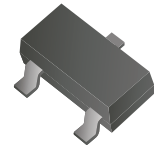


CDST-21/A/C/S-G

Reverse Voltage: 250 Volts
Forward Current: 200 mA
RoHS Device



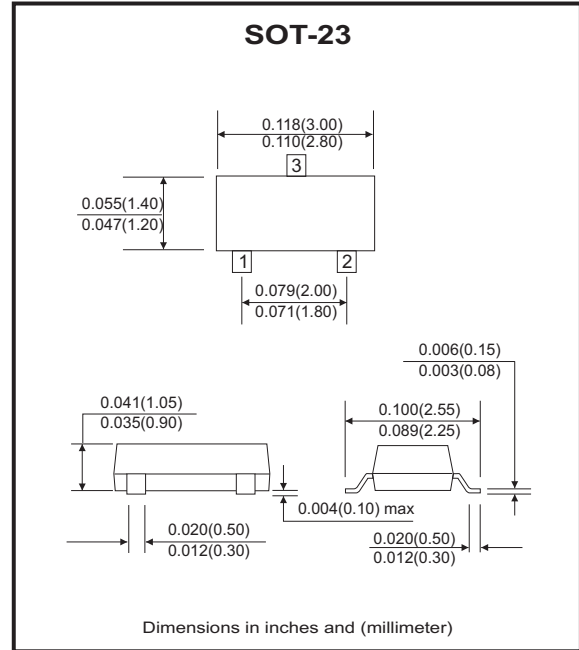
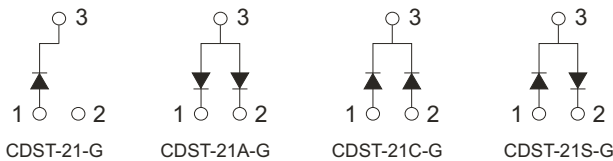
Features

- Fast Switching Speed.
- Surface Mount Package Ideally Suited for Automatic Insertion.
- For General Purpose Switching Applications.
- High Conductance.

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Approx. weight: 0.008 grams

Circuit diagram



Maximum Ratings and Electrical Characteristics

(at Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Units |
|---|-----------------|-------------|-------|
| Repetitive peak reverse voltage | V_{RRM} | 250 | V |
| Working peak reverse voltage | V_{RWM} | | |
| DC blocking voltage | V_R | | |
| Average rectified output current | I_o | 200 | mA |
| Non-repetitive peak forward surge current | | @ t = 1.0µs | 2.5 |
| | | @ t = 1.0s | 0.5 |
| Repetitive peak forward surge current | I_{FRM} | 625 | mA |
| Power dissipation | P_D | 225 | mW |
| Thermal resistance junction to ambient | $R_{\theta JA}$ | 55 | °C/W |
| Junction temperature | T_J | 150 | °C |
| Storage temperature | T_{STG} | -55 to +150 | °C |

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

| Parameter | Conditions | Symbol | Min. | Max. | Unit |
|---------------------------------|--|------------|------|--------------|---------|
| Reverse breakdown voltage | $I_R = 100\mu A$ | $V_{(BR)}$ | 250 | | V |
| Reverse voltage leakage current | $V_R = 200V$ | I_R | | 0.1 | μA |
| Forward voltage | $I_F = 100mA$ $I_F = 200mA$ | V_F | | 1000 1250 | mV |
| Diode Capacitance | $V_R = 0V, f = 1MHz$ | C_D | | 5 | pF |
| Reverse recovery time | $I_F = I_R = 30mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ | T_{rr} | | 50 | nS |

RATING AND CHARACTERISTIC CURVES (CDST-21/A/C/S-G)

