CHT-GANYMEDE DATASHEET

Dual Series Small Signal Diode

Version: 1.8
14-Dec-23
(Last Modification Date)

General description

The CHT-GANYMEDE is a high temperature dual series 80V / 300mA diode in a hermetically sealed TO18 metal can package. 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, clamping and general purpose.

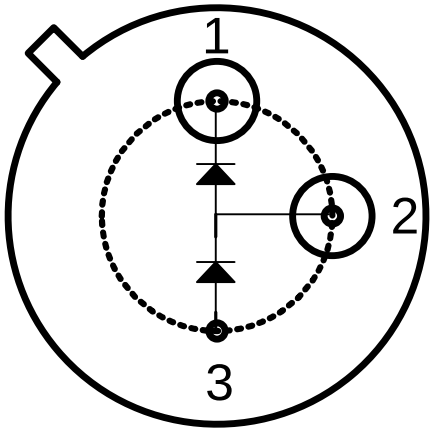
Features

- Specified from **-55 to +225°C** (Tj)
- Reverse voltage: **V_R = 80V** (max)
- Forward current**: I_F = 280 mA** (max @ 225°C (Tj) and VF = 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
- Validated at 225°C for 7000 hours

Applications

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

Package Configuration



Pin Number	Pin Name
1	K2
2	K1-A2
3	A1

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

Absolute Maximum Ratings

Reverse voltage V_R	80V
Forward surge current I_{FSM}	300mA
Power dissipation T_c=25°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°C	350mW
Junction temperature	-55°C to +225°C

Electrical characteristics

Unless otherwise stated, T_j = 25°C. **Bold** figures point out values valid over the whole temperature range (T_j = -55°C to +225°C).

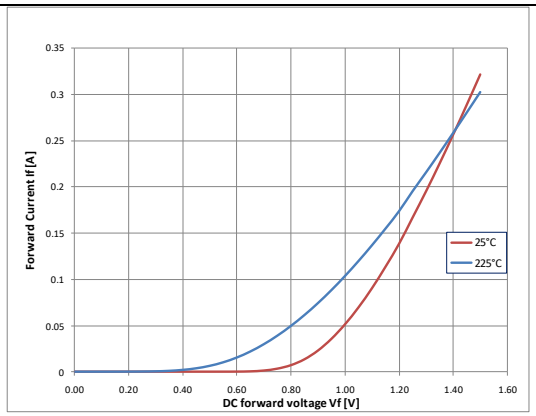
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage	V_F	I_F=1mA, T_j=25°C		0.7		V
Forward current	I_F				**280**	mA
Reverse leakage current	I_R	V_R=80V, T_j=25°C		2.11		nA
		V_R=80V, T_j=225°C		8.9		uA
Breakdown reverse voltage	$V_{(BR)}$		**80**			V
Junction capacitance	Cj	V_R=25V		8.5		pF
Reverse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

Thermal Characteristics

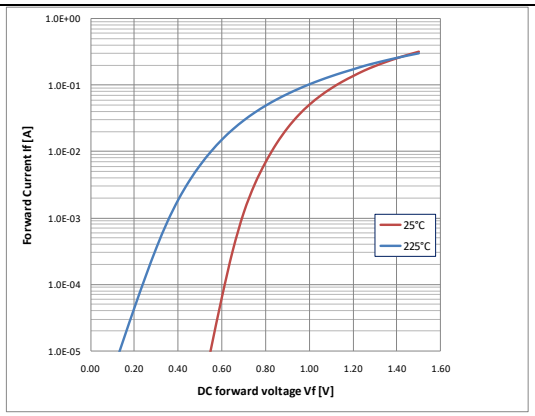
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Junction to case thermal resistance	Θ_{JC}	TO-18 package		60		°C/W

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

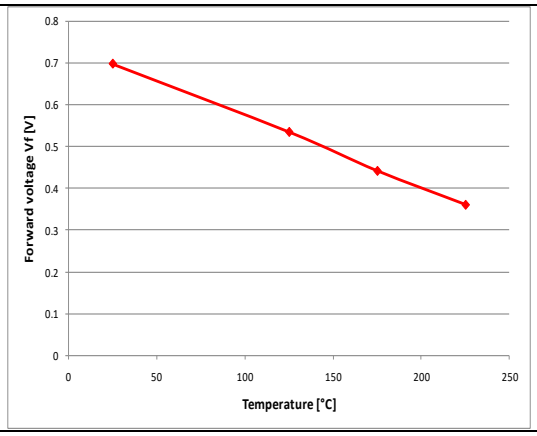
Typical Performance Characteristics (applicable to each diode)



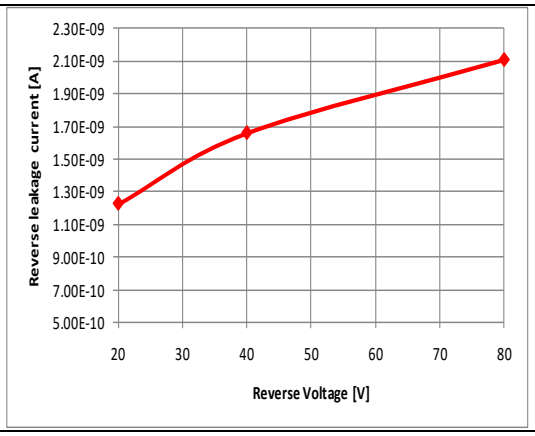
Forward current vs. forward voltage and temperature (linear scale).



