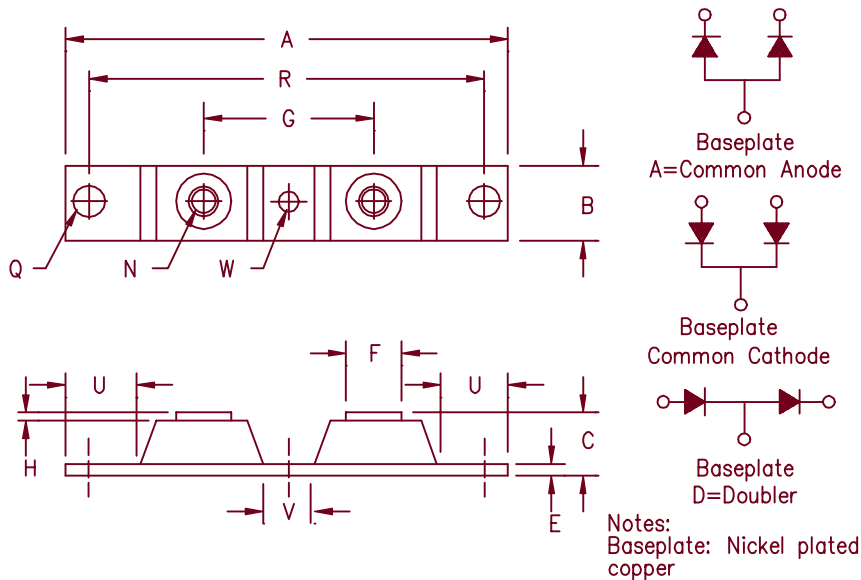


Schottky PowerMod

CPT50235 — CPT50245



	Dim. Inches		Millimeters		Notes
	Min.	Max.	Min.	Max.	
A	---	3.630	---	92.20	
B	0.700	0.800	17.78	20.32	
C	0.615	0.640	15.53	16.26	
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	0.007	0.030	0.18	0.76	
N	---	---	---	---	1/4-20 Dia.
Q	0.275	0.290	6.99	7.37	
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
CPT50235*	35V	35V
CPT50240*	40V	40V
CPT50245*	45V	45V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 500 Amperes/35 to 45 Volts
- 150°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 500 Amps	$T_C = 79^\circ C$, square wave, $R_{\theta JC} = 0.12^\circ C/W$
Average forward current per leg	$I_F(AV)$ 250 Amps	$T_C = 79^\circ C$, square wave, $R_{\theta JC} = 0.24^\circ C/W$
Maximum surge current per leg	I_{FSM} 5000 Amps	8.3ms, half sine, $T_J = 150^\circ C$
Maximum repetitive reverse current per leg	$I_R(OV)$ 2 Amps	$f = 1\text{ KHZ}$, $25^\circ C$, 1 usec square wave
Max peak forward voltage per leg	V_{FM} 0.55 Volts	$I_{FM} = 250A$; $T_J = 25^\circ C^*$
Max peak forward voltage per leg	V_{FM} 0.49 Volts	$I_{FM} = 250A$; $T_J = 150^\circ C^*$
Max peak reverse current per leg	I_{RM} 4.0 A	V_{RRM} , $T_J = 125^\circ C^*$
Max peak reverse current per leg	I_{RM} 12.0 mA	V_{RRM} , $T_J = 25^\circ C^*$
Typical junction capacitance per leg	C_J 10500 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 $150^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $150^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$0.24^\circ C/W$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	$0.12^\circ C/W$ 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 (78 grams) typical

