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**CHT-IO-1202  
PRELIMINARY DATASHEET**

Version: 1.0

**High Temperature 1200V/2A Silicon Carbide  
Common Cathode Dual Schottky Diode**

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**General description**

CHT-IO-1202 high temperature 1200V/2A Silicon Carbide Common Cathode Dual Schottky Diode is designed to achieve high performance in an extremely wide temperature range: typical operation temperature goes from -55°C to 210°C while keeping leakage currents low.

This device is packaged in a hermetically sealed TO-257 metal package especially designed and qualified to sustain high temperature and power cycling. This package offers high voltage isolation between pins and with respect to the case, facilitating the mounting on a heatsink.

The diodes can be used in a variety of applications, including rectification, free-wheeling, clamping and general purpose.

**Features**

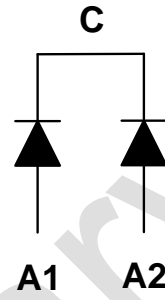
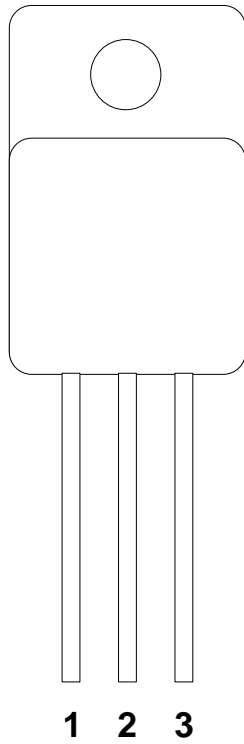
- Specified from **-55 to +210°C** (Tj)
- Reverse voltage:  **$V_R = 1200V$**  (max)
- Forward current:  **$I_F = 2A$**  (max @ 210°C (Tj) and  $V_F = 1.3V$ )
- Forward voltage:  **$V_F=1.15V$**  (typ. @ 25°C (Tj) and  $I_F=2A$ )
- Junction capacitance:  **$C_j=11pF$**  (typ. @  $V_R = 600V$ )
- Hermetically sealed TO-257 metal package
- Pins electrically isolated from the case

**Applications**

- Free Wheeling
- Full bridge rectification
- Power supplies
- General purpose diode

**Package Configuration**

**FRONT VIEW**



TO257 (Pin1= Cathode; Pin2= Anode 1; Pin3= Anode 2) (case floating)

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## CHT-IO-1202 –PRELIMINARY DATASHEET

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### Absolute Maximum Ratings

Reverse voltage $V_R$	1200V
Forward surge current $I_{FSM}$	2.5A
Junction temperature $T_j$	210°C

### Operating Conditions

Reverse voltage $V_R$	0V to 1200V
Continuous forward current $I_F$	0A to 2A
Forward voltage $V_F$	0V to 2V
Junction temperature	-55°C to +210°C

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Preliminary

### Electrical characteristics (per diode)

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  $+210^\circ\text{C}$ ).

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F=800\text{mA}, T_j=25^\circ\text{C}$		1.15		V
		$I_F=2\text{A}, T_j=25^\circ\text{C}$		1.5		V
		$I_F=800\text{mA}, T_j=210^\circ\text{C}$		1.3		V
		$I_F=2\text{A}, T_j=210^\circ\text{C}$		2.18		V
Reverse leakage current	$I_R$	$V_R=1200\text{V}, T_j=25^\circ\text{C}$		2		$\mu\text{A}$
		$V_R=1200\text{V}, T_j=210^\circ\text{C}$		30		$\mu\text{A}$
Breakdown reverse voltage	$V_{(BR)}$		<b>1200</b>			V
Junction capacitance	$C_j$	$V_R=600\text{V}, T_j=25^\circ\text{C}, f=100\text{ kHz}$		10.4		pF

### Thermal Characteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Junction-to-Case Thermal resistance	$R_{\theta JC}$			4.5		$^\circ\text{C/W}$

