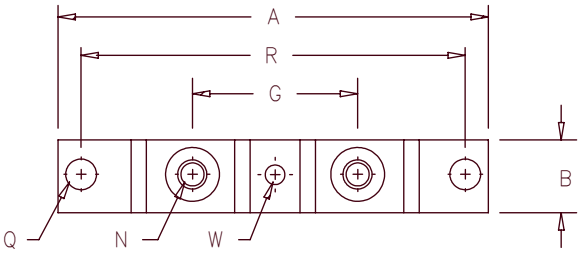
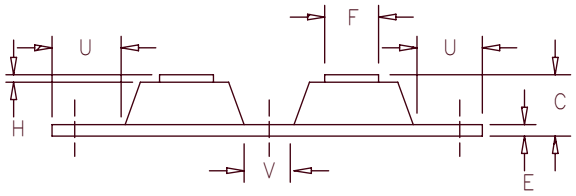
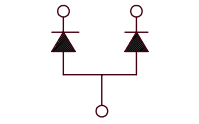
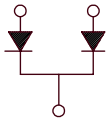
Schottky PowerMod
CPT50060







Baseplate
A=Common Anode



Baseplate
Common Cathode

Baseplate
D=Doubler

Notes:
Baseplate: Nickel plated copper

Dim.	Inches		Millimeters		
	Min.	Max.	Min.	Max.	Notes
A	---	3.630	---	92.20	
B	0.700	0.800	17.78	20.32	
C	---	0.680	---	17.28	
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
CPT50060*	MBR50060CT	60V	60V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- 500 Amperes/60 Volts
- 175°C Junction Temperature
- Reverse Energy Tested
- ROHS Compliant

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$	500 Amps	T_C = 132°C, Square wave, $R_{\theta JC}$ = 0.12°C/W
Average forward current per leg	$I_{F(AV)}$	250 Amps	T_C = 132°C, Square wave, $R_{\theta JC}$ = 0.24°C/W
Maximum surge current per leg	I_{FSM}	5000 Amps	8.3ms, half sine, T_J = 175°C
Maximum repetitive reverse current per leg	$I_{R(OV)}$	2 Amps	f = 1 KHZ, 25°C, 1μsec square wave
Max peak forward voltage per leg	V_{FM}	0.73 Volts	I_{FM} = 250A; T_J = 25°C
Max peak forward voltage per leg	V_{FM}	0.58 Volts	I_{FM} = 250A; T_J = 175°C
Max peak reverse current per leg	I_{RM}	200 mA	V_{RRM}, T_J = 125°C*
Max peak reverse current per leg	I_{RM}	8.0 mA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J	8800 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	$R_{\theta JC}$	0.24°C/W Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	0.12°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.08°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) center hole must be torqued first		8-10 inch pounds
Weight		2.8 ounces (78 grams) typical

