

CHT-CALLISTO DATASHEET Dual Common Anode Small Signal Diodes

Version: 1.4

General description

CHT-CALLISTO features high temperature dual common anode 80V / 300mA diodes packaged in a hermetically sealed TO18 metal can. It is designed to achieve high performance in an extremely wide temperature range: typical operation temperature goes from -55°C to 225°C while keeping leakage currents low. This dual diode can be used in a variety of applications, including rectification and general purpose.

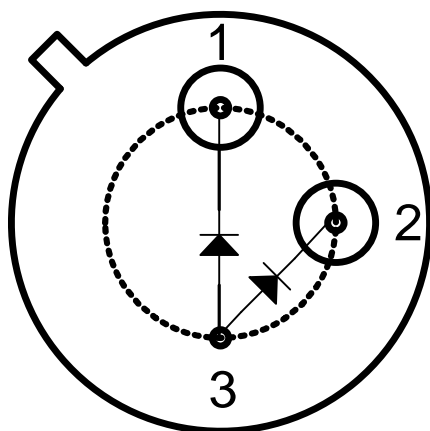
Features

- Specified from **-55 to +225°C** (Tj)
- Reverse voltage: **V_R = 80V** (max)
- Forward current: **I_F = 280 mA** (max @ 225°C (Tj) and V_F = 1.5V)
- Forward voltage:
V_F = 0.7V (typ. @ I_F = 1mA)
- Junction capacitance:
C_j = 8.5pF (typ. @ V_R = 25V)
- Package: Hermetically sealed metal can TO18

Applications

- Voltage multiplier / charge-pumps
- Signal rectification
- General purpose diode

Package Configuration



| Pin Number | Pin Name |
|------------|----------|
| 1 | K1 |
| 2 | K2 |
| 3 | A1 |

TO18 (bottom view) (case connected to pin 3)

CHT-CALLISTO – DATASHEET

Absolute Maximum Ratings

| | |
|------------------------------------------|-------|
| Reverse voltage V_R | 80V |
| Forward surge current I_{FSM} | 300mA |
| Power dissipation $T_c=25^\circ\text{C}$ | 450mW |
| Junction temperature T_j | 250°C |

Operating Conditions

| | |
|------------------------------------------|-----------------|
| Reverse voltage V_R | 0V to 80V |
| Continuous forward current I_F | 0mA to 250mA |
| Forward voltage V_F | 0V to 1.5V |
| Power dissipation $T_c=25^\circ\text{C}$ | 350mW |
| Junction temperature | -55°C to +225°C |

Electrical characteristics

Unless otherwise stated, $T_j = 25^\circ\text{C}$. **Bold** figures point out values valid over the whole temperature range ($T_j = -55^\circ\text{C}$ to $+225^\circ\text{C}$).

