

# Schottky Barrier Rectifier

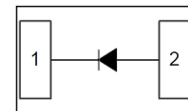
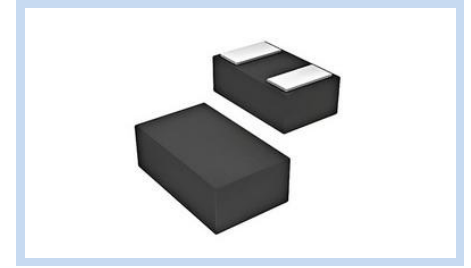
## 1A 40V DFN1005-2L

B5819WD1

MERITEK

### FEATURES

- Low Power Loss, High Efficiency
- Low Current Leakage
- High Surge Capacity, Low Forward Voltage Drop
- Silicon Epitaxial Planar Chip, Metal Silicon Junction
- Application: Low-Voltage, High-Frequency Inverters, Free Wheeling, Polarity Protection



### MECHANICAL DATA

- Case: DFN1005-2L, Molded Epoxy Meets UL94V-0
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

### ELECTRICAL CHARACTERISTICS

| Parameter                                           | Symbol          | Value      | Unit |
|-----------------------------------------------------|-----------------|------------|------|
| Maximum Recurrent Peak Reverse Voltage              | $V_{RRM}$       | 40         | V    |
| Maximum Average Forward Current                     | $I_{(AV)}$      | 1.0        | A    |
| Non-Repetitive Peak Forward Surge Current (t=8.3ms) | $I_{FSM}$       | 7.0        | A    |
| Power Dissipation                                   | $P_D$           | 200        | mW   |
| Typical Thermal Resistance Form Junction to Ambient | $R_{\theta JA}$ | 400        | °C/W |
| Operating Junction Temperature                      | $T_J$           | 125        | °C   |
| Storage Temperature Range                           | $T_{STG}$       | -55 to 125 | °C   |

### ELECTRICAL CHARACTERISTICS

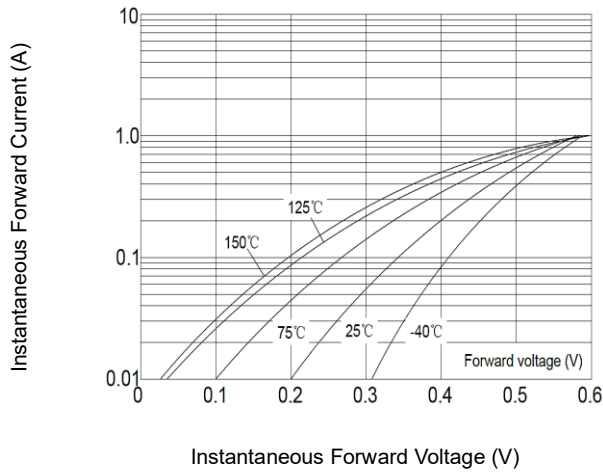
| Parameter                 | Conditions    | Symbol     | Min | Typ. | Max  | Units   |
|---------------------------|---------------|------------|-----|------|------|---------|
| Reverse Breakdown Voltage | $I_T=1mA$     | $V_{(BR)}$ | 40  | -    | -    | V       |
| Reverse Leakage Current   | $V_{RWM}=40V$ | $I_R$      | -   | 10   | 40   | $\mu A$ |
| Forward Voltage           | $I_F=100mA$   | $V_F$      | -   | -    | 0.38 | V       |
|                           | $I_F=200mA$   |            | -   | -    | 0.42 |         |
|                           | $I_F=500mA$   |            | -   | -    | 0.49 |         |
|                           | $I_F=700mA$   |            | -   | -    | 0.55 |         |
|                           | $I_F=1A$      |            | -   | -    | 0.61 |         |

Notes:

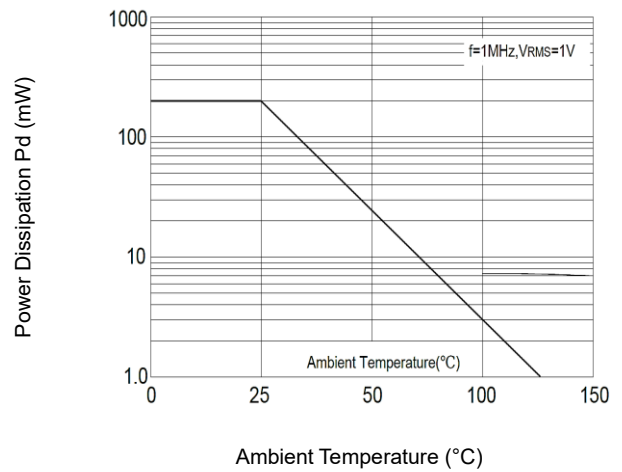
1.  $T_A=25^{\circ}C$ , RH=45%-75%, unless otherwise noted

### CHARACTERISTIC CURVES

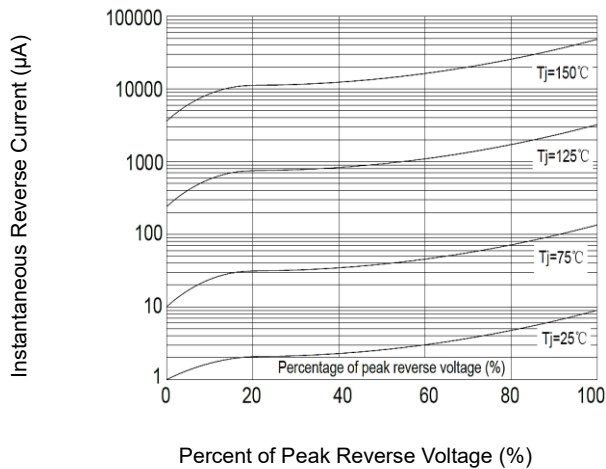
Typical Instantaneous Forward Characteristics



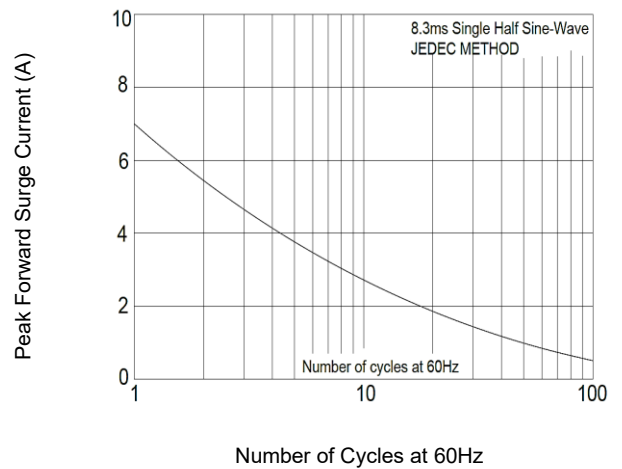
Power Derating Curve



Typical Reverse Characteristics



Maximum Non-Repetitive Forward Surge Current



### DIMENSIONS

| Item | Min. (mm) | Max. (mm) |
|------|-----------|-----------|
| A    | 0.40      | 0.55      |
| A1   | 0.00      | 0.05      |
| b2   | 0.45      | 0.55      |
| D    | 0.95      | 1.05      |
| E    | 0.55      | 0.65      |
| L1   | 0.20      | 0.30      |
| L2   | 0.20      | 0.30      |
| L3   | 0.40 BSC  |           |
| C    | 0.80      |           |
| G1   | 0.30      |           |
| X    | 0.50      |           |
| X1   | 1.30      |           |
| Y1   | 0.60      |           |