Fig.1 - Forward characteristics

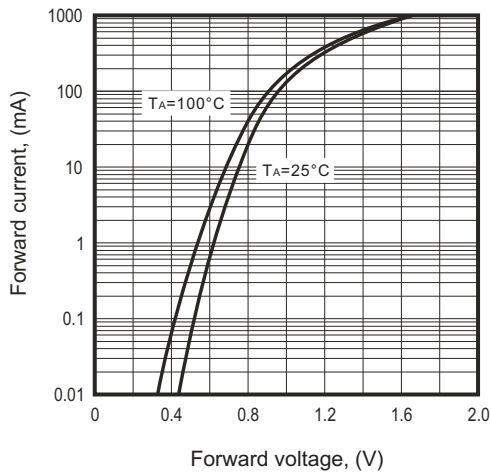


Fig.2 - Reverse characteristics

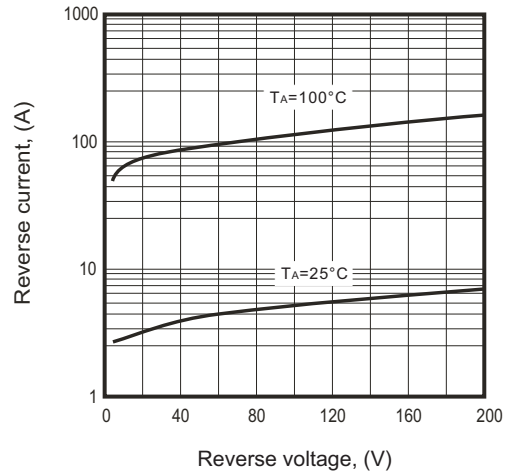


Fig.3 - Capacitance between

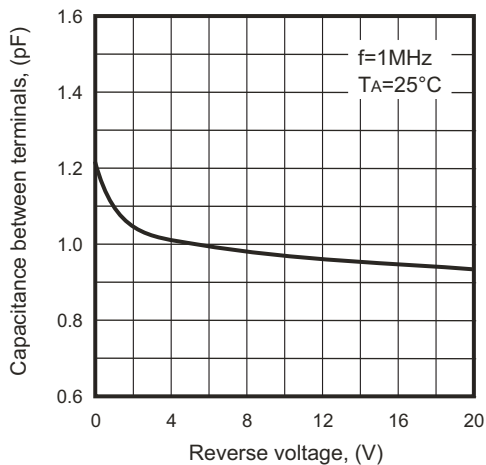
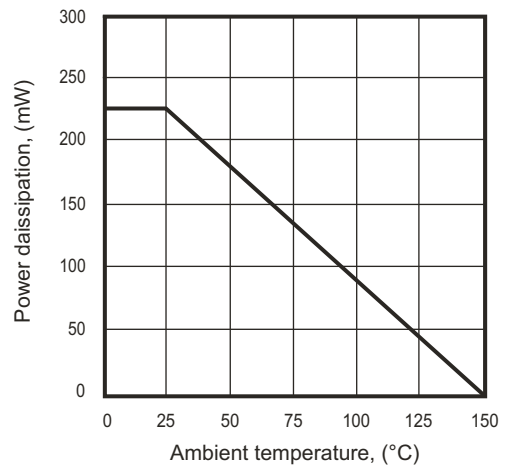
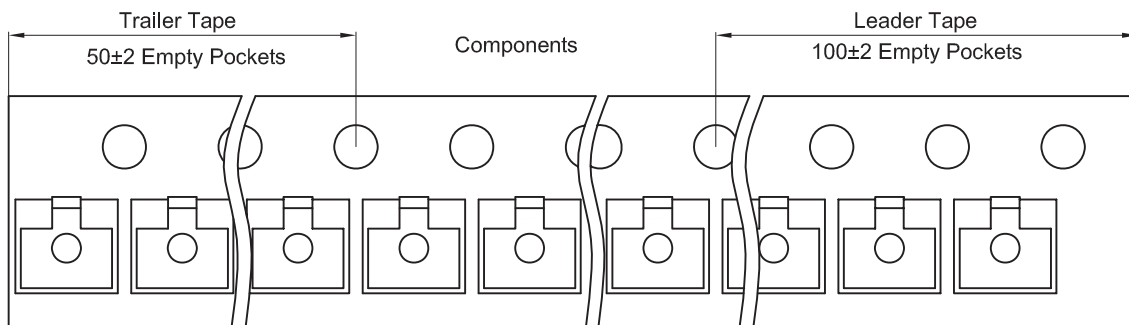
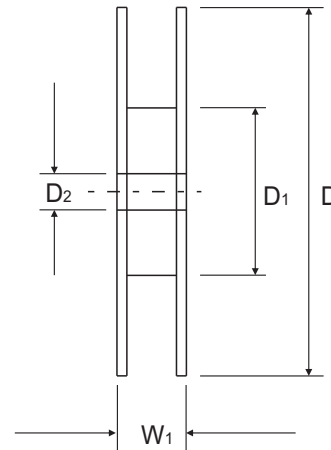
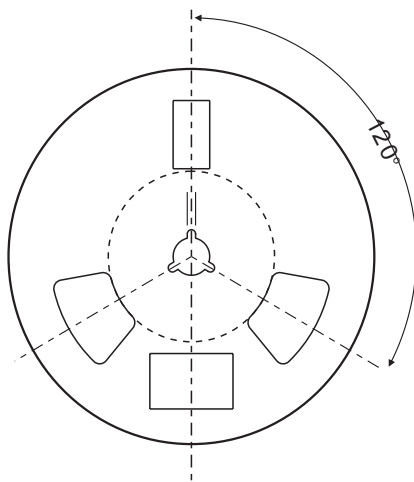
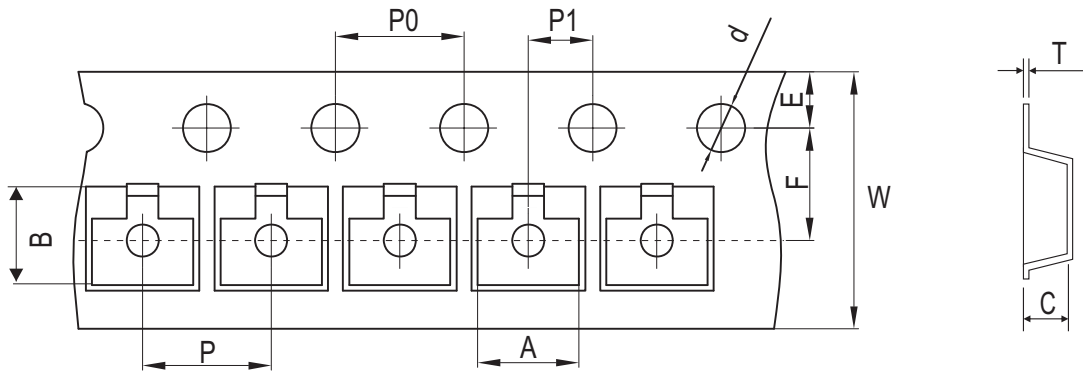


