CHT-EUROPA-A1230
Datasheet
High Temperature 1200V/30A Dual SiC Schottky Diode Module

Version: 1.2
14-Dec-23
(Last Modification Date)

General description

CHT-EUROPA-A1230 is a high temperature 1200V/30A Dual Silicon Carbide Schottky diode in a single hermetic module. It is suitable for applications such as DC-DC converters, PFC, or motor drives in high temperature environments. The two independent diodes can be used in parallel to deliver a total of 60A. This product is guaranteed for normal operation on the full range -55°C to +210°C (Tj). Each diode has a breakdown voltage in excess of 1200V. Schottky diode features fast switching, zero reverse recovery current.

Features (per diode)

- Specified from -55 to +210°C (Tj)
- Max Reverse Voltage V_R: 1200V
- Typ. Forward Voltage: 1.35V @ 30A
- Max Continuous Current: 30A
- Max Peak Rep Fwd Surge Current: 50A
- Hermetic package with isolated case

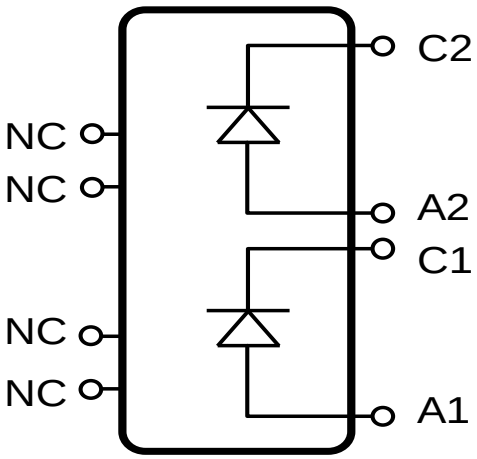
Benefits

- Support of high-frequency switching (almost no switching losses)
- Reduced Heat Sink requirement
- Extended lifetime and high reliability
- Harsh environments and high temperature power converters

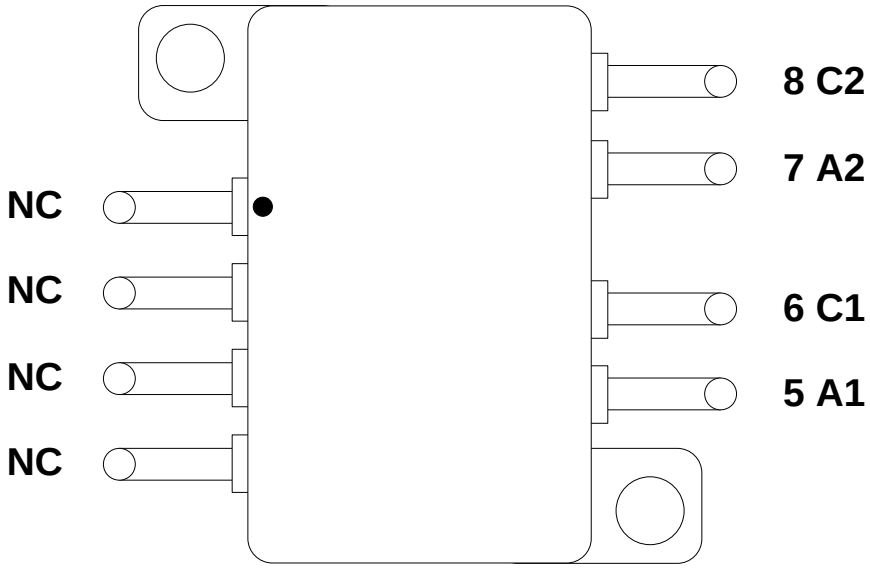
Applications

- AC rectification bridge
- Power Factor Correction
- DC motor drives and actuator control
- DC-DC converters

Functional Block Diagram



Package configuration and Pin Description



Pin ID	Pin Name	Pin Description	Pin Finish
1	NC	Not connected Pin	Nickel
2	NC	Not connected Pin	Nickel
3	NC	Not connected Pin	Nickel
4	NC	Not connected Pin	Nickel
5	A1	Anode of Diode 1 (Power Pin)	Nickel
6	C1	Cathode of Diode 1 (Power Pin)	Gold
7	A2	Anode of Diode 2 (Power Pin)	Nickel
8	C2	Cathode of Diode 2 (Power Pin)	Gold
	Body	Package body (isolated from Pins)	Nickel

Abs. Max. Ratings (per diode)

DC Blocking Voltage	1200V
Continuous Forward Current	30A
Max Junction temperature T_{jmax}	210°C
Power dissipation at Tc=175°C (*)	66W

Operating Conditions (per diode)

DC Blocking Voltage	1200V
Continuous Forward Current	30A
Rep. Peak Fwd Surge Current	50A
Junction temperature	-55°C to +210°C

ESD Rating

Human Body Model	>2kV

(*): per diode

Electrical characteristics (per diode)

Unless otherwise stated, T_j =25°C. **Bold** figures point out values valid over the whole temperature range (T_j =-55°C to +210°C).

