

S1D040120D



TriQSiC™ 1200V Silicon Carbide Schottky Diode

Features



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1200V SiC Schottky Diode

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3 Electrical characteristics

Table 4 Electrical characteristics (Per Leg, $T_c = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note
V_F	Forward Voltage	1.38 1.85	1.6 2.2	V	$I_F = 20\text{A}$ $T_J = 25$ $I_F = 20\text{A}$ $T_J = 175$	Fig.1
I_R	Reverse Current	1 10	100 200	μA	$V_R = 1200\text{V}$ $T_J = 25$ $V_R = 1200\text{V}$ $T_J = 175$	Fig.2
Q_c	Total Capacitive Charge	110	-	nC	$V_R = 800\text{V}$ $I_F = 20\text{A}$ $di/dt = 200\text{A}/\mu\text{s}$ $T_J = 25$	Fig.4
C	Total Capacitance	2120 104 76	-	pF	$V_R = 0\text{V}$ $T_J = 25$ $f = 1\text{MHz}$ $V_R = 400\text{V}$ $T_J = 25$ $f = 1\text{MHz}$ $V_R = 800\text{V}$ $T_J = 25$ $f = 1\text{MHz}$	Fig.3
E_C	Capacitance Stored Energy	60	-	μJ	$V_R = 800\text{V}$	Fig.5

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Figure 7. Current Derating

Figure 8. $r_{\theta jc}$ vs T_c

120D
200V

SICHAIN

300

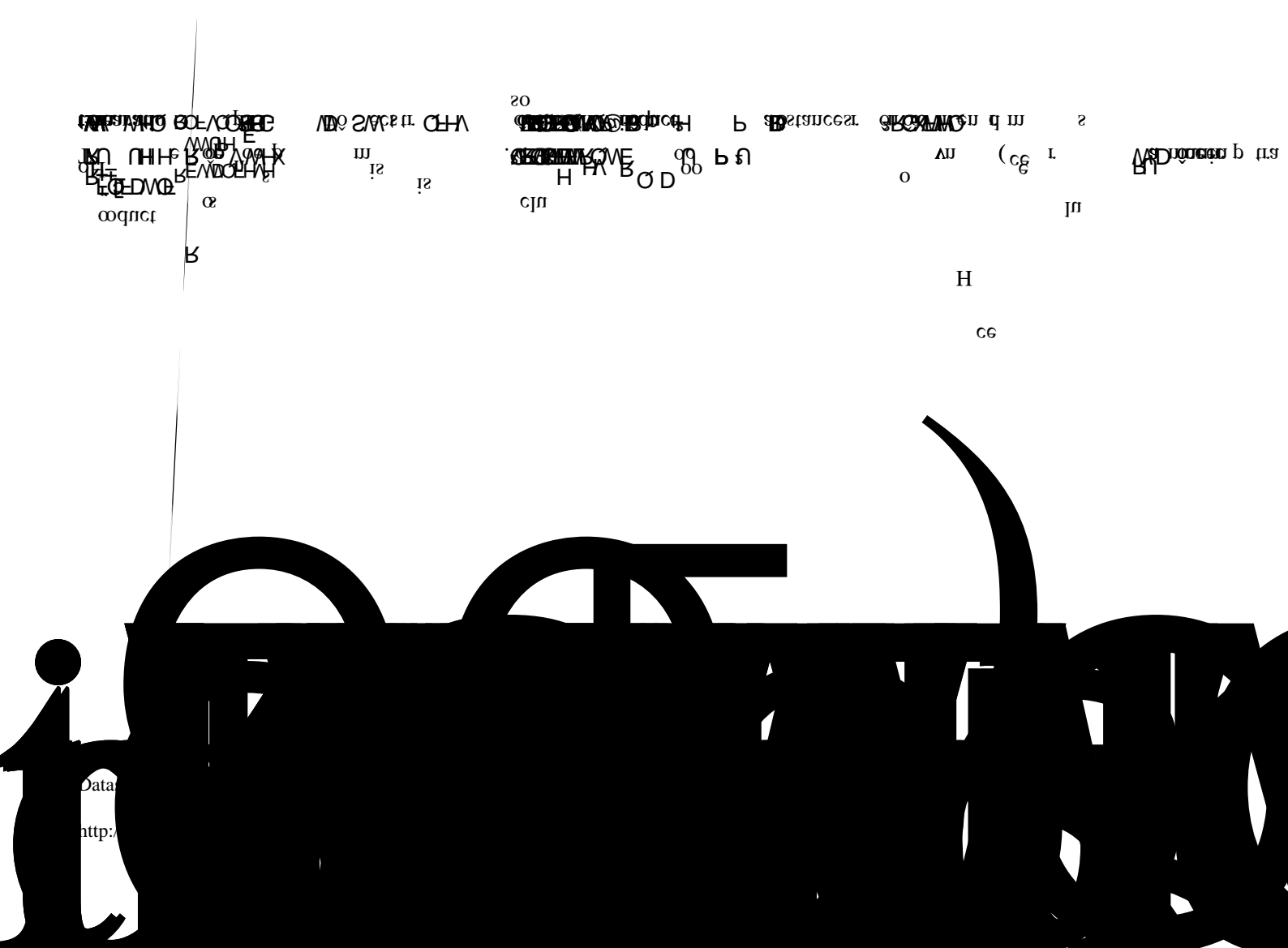
Revision history

Document version	Date of release	Description of changes
V02_00	2024-08-05	--
V02_01	2024-08-07	--
V02_02	2024-10-28	--
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Attention

1. RoHS compliance

The 1200V SiC Schottky Diode is RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with the RoHS Directive.



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7. Except as otherwise explicitly approved by Sichain in a written document signed by authorized representatives of Sichain, Sichain' products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury.

8. For use of our products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a Sichain representatives, for example but not limited to: transportation equipment, primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, and power transmission systems.