

Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 40 V
Forward Current - 1.0 A

PINNING

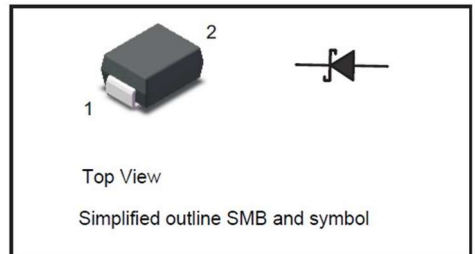
| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |

Features

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 70mg / 0.0025oz



Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %.

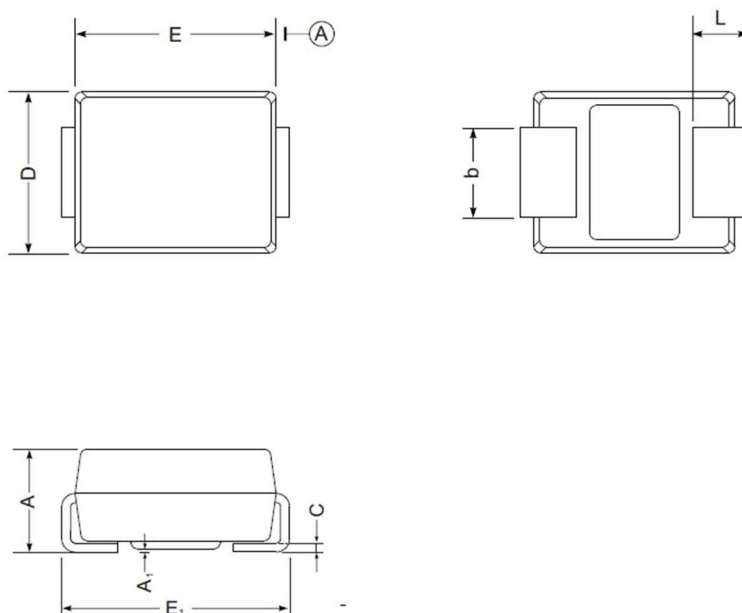
| Parameter | Symbols | 10BQ040 | Units |
|---|-----------------|------------|----------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 40 | V |
| Maximum RMS voltage | V_{RMS} | 28 | V |
| Maximum DC Blocking Voltage | V_{DC} | 40 | V |
| Maximum Average Forward Rectified Current at $T_c = 100\text{ }^{\circ}\text{C}$ | $I_{F(AV)}$ | 1.0 | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 25 | A |
| Max Instantaneous Forward Voltage at 1 A | V_F | 0.55 | V |
| Maximum DC Reverse Current $T_a = 25^{\circ}\text{C}$ at Rated DC Reverse Voltage $T_a = 100^{\circ}\text{C}$ | I_R | 0.5 10 | mA |
| Typical Junction Capacitance ⁽¹⁾ | C_j | 110 | pF |
| Typical Thermal Resistance ⁽²⁾ | $R_{\theta JA}$ | 90 | $^{\circ}\text{C/W}$ |
| Operating Junction Temperature Range | T_j | -55 ~ +125 | $^{\circ}\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | $^{\circ}\text{C}$ |

(1) Measured at 1MHz and applied reverse voltage of 4 V D.C.

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas

PACKAGE OUTLINE

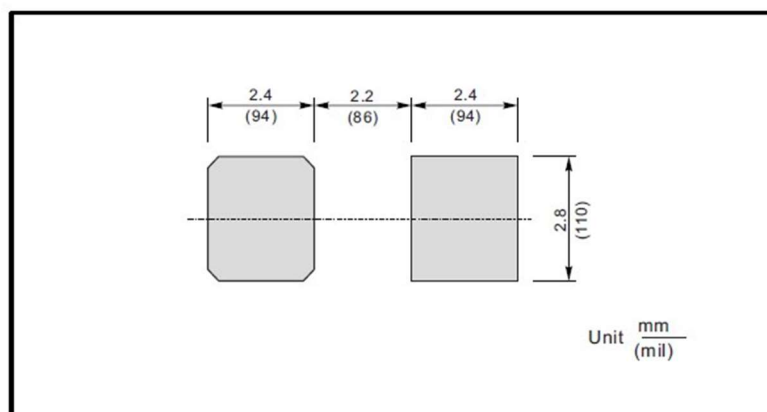
Plastic surface mounted package; 2 leads



SMB mechanical data

| UNIT | | A | E | D | E ₁ | A ₁ | L | C | b |
|------|-----|------|------|------|----------------|----------------|-----|-------|-----|
| mm | max | 2.44 | 4.70 | 3.94 | 5.59 | 0.20 | 1.5 | 0.305 | 2.2 |
| | min | 2.13 | 4.06 | 3.3 | 5.08 | 0.05 | 0.8 | 0.152 | 1.9 |
| mil | max | 96 | 185 | 155 | 220 | 7.9 | 59 | 12 | 87 |
| | min | 84 | 160 | 130 | 200 | 2.0 | 32 | 6 | 75 |

The recommended mounting pad size



MARKING

SS14