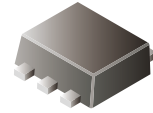


CDSH6-01100-HF

RoHS Device

Halogen Free

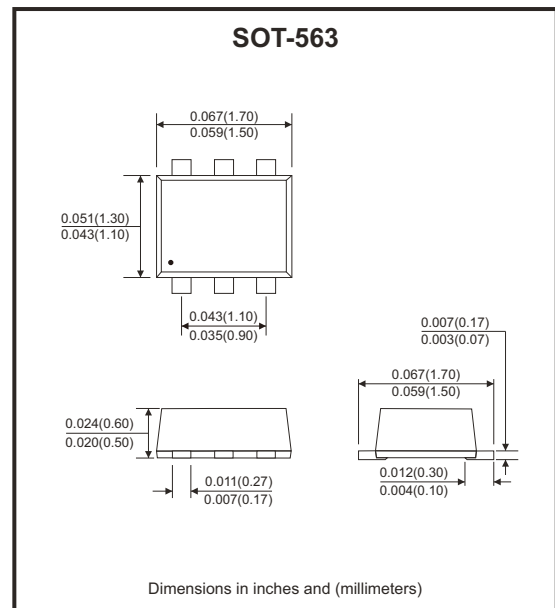


Features

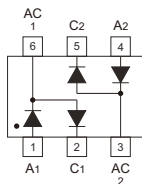
- Fast switching speed.
- Low forward voltage.
- Fast reverse recovery.
- Low capacitance.
- Ultra-small surface mount package.

Mechanical data

- Case: SOT-563, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.



Circuit Diagram



Maximum Ratings (at TA=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|-----------|-------------|------|
| Non-repetitive peak reverse voltage | V_{RM} | 105 | V |
| Repetitive peak reverse voltage | V_{RRM} | 100 | V |
| Repetitive peak forward current | I_{FRM} | 300 | mA |
| Continuous forward current | I_o | 100 | mA |
| Non-repetitive peak forward current @ t = 1μs | I_{FSM} | 2 | A |
| Power dissipation | P_D | 200 | mW |
| Operating temperature range | T_J | -40 to +150 | °C |
| Storage temperature range | T_{STG} | -55 to +150 | °C |

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

| Parameter | Conditions | Symbol | Min | Max | Unit |
|---------------------------|--|------------|-----|--------------------------|---------------|
| Reverse breakdown voltage | $I_R = 0.1\text{mA}$ | $V_{(BR)}$ | 80 | | V |
| Forward voltage | $I_F = 100\text{mA}$ $I_F = 150\text{mA}$ | V_F | | 1200 1250 | mV |
| Reverse current | $V_R = 30\text{V}$ $V_R = 80\text{V}$ $V_R = 20\text{V}$ $V_R = 75\text{V}$ | I_R | | 0.3 0.5 0.3 0.5 | μA |
| Total capacitance | $V_R = 0\text{V}$, $f = 1\text{MHz}$ | C_T | | 2.0 | pF |
| Reverse recovery time | $I_F = I_R = 10\text{mA}$, $I_{rr} = 1\text{mA}$, $R_L = 100\Omega$ | t_{rr} | | 4 | ns |

Rating and Characteristic Curves (CDSH6-01100-HF)

