

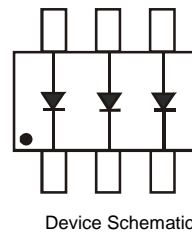
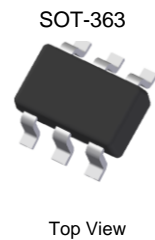
SD103ATW-7-F

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Switching
- Low Leakage Current
- Three Fully Isolated Schottky Diodes
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

Mechanical Data

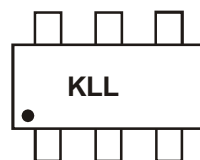
- Case: SOT-363
- Case Material: Molded Plastic, “Green” Molding Compound;
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity: See Diagram
- Terminals: Matte Tin Finish Annealed over Alloy 42 Leadframe
(Lead Free Plating); Solderable per MIL-STD-202, Method 208 ②③
- Weight: 0.006 grams (Approximate)



Ordering Information (Note 4)

| Part Number | Case | Packaging |
|--------------|---------|-------------------|
| SD103ATW-7-F | SOT-363 | 3,000/Tape & Reel |

Marking Information



SD103ATW-7-F

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Value | Unit |
|--|---------------------|-------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 40 | V |
| Working Peak Reverse Voltage | V _{RWM} | | |
| DC Blocking Voltage | V _R | | |
| RMS Reverse Voltage | V _{R(RMS)} | 28 | V |
| Forward Continuous Current (Note 5) | I _{FM} | 350 | mA |
| Average Rectified Current (Note 5) | I _O | 175 | mA |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Note 5) | I _{FSM} | 1.0 | A |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|--|-----------------------------------|-------------|------|
| Power Dissipation (Note 6) | P _D | 200 | mW |
| Thermal Resistance, Junction to Ambient Air (Note 6) | R _{θJA} | 500 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +125 | °C |

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Min | Typ | Max | Unit | Test Condition |
|------------------------------------|--------------------|-----|------|------|------|---|
| Reverse Breakdown Voltage (Note 7) | V _{(BR)R} | 40 | — | — | V | I _R = 100μA |
| Forward Voltage Drop | V _F | — | 0.27 | — | V | I _F = 1mA |
| | | — | 0.32 | — | V | I _F = 5mA |
| | | — | 0.36 | 0.37 | V | I _F = 20mA |
| | | — | 0.44 | 0.50 | V | I _F = 100mA |
| Leakage Current (Note 7) | I _R | — | 0.2 | 2.0 | μA | V _R = 10V |
| | | — | 0.4 | 5.0 | μA | V _R = 30V |
| Total Capacitance | C _T | — | 50 | — | pF | V _R = 0V, f = 1.0MHz |
| Reverse Recovery Time | t _{rr} | — | 10 | — | ns | I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω |

- Notes:
- This is the maximum rating of single Diode (D₁ or D₂ or D₃). In the case of using two or three diodes, the maximum ratings per diode are 75% of the ratings for single diode operation.
 - Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 - Short duration pulse test used to minimize self-heating effect.

