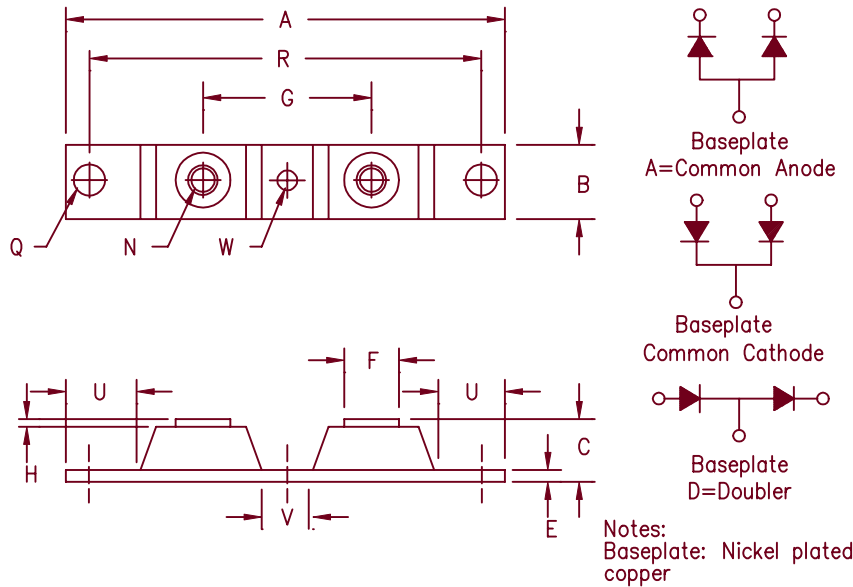


Schottky PowerMod

CPT20035 — CPT20050



| 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 | Industry Part Number | Working Peak Reverse Voltage | Repetitive Peak Reverse Voltage |
|--------------------------|----------------------|------------------------------|---------------------------------|
| CPT20035* | 201CNQ035 | 35V | 35V |
| CPT20040* | 201CNQ040 | 40V | 40V |
| CPT20045* | 201CNQ045 | 45V | 45V |
| | MBRP20045CT | | |
| CPT20050* | | 50V | 50V |

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring Protection
- Common Cathode Center Tap
- 200 Amperes/35 to 50 Volts
- 175°C Junction Temperature
- Reverse Energy Tested

Electrical Characteristics

| | | |
|--|-----------------------------|---|
| Average forward current per pkg | I _{F(AV)} 200 Amps | T _C = 143°C Square wave, R _{θJC} = 0.25°C/W |
| Average forward current per leg | I _{F(AV)} 100 Amps | T _C = 143°C, Square wave, R _{θJC} = 0.5°C/W |
| Maximum surge current per leg | I _{FSM} 2000 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, 1 μsec square wave |
| Max peak forward voltage per leg | V _{FM} 0.80 Volts | I _{FM} = 200A; T _J = 25°C* |
| Max peak forward voltage per leg | V _{FM} 0.60 Volts | I _{FM} = 200A; T _J = 175°C* |
| Max peak reverse current per leg | I _{RM} 75mA | V _{RRM} , T _J = 125°C* |
| Max peak reverse current per leg | I _{RM} 4.0mA | V _{RRM} , T _J = 25°C |
| Typical junction capacitance per leg | C _J 4600pF | V _R = 5.0V, T _J = 25°C |

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

Thermal and Mechanical Characteristics

| | | |
|--------------------------------------|------------------|-------------------------------|
| Storage temp range | T _{STG} | -55°C to 175°C |
| Operation junction temp range | T _J | -55°C to 175°C |
| Max thermal resistance per leg | R _{θJC} | 0.5°C/W Junction to case |
| Max thermal resistance per pkg | R _{θJC} | 0.25°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) | | 8-10 inch pounds |
| center bolt must be torqued first | | |
| Weight | | 2.8 ounces (75 grams) typical |

