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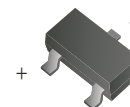
sales@integrated-circuit.com

SMD Switching Diodes



CDST-19-G/20-G

High Speed
RoHS Device



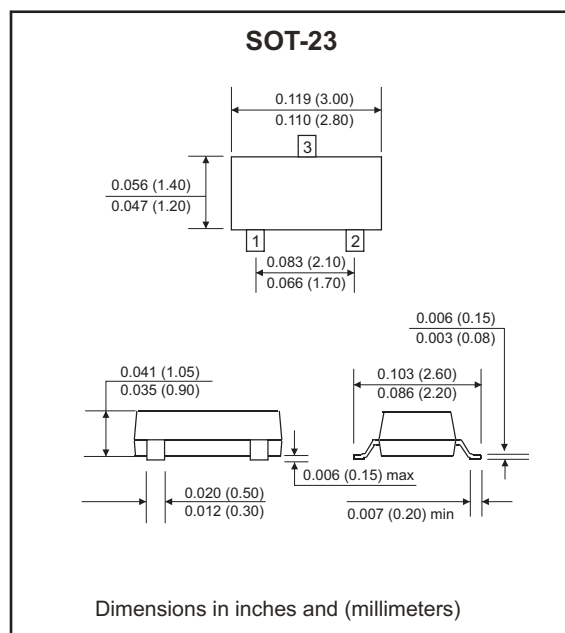
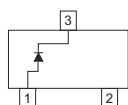
Features

- Fast switching diode.
- Surface mount package ideally for automatic insertion.
- For general purpose switching applications.
- High conductance.

Mechanical data

- Case: SOT-23
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026.
- Weight: 0.008 gram.

Circuit Diagram



Maximum Rating (at Ta=25°C unless otherwise noted)

| Parameter | Symbol | CDST-19-G | CDST-20-G | Unit |
|--|-----------------|------------|-----------|------|
| Non-Repetitive peak reverse voltage | V_{RM} | 100 | 150 | V |
| DC blocking voltage | V_R | 100 | 150 | V |
| Average rectified output current | I_o | 200 | | mA |
| Power dissipation | P_D | 250 | | mW |
| Thermal resistance-Junction to ambient air | $R_{\theta JA}$ | 500 | | °C/W |
| Junction temperature | T_J | 150 | | °C |
| Storage temperature range | T_{STG} | -65 ~ +150 | | °C |

Electrical Characteristics (at TA=25°C unless otherwise noted)

| Parameter | Symbol | Test Conditions | Min | Max | Unit |
|---------------------------|----------|---------------------------------------|------------|-----------|------|
| Reverse breakdown voltage | V_{BR} | $I_R=100\mu A$ | 100 150 | | V |
| Reverse leakage current | I_R | $V_R=100V$ $V_R=150V$ | | 0.1 | UA |
| Forward voltage | V_F | $I_F=100mA$ $I_F=200mA$ | | 1 1.25 | V |
| Junction capacitance | C_J | $V_R=0V, f=1MHz$ | | 5 | pF |
| Reverse recovery time | t_{rr} | $I_F=I_R=30mA, I_{rr}=0.1 \times I_R$ | | 50 | nS |

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Characteristic Curves (CDST-19-G/20-G)

Fig.1 - Forward Characteristics

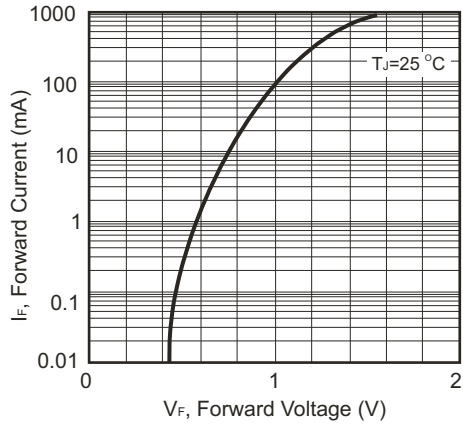
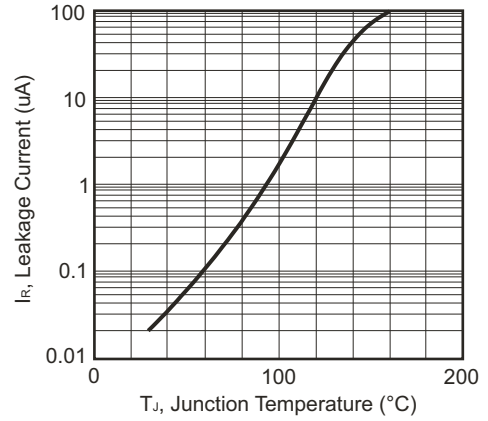