CPT50235 — CPT50245

Figure 1
Typical Forward Characteristics – Per Leg

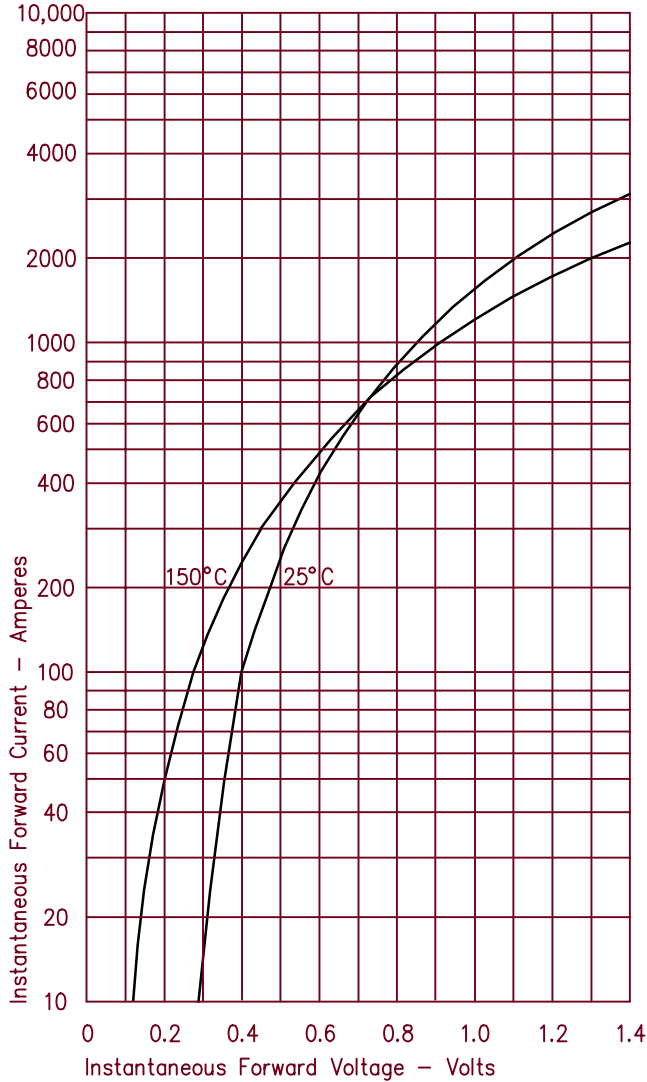


Figure 2
Typical Reverse Characteristics – Per Leg

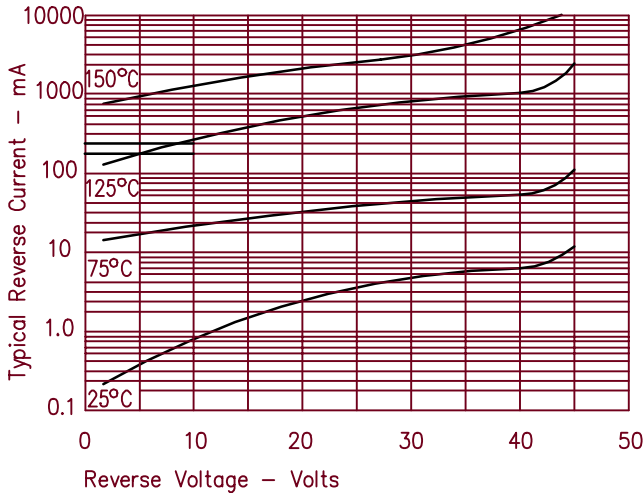


Figure 3
Typical Junction Capacitance – Per Leg

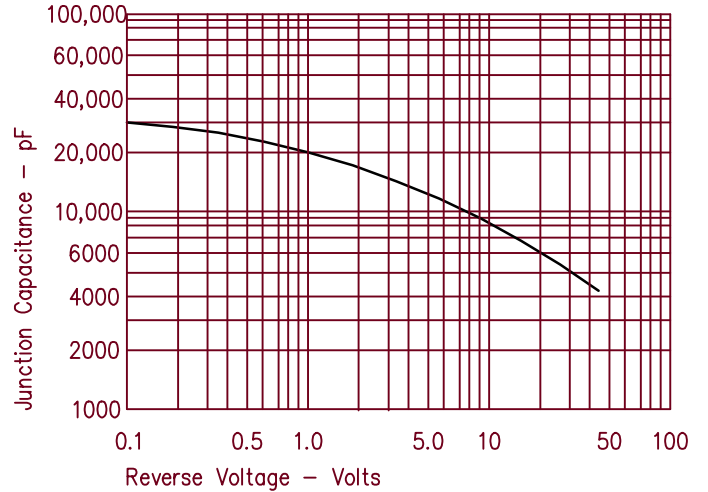


Figure 4
Forward Current Derating – Per Leg

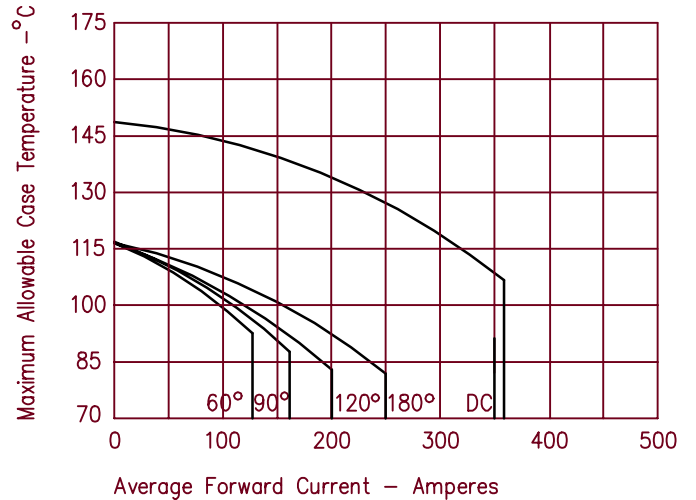


Figure 5
Maximum Forward Power Dissipation – Per Leg