CPT20035 – CPT20050

Figure 1
Typical Forward Characteristics – Per Leg

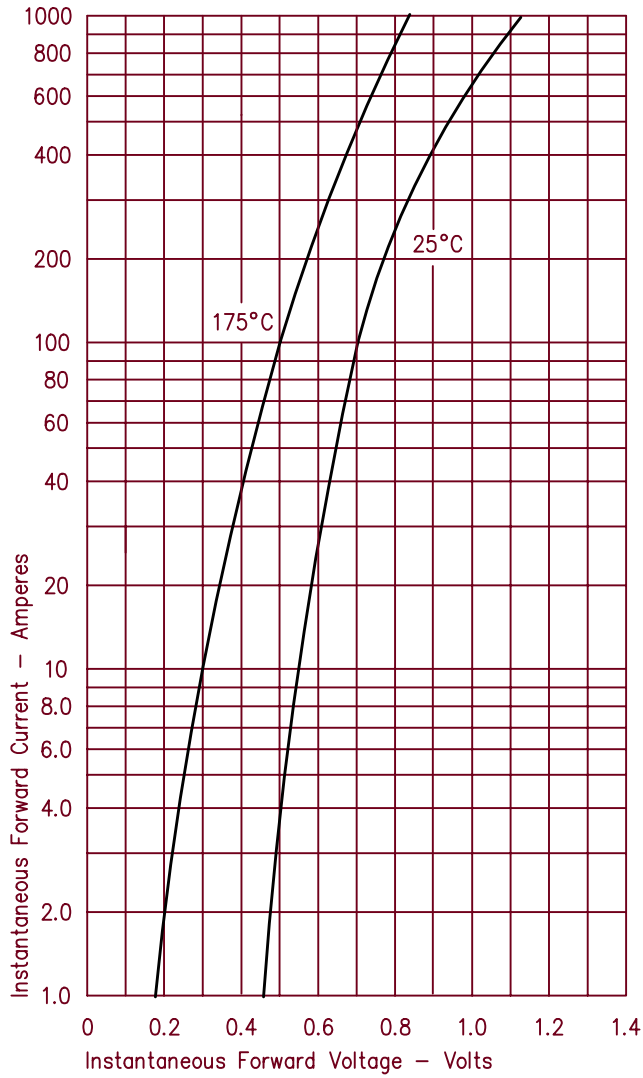


Figure 3
Typical Junction Capacitance – Per Leg

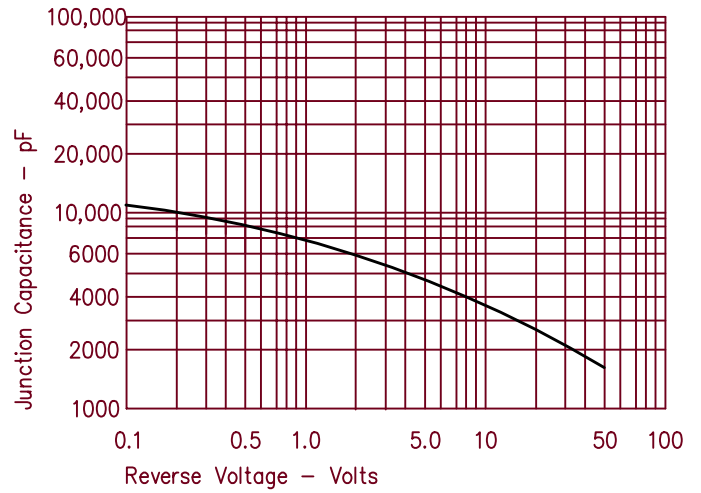


Figure 4
Forward Current Derating – Per Leg

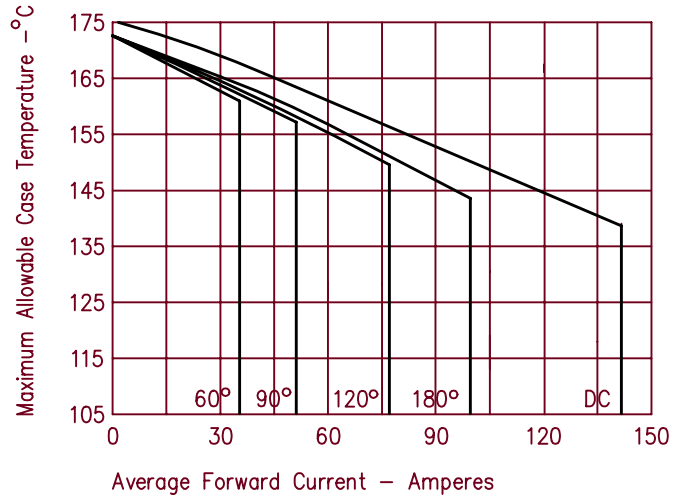


Figure 2
Typical Reverse Characteristics – Per Leg

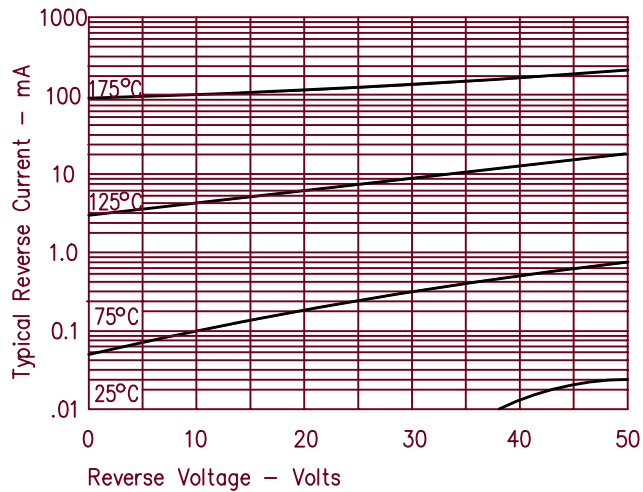


Figure 5
Maximum Forward Power Dissipation – Per Leg

