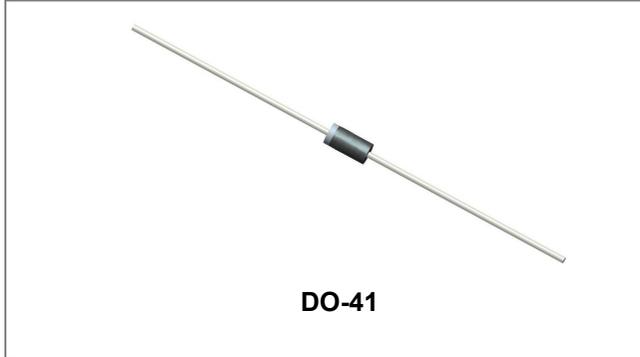


11DQ03/11DQ04 SCHOTTKY RECTIFIER



Features

- Low profile, axial leaded outline
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Very Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Terminals finish: Tin Lead-free plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Maximum Ratings(limiting values, $T_c = 25^\circ\text{C}$ unless otherwise specified)

| Characteristics | Symbol | Condition | Max. | Units |
|--|---------------------------------|---|--------------------------|-------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | - | 30(11DQ03) 40(11DQ04) | V |
| Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_c = 75^\circ\text{C}$, rectangular wave form On PC board 9mm ² island | 1.1 | A |
| Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 8.3 ms, half Sine pulse | 40 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|---------------------------|----------|--|--------------|--------------|------------------|
| Forward Voltage Drop* | V_{F1} | @ 1 A, Pulse, $T_J = 25^\circ\text{C}$ @ 2 A, Pulse, $T_J = 25^\circ\text{C}$ | 0.47 0.59 | 0.55 0.71 | V |
| | V_{F2} | @ 1 A, Pulse, $T_J = 125^\circ\text{C}$ @ 2 A, Pulse, $T_J = 125^\circ\text{C}$ | 0.42 0.57 | 0.50 0.61 | V |
| Reverse Current* | I_{R1} | @ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25^\circ\text{C}$ | 0.02 | 1 | mA |
| | I_{R2} | @ $V_R = \text{Rated } V_R$, Pulse, $T_J = 125^\circ\text{C}$ | 4.5 | 6 | mA |
| Junction Capacitance | C_T | @ $V_R = 5\text{V}$, $T_c = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 46 | 60 | PF |
| Typical Series Inductance | L_S | Measured lead to lead 5 mm from package body | 8.0 | - | nH |
| Voltage Rate of Change | dv/dt | - | - | 10,000 | V/ μs |

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|--|-----------------------|-----------|---------------|-----------------------------|
| Junction Temperature | T_J | - | -40 to +150 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{stg} | - | -40 to +150 | $^{\circ}\text{C}$ |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta\text{JA}}$ | - | 100 | $^{\circ}\text{C}/\text{W}$ |
| Typical Thermal Resistance Junction to Lead | $R_{\theta\text{JL}}$ | - | 81 | $^{\circ}\text{C}/\text{W}$ |
| Approximate Weight | wt | - | 0.34 | g |

