## Features

- Extremely Low Thermal Resistance
- For Surface Mount Application and High Current Capability
- Higher Temp Soldering: 260°C for 10 Seconds At Terminals
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. “Green” Device (Note 1)
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

# 250mW, 40 Volt Schottky Barrier Diode

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 400°C/W Junction to Ambient(Note 2)

| MCC Part Number | Repetitive Peak Reverse Voltage $V_{RRM}$ | RMS Reverse Voltage $V_{R(RMS)}$ | DC Blocking Voltage $V_R$ |
|---|---|---|---|
| B5819P1L | 40V | 28V | 40V |

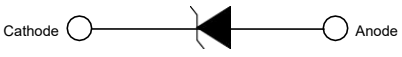
### Electrical Characteristics @ 25°C Unless Otherwise Specifie

| Parameter | Symbol | Value |
|---|---|---|
| Average Rectified Current | $I_{F(AV)}$ | 1A |
| Power Dissipation | $P_D$ | 250mW |

Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. Valid Provided that Terminals are Kept at Ambient Temperature.

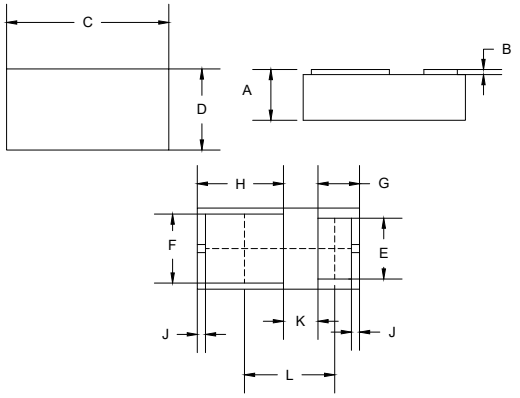
## Internal Structure and Marking Code





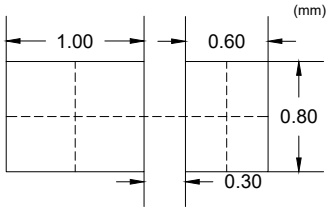


## DFN1608-2




| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.018 | 0.022 | 0.45 | 0.55 | |
| B | 0.000 | 0.004 | 0.01 | 0.09 | |
| C | 0.061 | 0.065 | 1.55 | 1.65 | |
| D | 0.030 | 0.033 | 0.75 | 0.85 | |
| E | 0.020 | 0.027 | 0.52 | 0.68 | |
| F | 0.024 | 0.030 | 0.60 | 0.76 | |
| G | 0.016 | | 0.41 | | REF. |
| H | 0.033 | | 0.85 | | REF. |
| J | 0.003 | | 0.08 | | REF. |
| K | 0.013 | | 0.34 | | REF. |
| L | 0.035 | 0.039 | 0.90 | 1.00 | |

**Suggested Solder Pad Layout**



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| Reverse Breakdown Voltage | $V_{BR}$ | $I_R$=500μA | 40 | | | V |
| Forward Voltage | $V_F$ | $I_F$=0.5A | | 0.41 | | V |
| | | $I_F$=1A | | 0.49 | 0.54 | V |
| Reverse Current | $I_R$ | $V_R$=40V | | | 100 | μA |
| Junction Capacitance | $C_J$ | $V_R$ = 0V, f = 1MHz | | | 150 | pF |
| Reverse Recovery Time | $t_{rr}$ | $I_F$=$I_R$=10mA, $I_{rr}$=0.1×$I_R$,$R_L$=100Ω | | | 25 | ns |