Fig.1 - Power Derating Curve

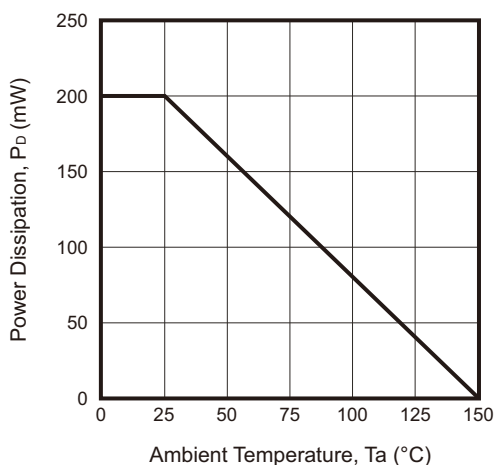


Fig.2 - Forward Characteristic

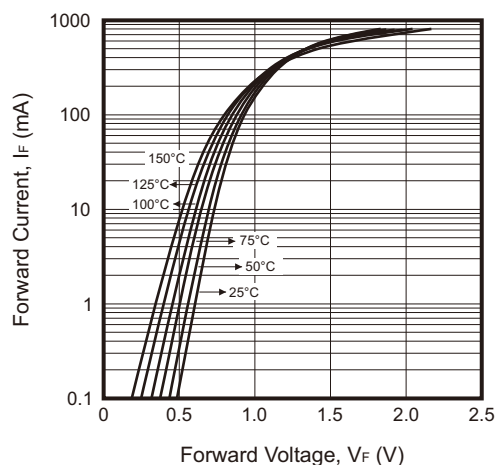


Fig.3 - Capacitance of Diodes

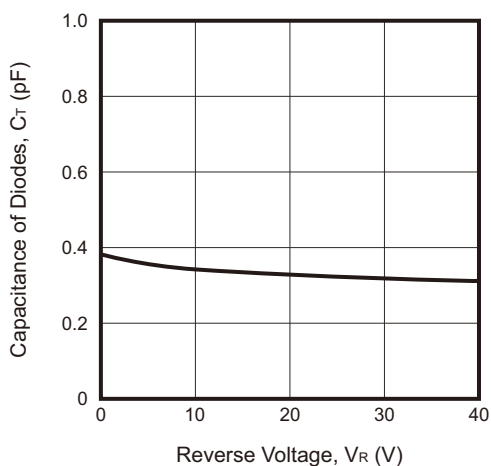
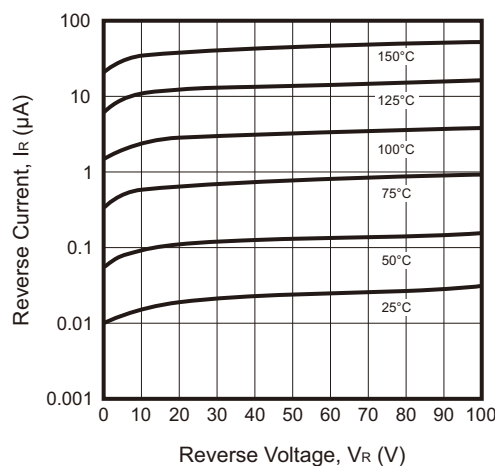
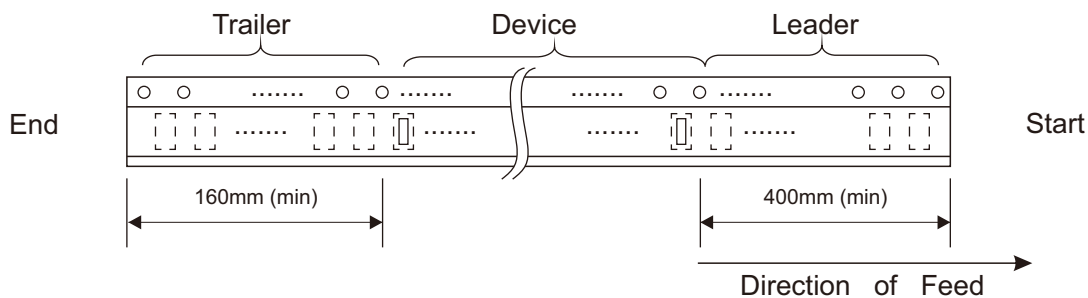
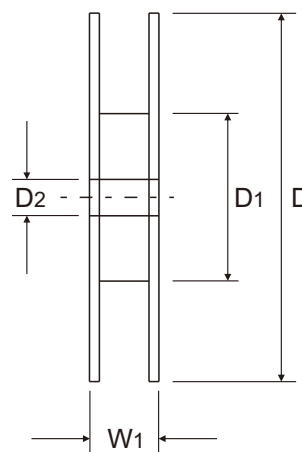
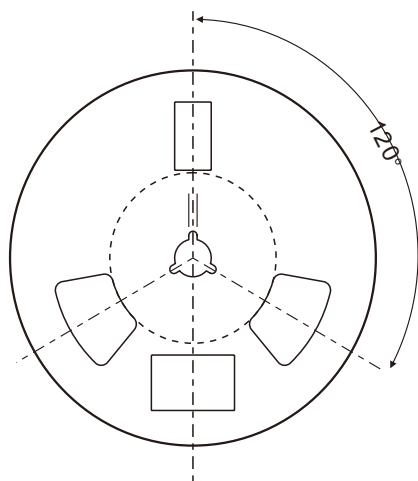
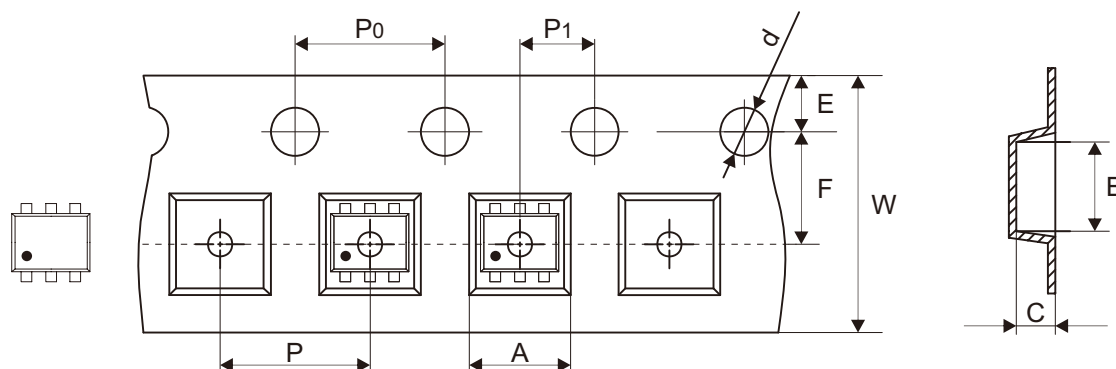