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

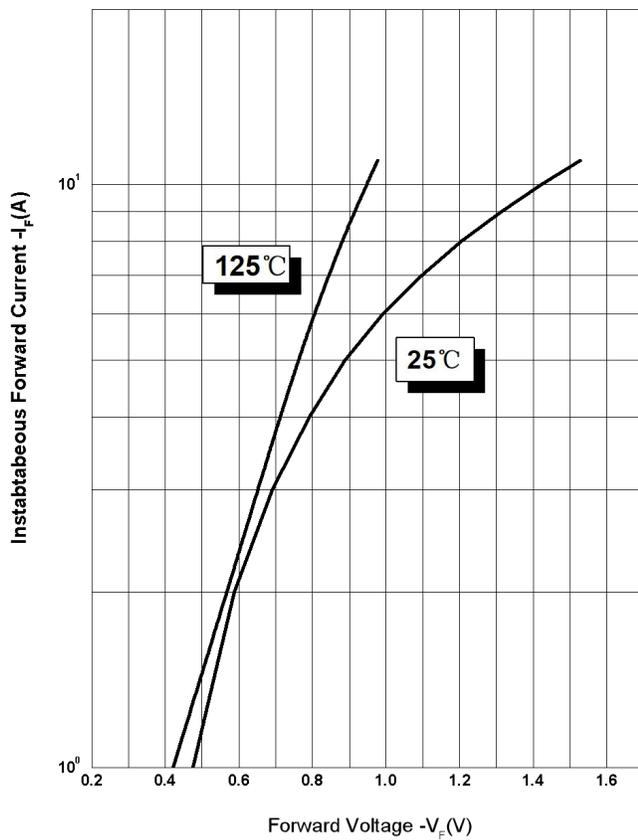


Figure 2 Typical Reverse Characteristics

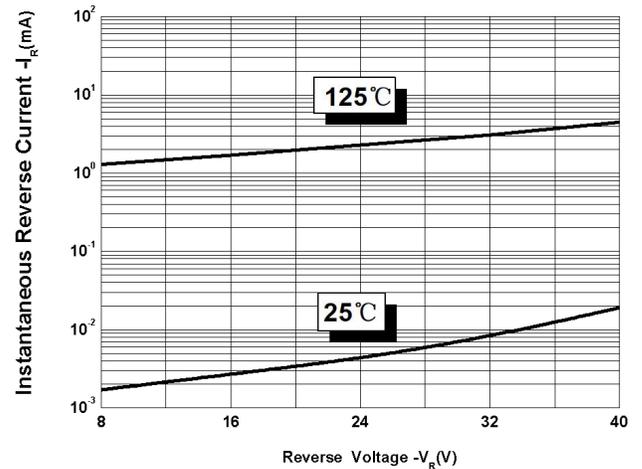
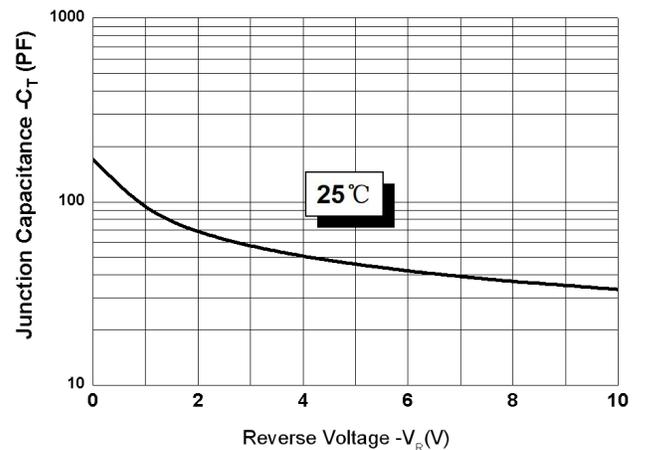
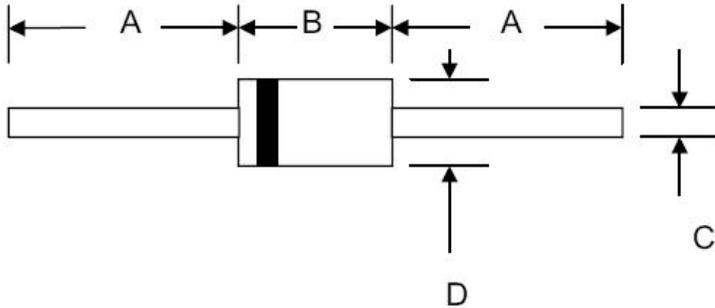


Figure 3 Typical Junction Capacitance



Mechanical Dimensions DO-41



| SYMBOL | Millimeters | | Inches | |
|--------|-------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 25.4 | - | 1.000 | - |
| B | 4.06 | 5.21 | 0.160 | 0.205 |
| C | 0.71 | 0.864 | 0.028 | 0.034 |
| D | 2.00 | 2.72 | 0.079 | 0.107 |

Ordering Information

| Device | Package | Shipping |
|------------------|-----------------|---------------|
| 11DQ03 11DQ04 | DO-41 (Pb-Free) | 5000pcs /reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

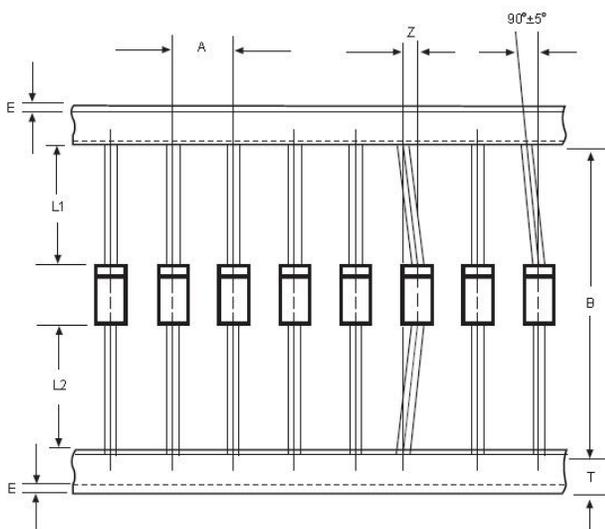


Where XXXXX is YYWWL

11DQ03 = Part Name
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Caution: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification DO-41



| SYMBOL | Millimeters | |
|---------|-------------|------|
| | Min. | Max. |
| A | 4.50 | 5.50 |
| B | 50.9 | 53.9 |
| Z | - | 1.20 |
| T | 5.60 | 6.40 |
| E | - | 0.80 |
| IL1-L2I | - | 1.0 |

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