Parameter	Symbol	Condition	Min	Typ	Max	Unit
DC Blocking Voltage	V_{DC}		**1200**			V
Forward Voltage	V_F	Tj=25°C; I_F=30A		1.35		V
		Tj=210°C; I_F=30A		1.8		V
Reverse Current	I_R	Tj=25°C; V_R=1200A		80		µA
		Tj=210°C; V_R=1200A		800		µA
Total Capacitive Charge	Q_C	I=30A,V_R=600V,T_J =25°C,di/dt=500A/µs		122		nC
Total Capacitance	C	Tj=25°C; V_R =0V;f = 1 MHz		TBD		pF
		Tj=25°C; V_R =200V;f = 1 MHz		TBD		pF
		Tj=25°C; V_R =400V;f = 1 MHz		TBD		pF

Thermal Characteristics (per diode)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Junction-to-Case Thermal resistance	$R_{\Theta JC}$			0.7		°C/W

Typical performances

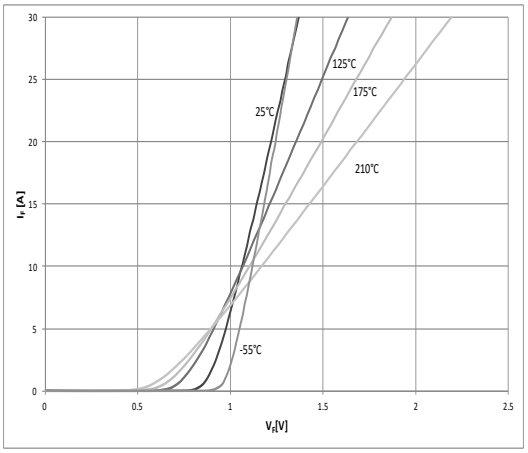


Figure 1: Diode I_F vs V_F

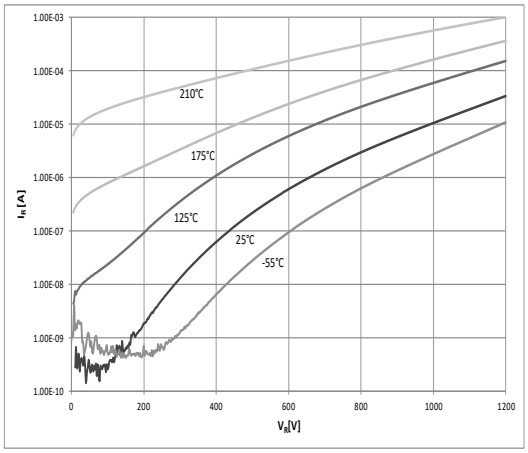
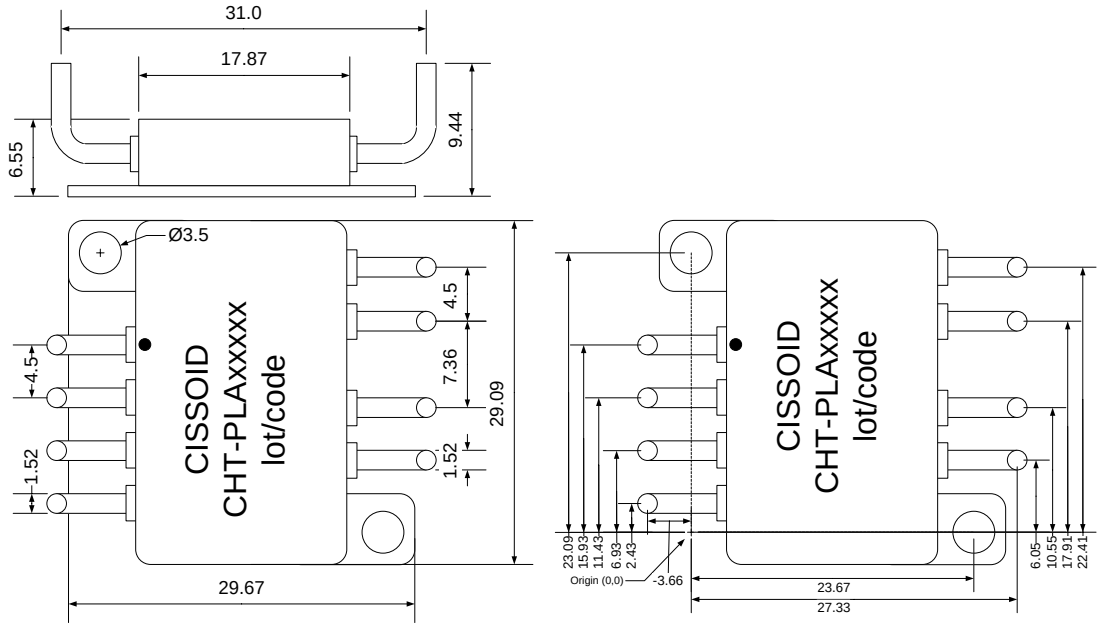


Figure 2: Diode I_R vs V_R

Package Dimensions



HM8A dimensions in mm (+/- 10%)

Ordering Information

Product Name	Ordering Reference	Package	Marking
CHT-EUROPA-A1230	CHT-PLA1971A-HM8A-T	HM8A	CHT-PLA1971A

Related products

Product Name	Function	Ordering Reference
CHT-EUROPA-A1220	Dual 1200V/20A Schottky Diode Module	CHT-PLA3143A-HM8A-T

Contact & Ordering

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