Forward current vs. forward voltage and temperature (log_{10} scale).



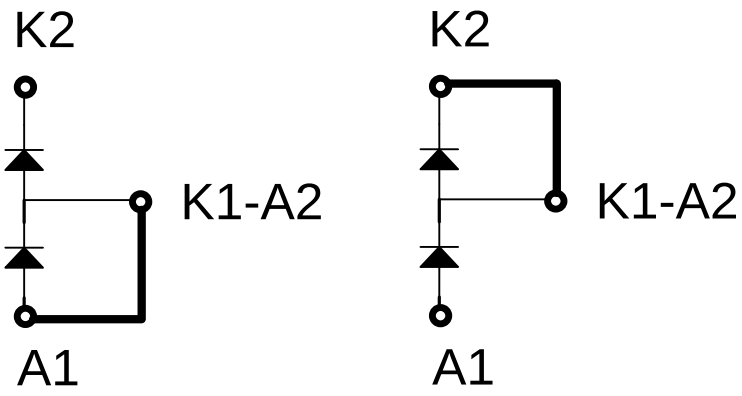
Forward voltage (at forward current I_F=1mA) vs. temperature.



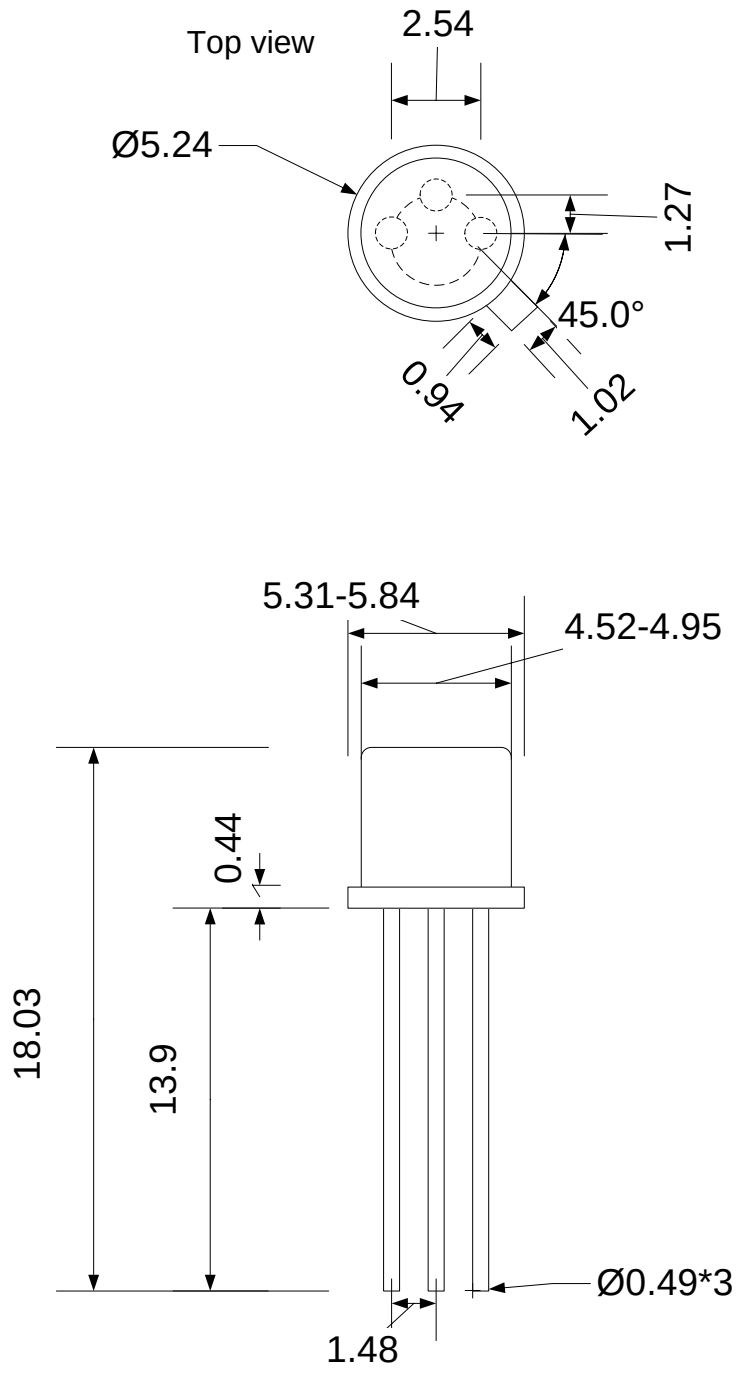
Reverse leakage current vs. Reverse voltage (T = 25°C).

Configuration

In case of only one of the 2 diodes is used, following connections should be implemented:



Package Dimensions



Drawing TO18 (mm +/- 10%)

Ordering Information

Product Name	Ordering Reference	Package	Marking
CHT-GANYMEDE	CHT-PLA5598C-TO18-T	TO-18	CHT-5598C

Contact & Ordering

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