Fig.4 - Reverse Characteristic



Reel Taping Specification



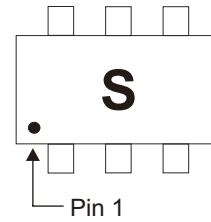
| SOT-563 | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|--------------------------|---------------|
| | (mm) | 1.70 ± 0.10 | 1.70 ± 0.10 | 0.72 ± 0.10 | 1.55 ± 0.05 | 178.00 ± 1.00 | 60.00 + 0.50 - 0.00 | 13.00 ± 0.20 |
| | (inch) | 0.067 ± 0.004 | 0.067 ± 0.004 | 0.028 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.039 | 2.362 + 0.020 - 0.000 | 0.512 ± 0.008 |

| SOT-563 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 8.00 ± 0.15 | 12.40 + 0.00 - 0.40 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.315 ± 0.006 | 0.488 + 0.000 - 0.016 |

Company reserves the right to improve product design, functions and reliability without notice. REV:A

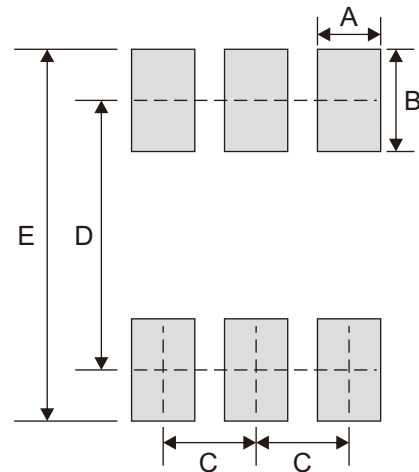
Marking Code

| Part Number | Marking Code |
|----------------|--------------|
| CDSH6-01100-HF | S |



Suggested P.C.B. PAD Layout

| SIZE | SOT-563 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 0.34 | 0.013 |
| B | 0.55 | 0.022 |
| C | 0.50 | 0.020 |
| D | 1.45 | 0.057 |
| E | 2.00 | 0.079 |



Note: 1. The pad layout is for reference purposes only.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOT-563 | 3,000 | 7 |