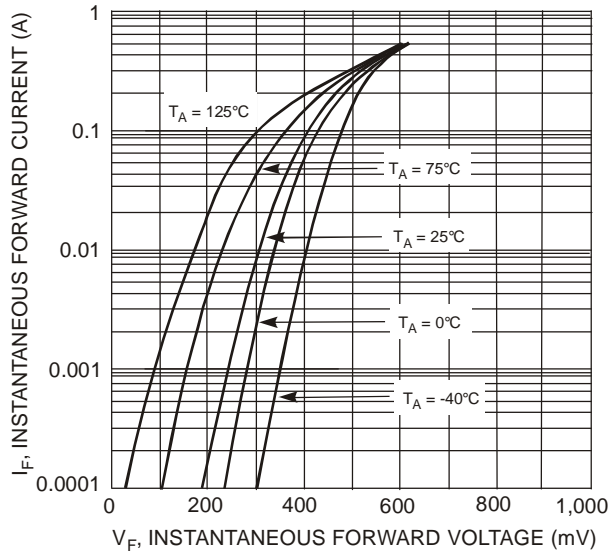


Fig. 1 Typical Forward Characteristics

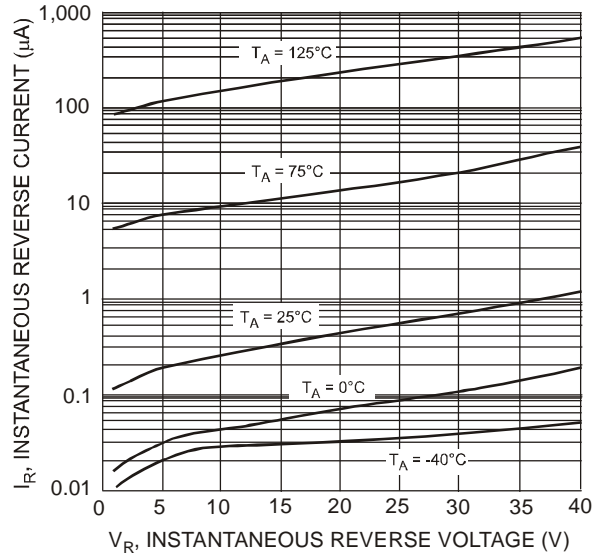


Fig. 2 Typical Reverse Characteristics

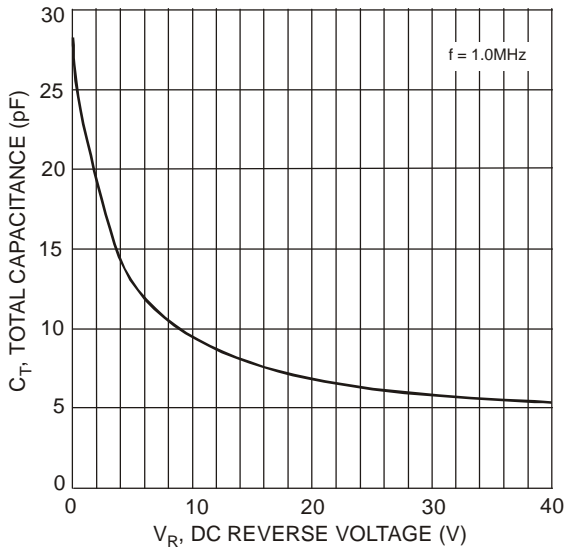


Fig. 3 Total Capacitance vs. Reverse Voltage

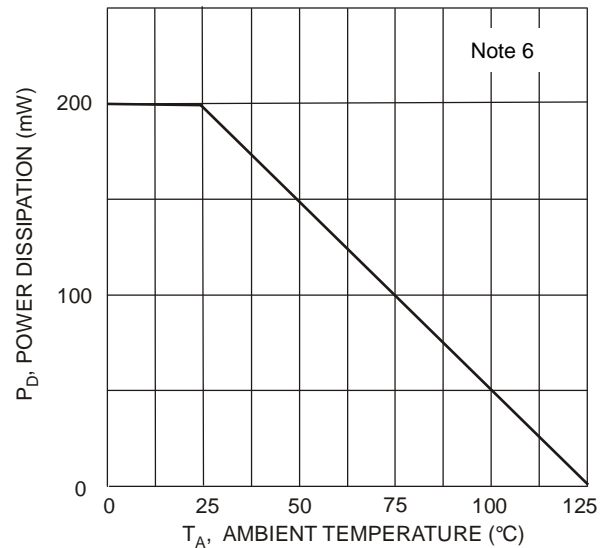
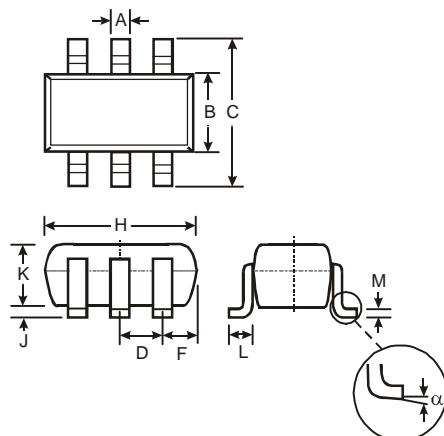


Fig. 4 Power Derating Curve

Package Outline Dimensions



| SOT-363 | | | |
|----------------------|----------|------|-------|
| Dim | Min | Max | Typ |
| A | 0.10 | 0.30 | 0.25 |
| B | 1.15 | 1.35 | 1.30 |
| C | 2.00 | 2.20 | 2.10 |
| D | 0.65 Typ | | |
| F | 0.40 | 0.45 | 0.425 |
| H | 1.80 | 2.20 | 2.15 |
| J | 0 | 0.10 | 0.05 |
| K | 0.90 | 1.00 | 1.00 |
| L | 0.25 | 0.40 | 0.30 |
| M | 0.10 | 0.22 | 0.11 |
| α | 0° | 8° | - |
| All Dimensions in mm | | | |

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