S1P03R170HBG-B Preliminary

1700V

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2 Packaging Characteristics

Table 2 Package Characteristics

Symbol	Description	Value	Unit	Note
R_{HS}	High-side Resistance	3.1	mΩ	
R_{LS}	Low-side Resistance	3.1		
Ls	Stray inductance	18	nH	
V_{ISO}	Isolation Test Voltage RMS, f=50Hz, t=1min	3.4		
	Terminal to Heatsink Creepage Distance	14.5		
	Terminal to Terminal Creepage Distance	13.0		
	Terminal to Heatsink Clearance	12.5		
	Terminal to Terminal Clearance	10.0		
R	Average Thermal Resistance of Per Upper Switch	06		
T_{jmax}	Maximum Junction Temperature	175		
T_{jop}	Operation Junction Temperature	-40 to +150		
T_{STG}	Storage Temperature Range	-40 to +150		
W	Weight	380		
Ms	Maximum Mounting Torque	6.0		

[1] Not subject to production test. Parameter verified by design/characterization.

3 Electrical characteristics

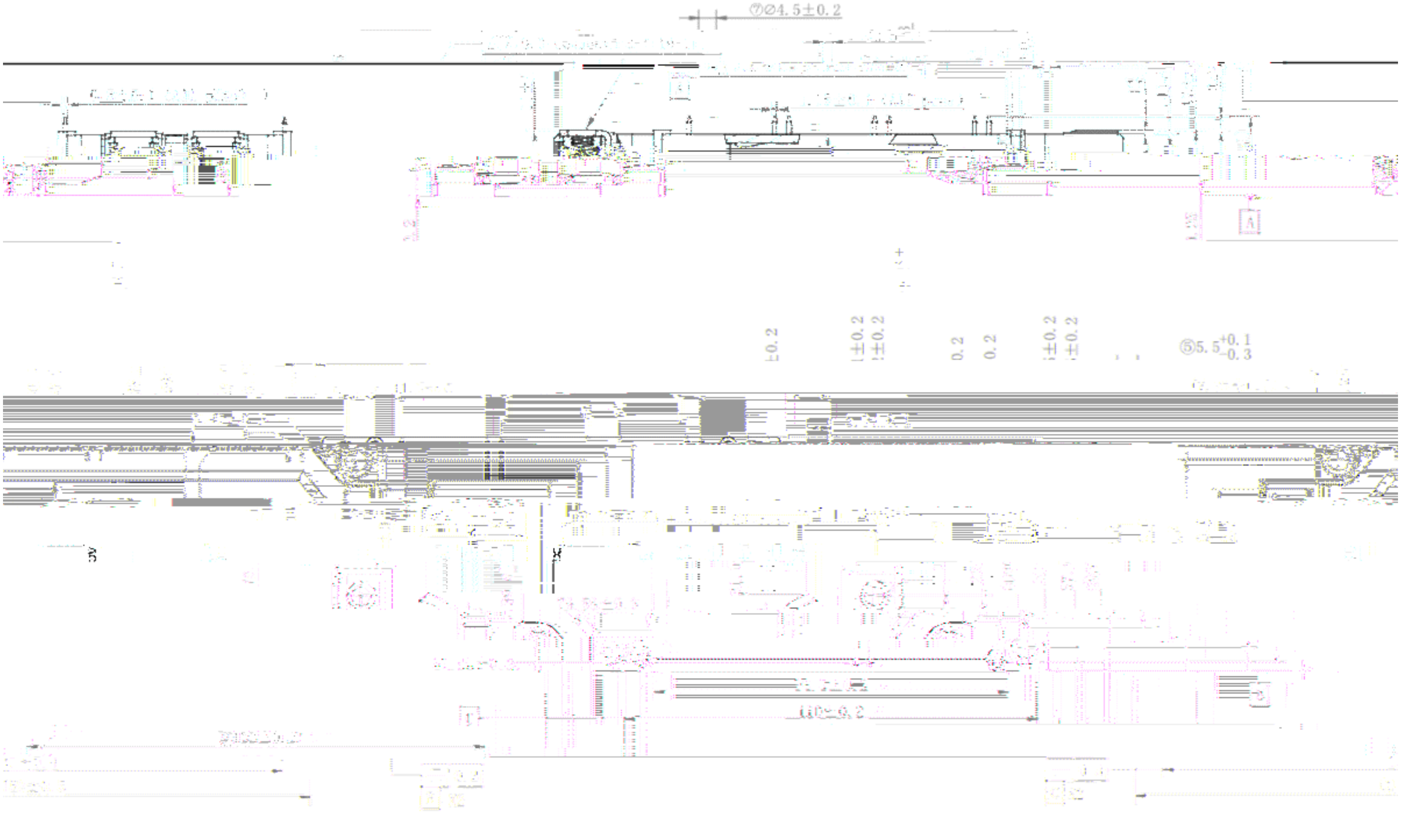
Table 4 SiC MOSFET characteristics (Tc = 25°C unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions	Note
$V_{(BR)DSS}$	Drain-source breakdown voltage	1700	-	-	V	V_{GS} = 0V, I_D = 100μA	
[redacted]$_{GS(th)}$	Gate threshold voltage	2.5	3.1	4.0	V	V_{DS} = V_{GS}, I_D = 144mA	
		-	2.3	-	V	V_{DS} = V_{GS}, I_D = 144mA, T_J = 175°C	

Table 5 Body diode characteristics (Tc = 25°C unless otherwise specified)

[illegible]

4 Package drawing



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