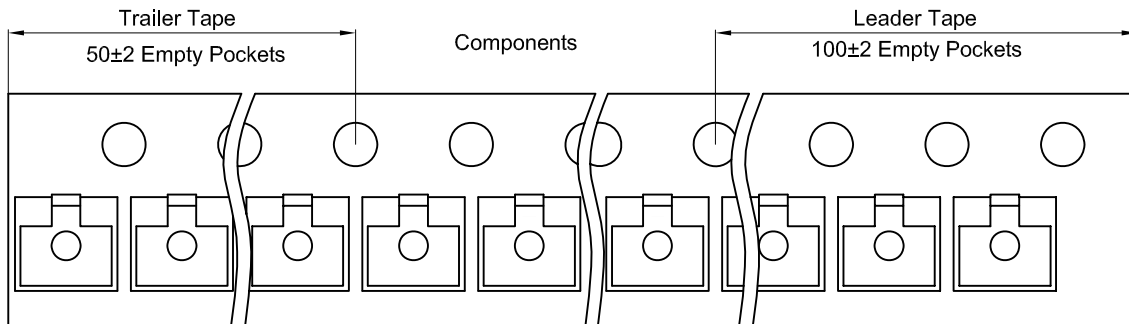
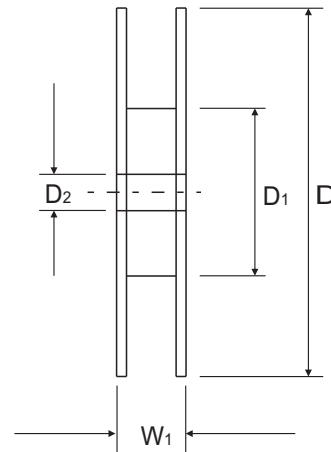
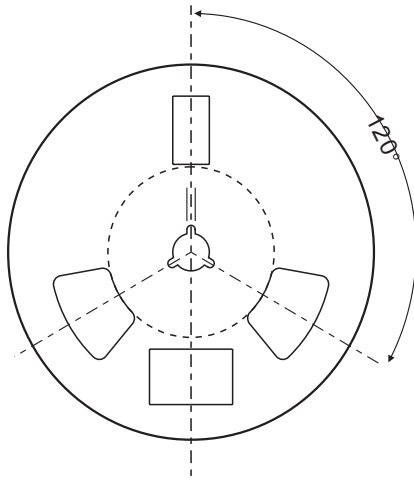
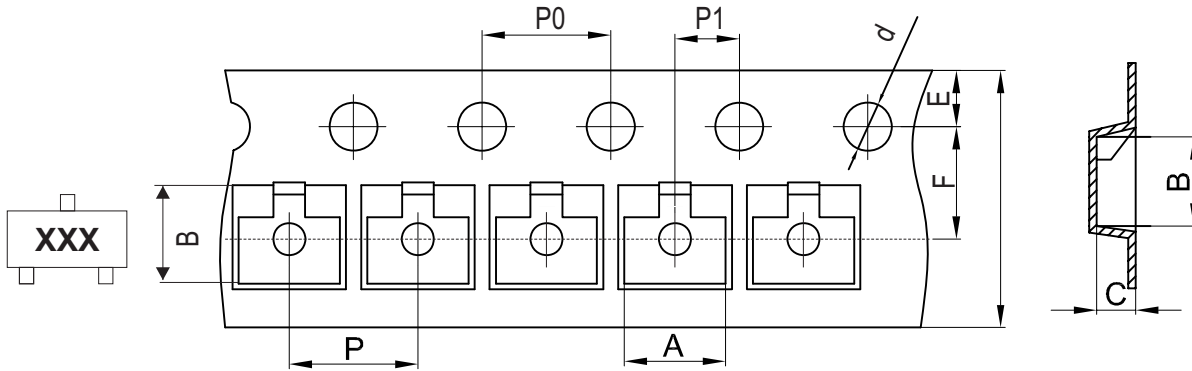
Fig.2 - Leakage Current vs Junction Temperature



SMD Switching Diodes



Reel Taping Specification



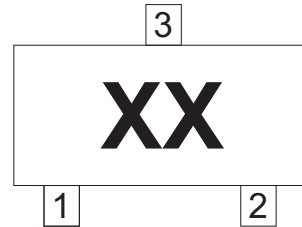
| SOT-23 | SYMBOL | A | B | C | d | D | D1 | D2 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 3.15 ± 0.10 | 2.77 ± 0.10 | 1.22 ± 0.10 | 1.50 ± 0.10 | 178 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch) | 0.124 ± 0.004 | 0.109 ± 0.004 | 0.048 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

| SOT-23 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|-------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 8.00 + 0.30 / - 0.10 | 12.30 ± 1.0 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.315 + 0.012 / - 0.004 | 0.484 ± 0.039 |

SMD Switching Diodes

Marking Code

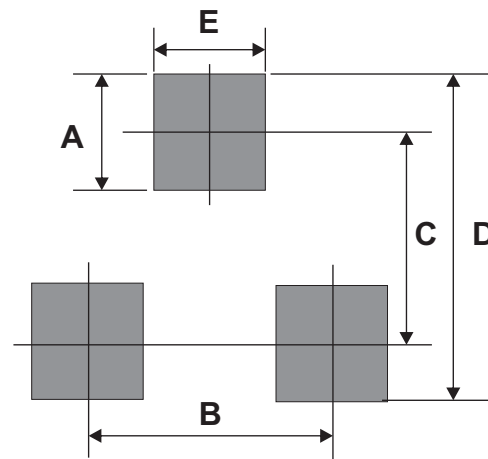
| Part Number | Marking Code |
|-------------|--------------|
| CDST-19-G | JP |
| CDST-20-G | JR |



xx = Product type marking code

Suggested PAD Layout

| SIZE | SOT-23 | |
|------|--------|--------|
| | (mm) | (inch) |
| A | 0.80 | 0.031 |
| B | 1.90 | 0.075 |
| C | 2.02 | 0.080 |
| D | 2.82 | 0.111 |
| E | 0.80 | 0.031 |



Standard Packaging

| Case Type | REEL PACK | |
|-----------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOT-23 | 3,000 | 7 |