

## CHT-CALLISTO DATASHEET Dual Common Anode Small Signal Diodes

Version: 1.6

### 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.

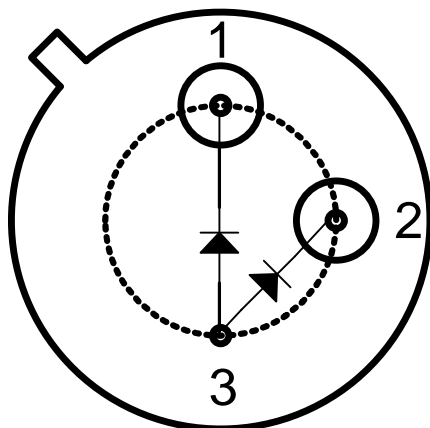
### Features

- Specified from **-55 to +225°C** (Tj)
- Reverse voltage: **V<sub>R</sub> = 80V** (max)
- Forward current: **I<sub>F</sub> = 280 mA** (max @ 225°C (Tj) and V<sub>F</sub> = 1.5V)
- Forward voltage:  
**V<sub>F</sub> = 0.7V** (typ. @ I<sub>F</sub> = 1mA)
- Junction capacitance:  
**C<sub>j</sub> = 8.5pF** (typ. @ V<sub>R</sub> = 25V)
- Package: Hermetically sealed metal can TO18
- Validated at 225°C for 7000 hours

### 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  $+225^\circ\text{C}$ ).

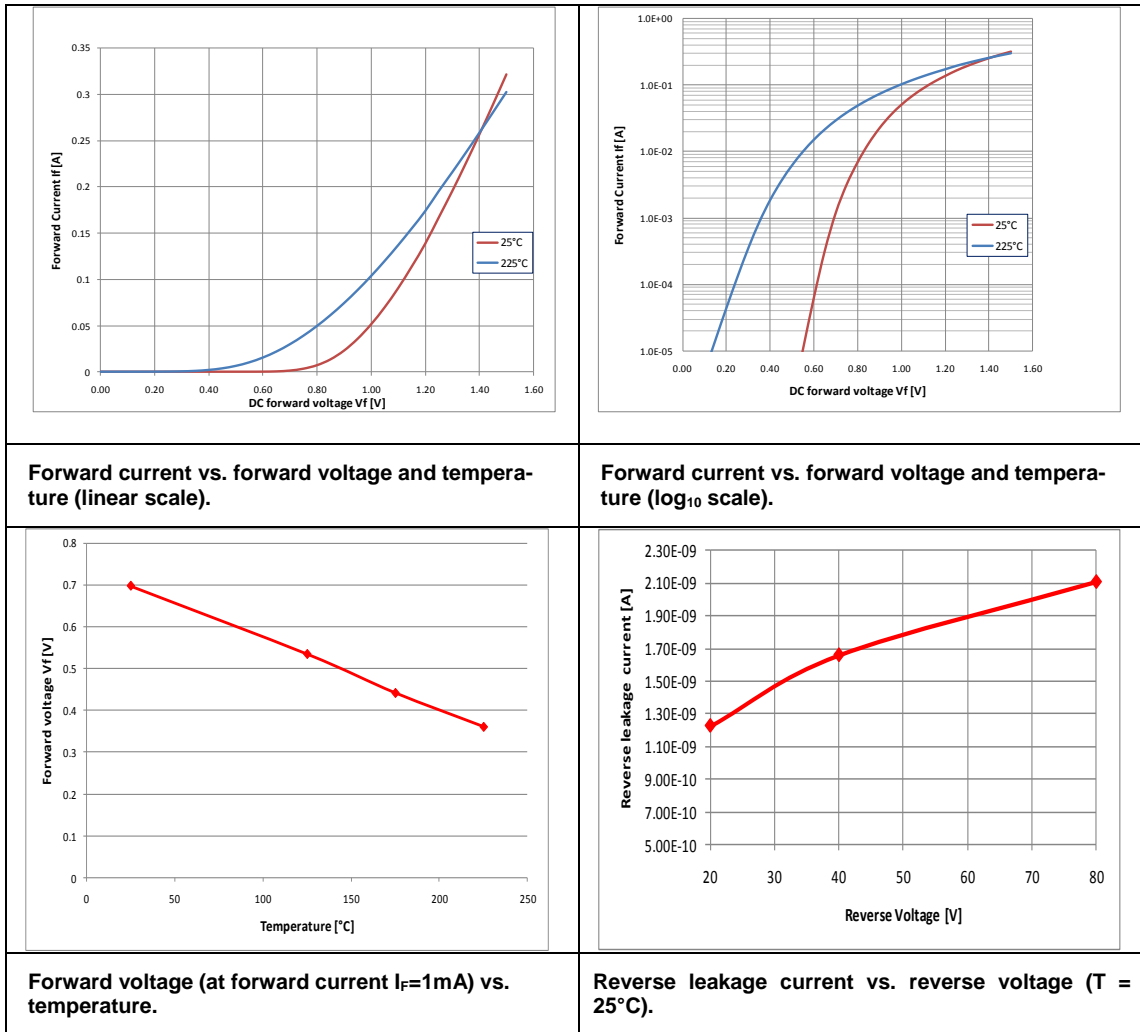
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F=1\text{mA}$ , $T_j=25^\circ\text{C}$		0.7		V
Forward current	$I_F$				<b>280</b>	mA
Reverse leakage current	$I_R$	$V_R=80\text{V}$ , $T_j=25^\circ\text{C}$		2.11		nA
		$V_R=80\text{V}$ , $T_j=225^\circ\text{C}$		8.9		uA
Breakdown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