Typical performances

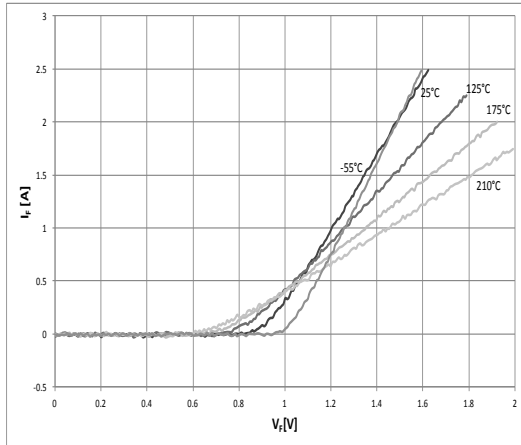


Figure 1: Diode  $I_F$  vs  $V_F$

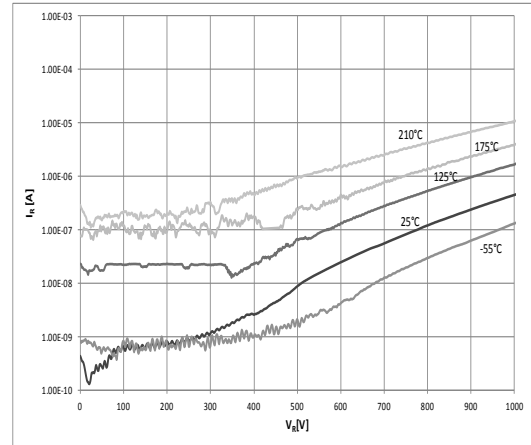


Figure 2: Diode  $I_R$  vs  $V_R$

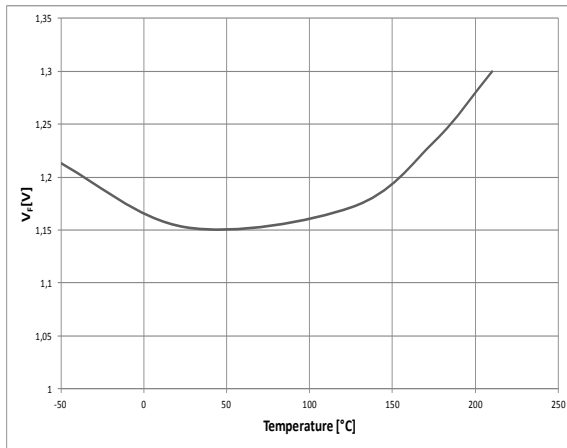


Figure 3: Diode  $V_F$  vs Temperature ( $I_F = 800\text{mA}$ )

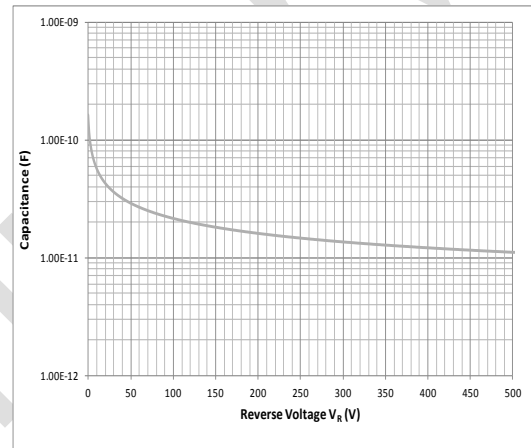
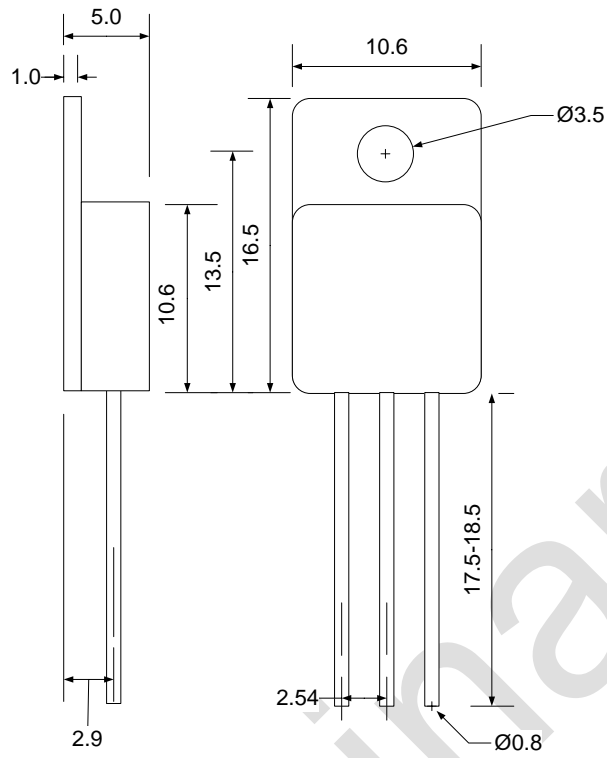


Figure 4: Typical capacitance vs  $V_R$  ( $T_j = 25^\circ\text{C}$ ;  $f = 100\text{ kHz}$ ,  $V_{AC} = 25\text{mV}$ )

Package Dimensions



TO257 dimensions in mm (+/- 10%)

Ordering Information

Product Name	Ordering Reference	Package	Marking
CHT-IO-1202	CHT-PLA6609A-TO257-T	TO-257	CHT-PLA6609A

## Contact & Ordering

### CISSOID S.A.

<b>Headquarters and contact EMEA:</b>	CISSOID S.A. – Rue Francqui, 3 – 1435 Mont Saint Guibert - Belgium T : +32 10 48 92 10 - F: +32 10 88 98 75 Email: <a href="mailto:sales@cissoid.com">sales@cissoid.com</a>
<b>Sales Representatives:</b>	Visit our website: <a href="http://www.cissoid.com">http://www.cissoid.com</a>

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