CPT50060

Figure 1
Typical Forward Characteristics – Per Leg

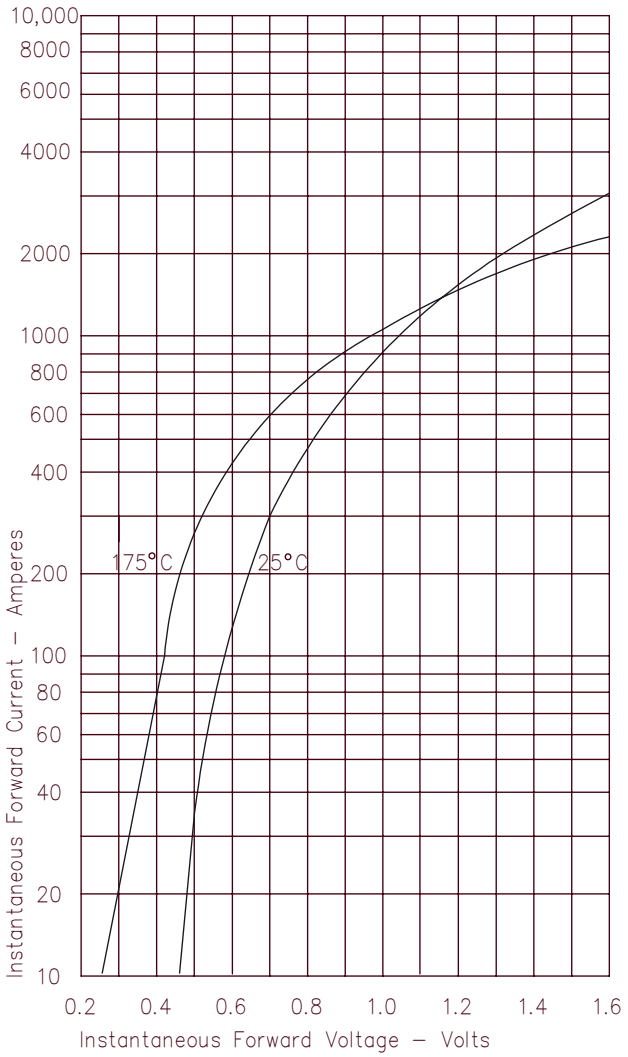


Figure 2
Typical Reverse Characteristics – Per Leg

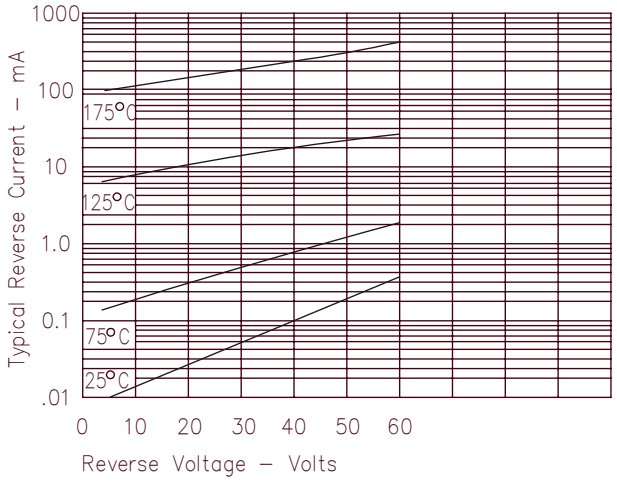


Figure 3
Typical Junction Capacitance – Per Leg

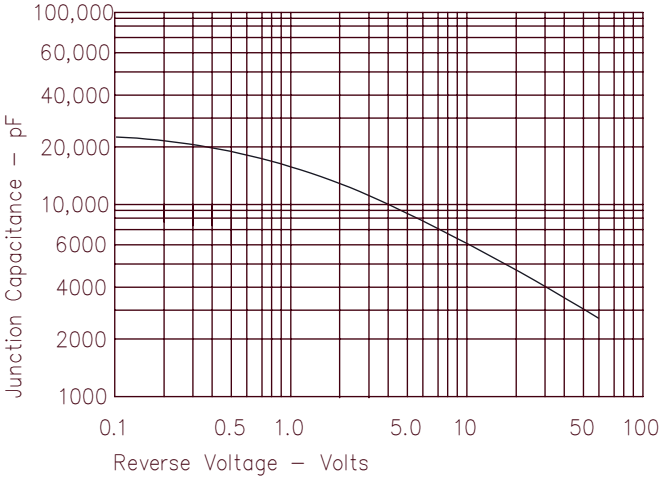


Figure 4
Forward Current Derating – Per Leg

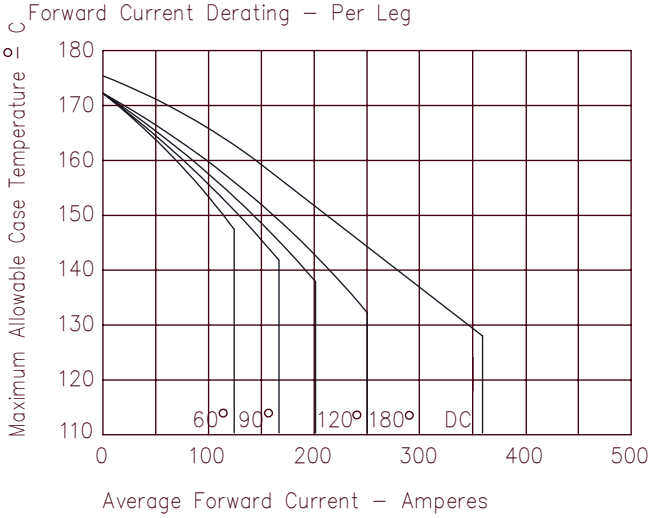
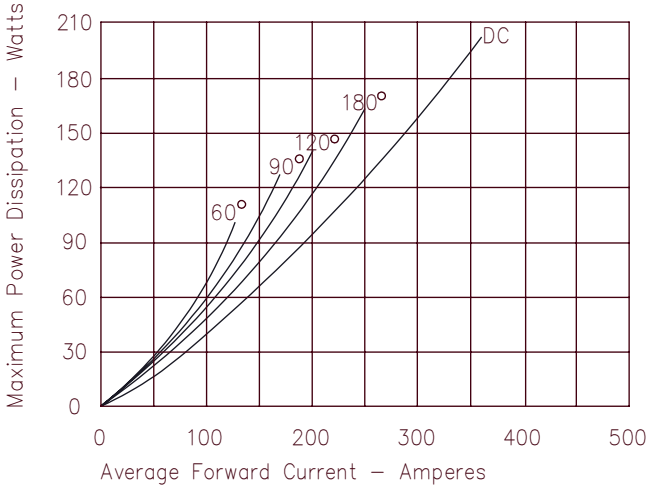


Figure 5
Maximum Forward Power Dissipation – Per Leg



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