### Thermal Characteristics

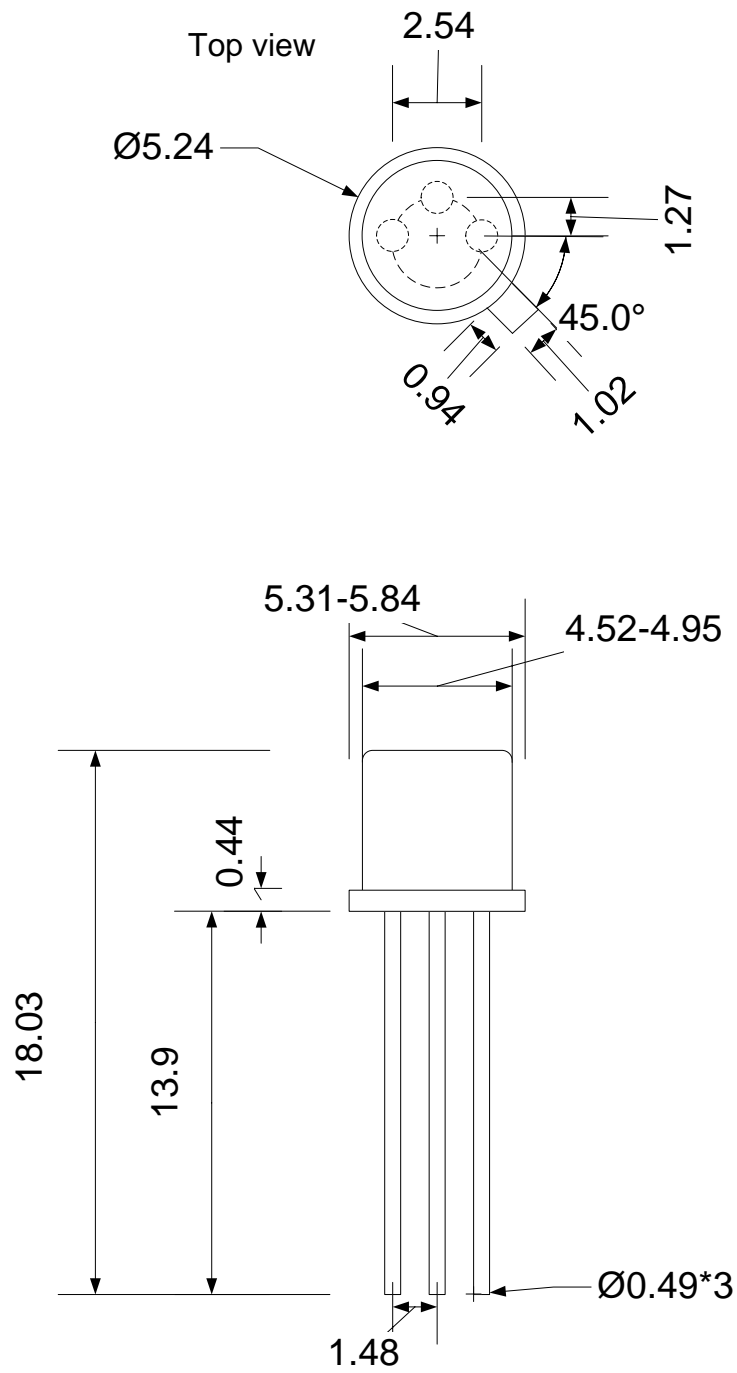
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Junction to case thermal resistance	$\Theta_{JC}$	TO-18 package		60		°C/W

<sup>1</sup>  $t_{rr}$  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 +/- 10%)

## 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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**Document history**

<b>Revision</b>	<b>Modification</b>	<b>Author</b>	<b>Date</b>
1.0	First issue	EVZ	15-nov-2011
1.1	Change max If from 300mA to 280mA (based on qual results)	EVZ	3-Feb-2012
1.2	Add diode reverse recovery information	EVZ	29-May-2012
1.3	Add Preliminary Statement since no DR5 reached yet	EVZ	14-Sep-2012
1.4	Release version: "Preliminary watermark" removed	EVZ	16-Oct-2012
1.5	Update TO-18 package drawing	EVZ	12-Nov-2013
1.6	Added HALT duration statement	EVZ	23-Mar-2018

<b>Approvals</b>	
17/05/2018	
<p><b>X</b> Pierre Delatte</p> <hr/> <p>Marketing</p>	
<p><b>X</b></p> <hr/> <p>Engineering</p>	

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