* Pulse Test: Pulse Width 300 μsec, Duty Cycle 2%

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

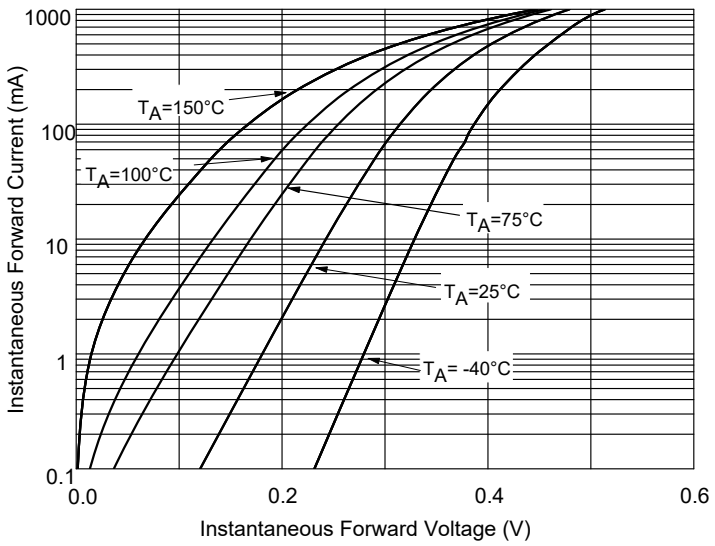



Fig. 2 - Typical Reverse Leakage Characteristics

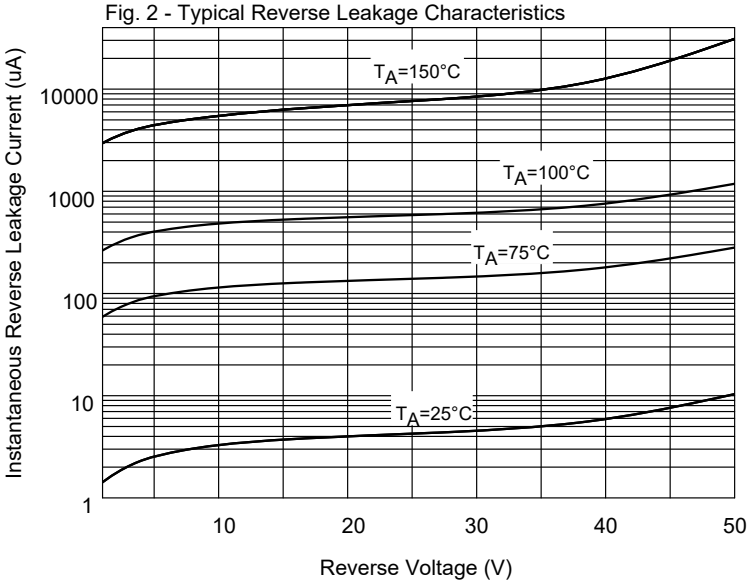



Fig. 3 - Capacitance Characteristics

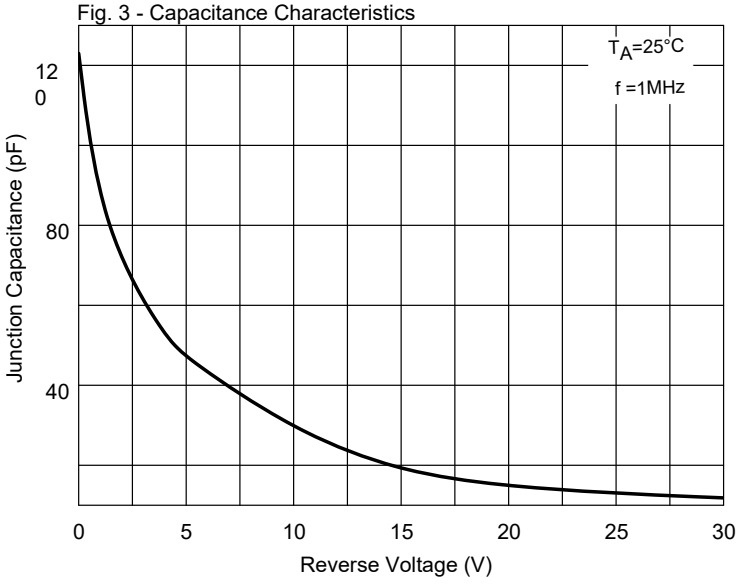
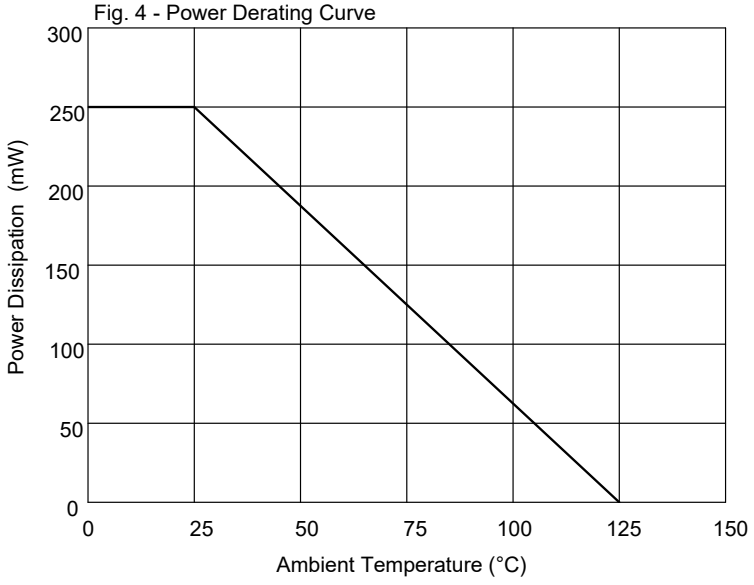



Fig. 4 - Power Derating Curve



## Ordering Information

| Device | Packing |
|---|---|
| Part Number-TP | Tape&Reel: 10Kpcs/Reel |

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