermal resistance per leg	R _{θJC}	0.32°C/W Junction to case
Max thermal resistance per pkg	R _{θJC}	0.16°C/W Junction to case
Typical thermal resistance (greased)	R _{θCS}	0.08°C/W Case to sink
Terminal Torque		35–50 inch pounds maximum
Mounting Base Torque (outside holes)		30–40 inch pounds maximum
Mounting Base Torque (center hole) center hole must be torqued first		8–10 inch pounds maximum
Weight		2.8 ounces (77 grams) typical

CPT40130 - CPT40145

Figure 1
Typical Forward Characteristics – Per Leg

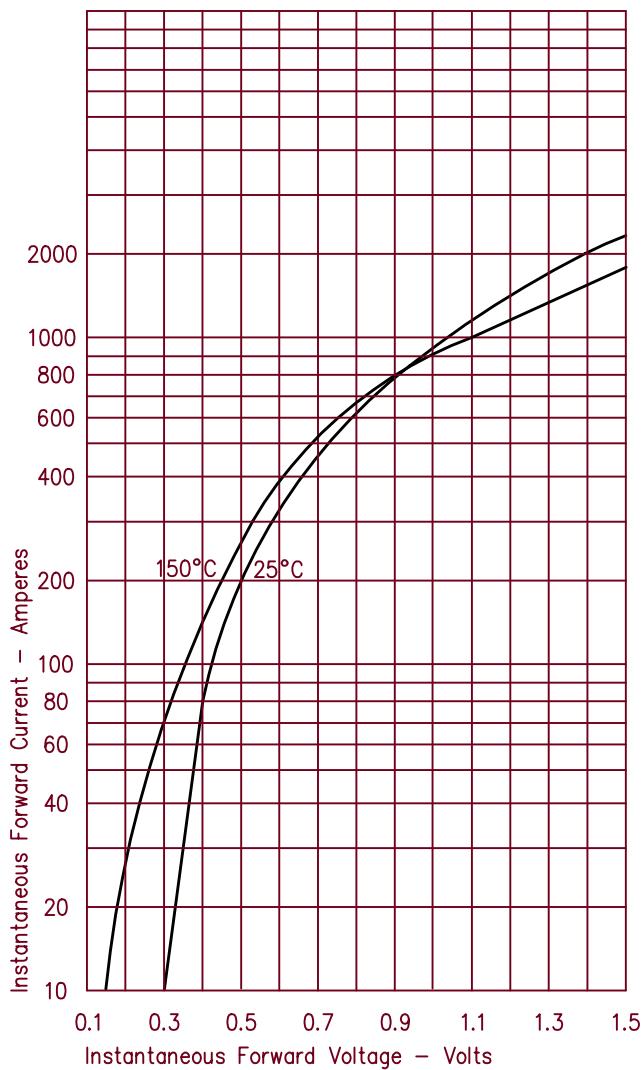


Figure 2
Typical Reverse Characteristics – Per Leg

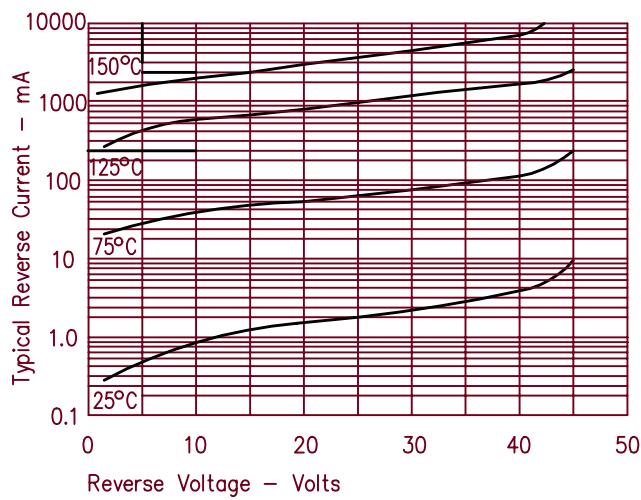


Figure 3
Typical Junction Capacitance – Per Leg

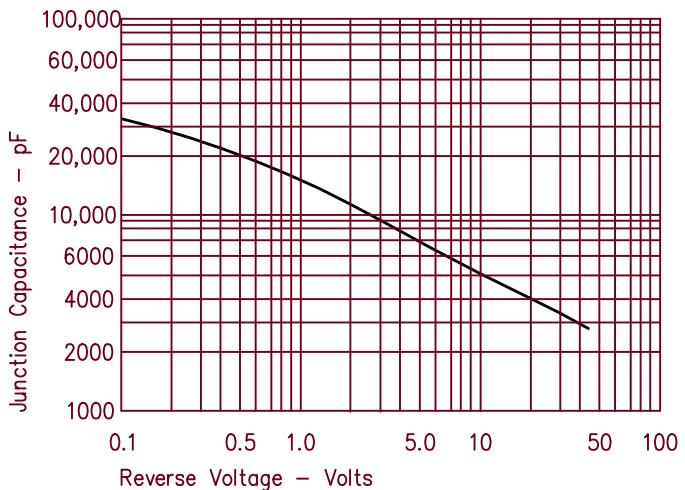


Figure 4
Forward Current Derating – Per Leg

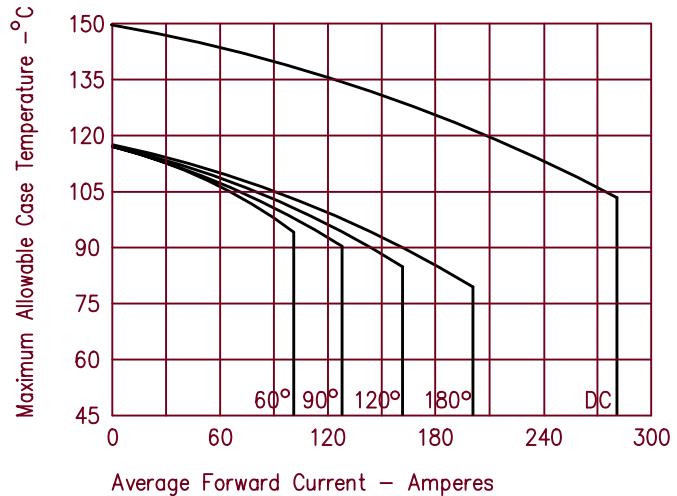


Figure 5
Maximum Forward Power Dissipation – Per Leg