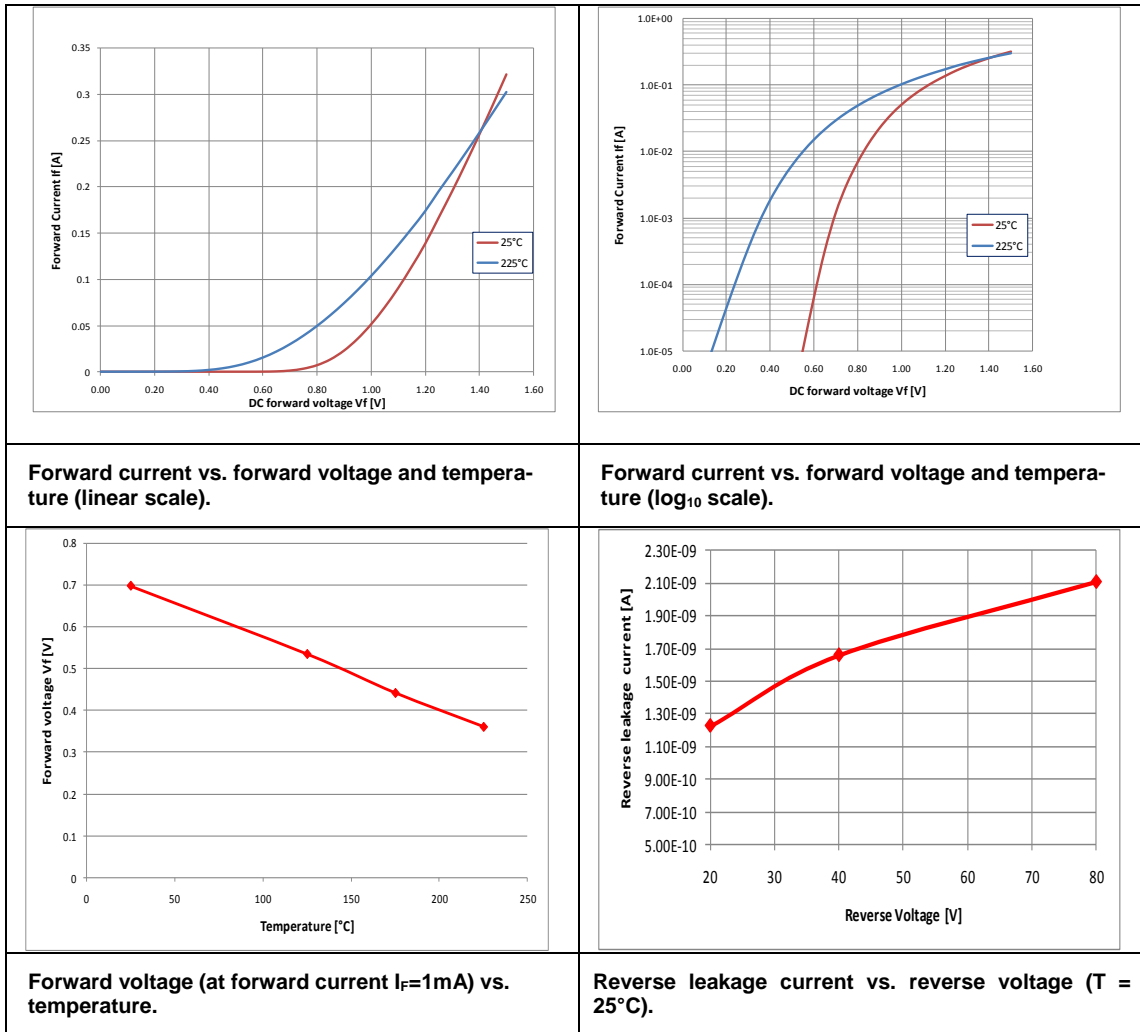
| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|------------------------------------|------------|---------------------------------------------------|-----------|------|------------|------|
| Forward voltage | V_F | $I_F=1\text{mA}$, $T_j=25^\circ\text{C}$ | | 0.7 | | V |
| Forward current | I_F | | | | 280 | mA |
| Reverse leakage current | I_R | $V_R=80\text{V}$, $T_j=25^\circ\text{C}$ | | 2.11 | | nA |
| | | $V_R=80\text{V}$, $T_j=225^\circ\text{C}$ | | 8.9 | | uA |
| Breakdown reverse voltage | $V_{(BR)}$ | | 80 | | | V |
| Junction capacitance | C_j | $V_R=25\text{V}$ | | 8.5 | | pF |
| Reverse recovery time ¹ | t_{rr} | $V_R = 80\text{V}$ | | 56 | | ns |
| Peak reverse recovery current | I_{rrp} | $I_F = 950\text{ mA}$ $T_a = 25^\circ\text{C}$ | | 690 | | mA |

