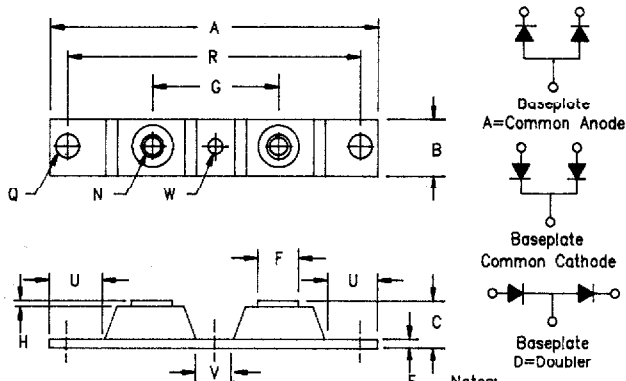


Schottky PowerMod

CPT40120 — CPT40140



Notes:
Baseplate: Nickel plated copper; common cathode

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
CPT40120*	20V	20V
CPT40125*	25V	25V
CPT40130*	30V	30V
CPT40135*	35V	35V
CPT40140*	40V	40V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- VRRM 20 to 40 Volts
- 150°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics		
Average forward current per pkg	$I_F(AV)$ 400 Amps	$T_C = 79^\circ C$, Square wave, $R_{\theta JC} = 0.16^\circ C/W$
Average forward current per leg	$I_F(AV)$ 200 Amps	$T_C = 79^\circ C$, Square wave, $R_{\theta JC} = 0.32^\circ C/W$
Maximum surge current per leg	I_{FSM} 3000 Amps	8.3ms. half sine. $T_J = 150^\circ C$
Maximum repetitive reverse current per leg	$I_R(OV)$ 2 Amps	$f = 1$ KHZ, $25^\circ C$, 1 usec square wave
Max peak forward voltage per leg	V_{FM} 0.55 Volts	$I_{FM} = 200A; T_J = 25^\circ C^*$
Max peak forward voltage per leg	V_{FM} 0.49 Volts	$I_{FM} = 200A; T_J = 150^\circ C^*$
Max peak reverse current per leg	I_{RM} 3.5 A	$V_{RRM}, T_J = 125^\circ C^*$
Max peak reverse current per leg	I_{KM} 10 mA	$V_{RRM}, T_J = 25^\circ C$
Typical junction capacitance	C_J 7000 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}	$-40^\circ C$ to $150^\circ C$
Operating junction temp range	T_J	$-40^\circ C$ to $150^\circ C$
Max thermal resistance	$R_{\theta JC}$	$0.32^\circ C/W$ Junction to case
Typical thermal resistance	$R_{\theta CS}$	$0.08^\circ C/W$ Case to sink
Terminal Torque		50 inch pounds maximum
Mounting Base Torque (outside holes)		40 inch pounds maximum
Mounting Base Torque (center hole)		10 inch pounds maximum
center hole must be torqued first		
Weight		2.8 ounces (78.3 grams) typical

Microsemi Corp.
Colorado

CPT40120 — CPT40140



Figure 1
Typical Forward Characteristics — Per Leg

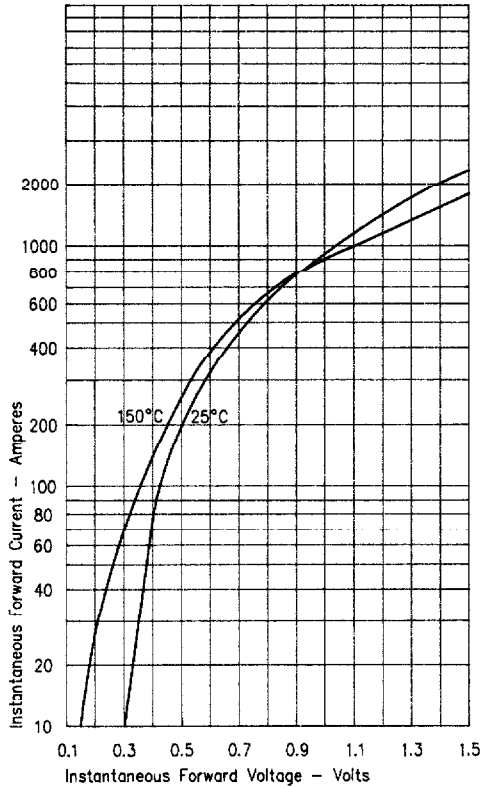


Figure 3
Typical Junction Capacitance — Per Leg

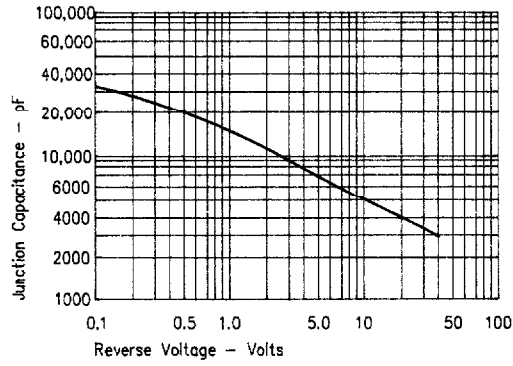


Figure 4
Forward Current Derating — Per Leg

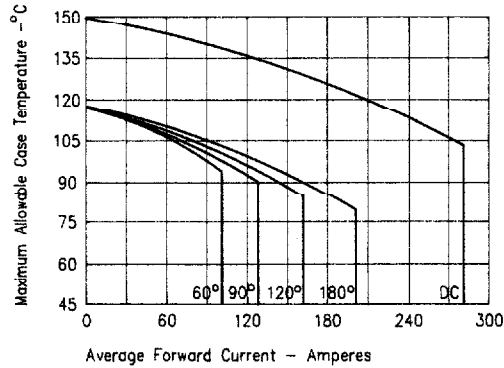


Figure 2
Typical Reverse Characteristics — Per Leg

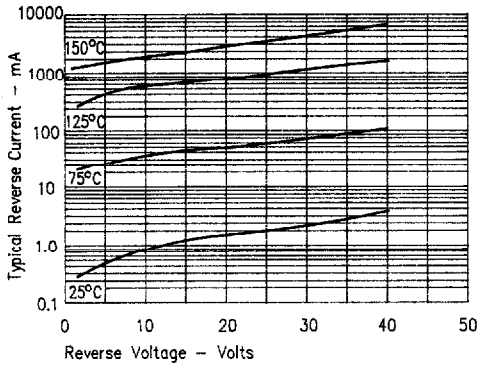


Figure 5
Maximum Forward Power Dissipation — Per Leg