Fig.4 - Power derating curve



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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 | Φ1.50 ± 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 | Φ0.059 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

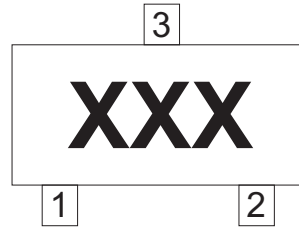
| SOT-23 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|-------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 8.00 + 0.30 / - 0.10 | 12.30 ± 1.00 |
| | (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 |

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REV:C

Marking Code

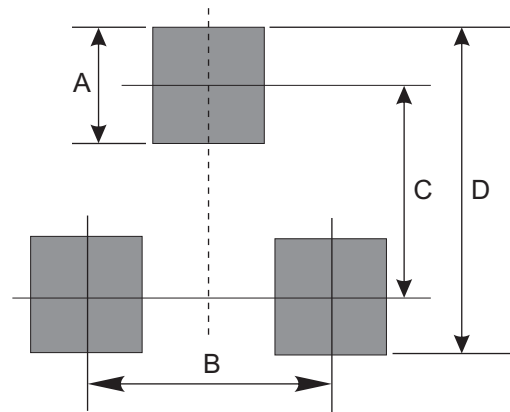
| Part Number | Marking Code |
|-------------|--------------|
| CDST-21-G | JS |
| CDST-21A-G | JS2 |
| CDST-21C-G | JS3 |
| CDST-21S-G | JS4 |



xx/xxx = 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 |



Standard Packaging

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

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