Thermal Characteristics

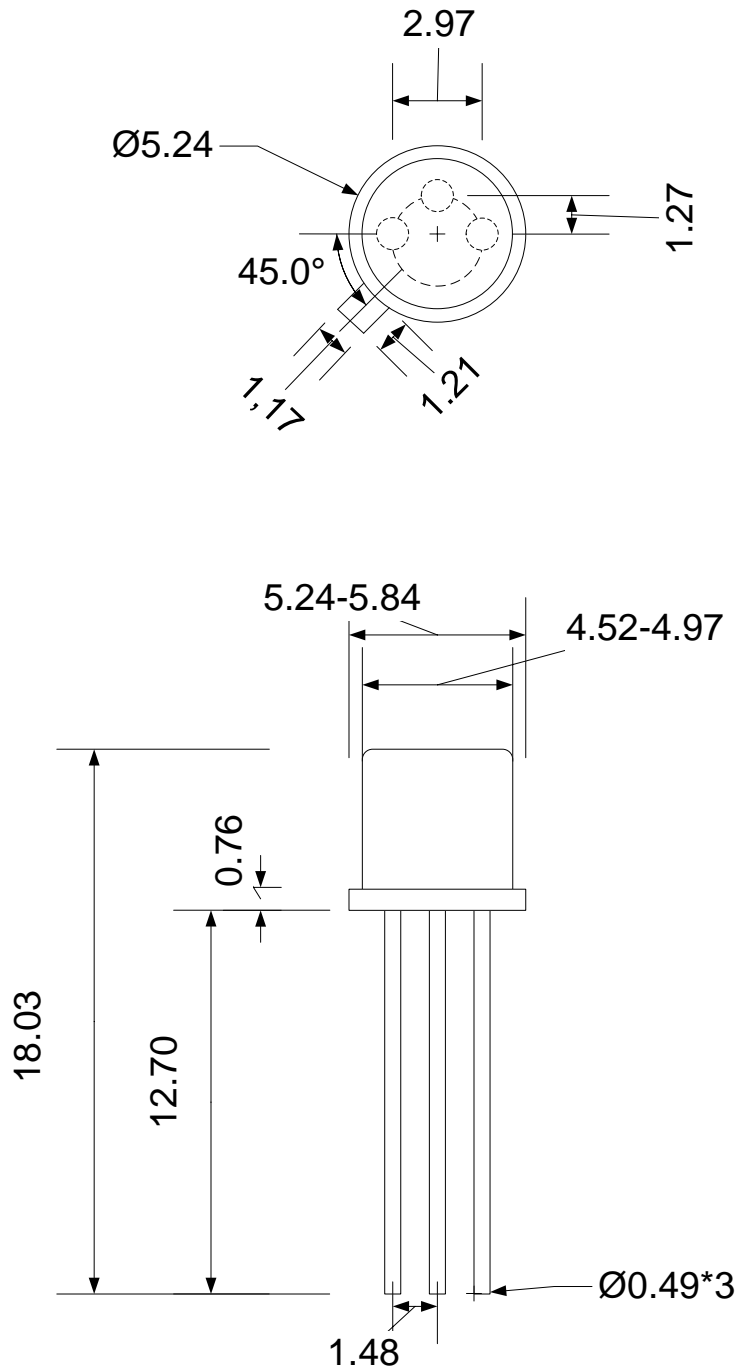
| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|-------------------------------------|---------------|---------------|-----|-----|-----|------|
| Junction to case thermal resistance | Θ_{JC} | TO-18 package | | 60 | | °C/W |

¹ t_{rr} measured between point where current crosses zero and current reaches 10% of peak reverse recovery current

Typical Performance Characteristics (applicable to each diode)



Package Dimensions



Drawing TO18 (mm)

Ordering Information

| Product Name | Ordering Reference | Package | Marking |
|--------------|---------------------|---------|-----------|
| CHT-CALLISTO | CHT-PLA5520A-TO18-T | TO-18 | CHT-5520A |

Contact & Ordering

CISSOID S.A.

| | |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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