ầ

ầ

ầ

ầ

ầ

ầ

$R_{th\text{-}JC}$	Thermal Resistance, Junction to Case	-	0.34	0.43	/W	Note1
		-	0.5	-		Note2
V_{ISO}	Isolation Test Voltage RMS, f=50Hz, t=1min	2.5	-	-	kV	
Creepage	Terminal to Heatsink Creepage Distance	-	8.5	-	mm	
	Terminal to Terminal Creepage Distance	-	10.5	-	mm	
Clearance	Terminal to Heatsink Clearance	-	6.8	-	mm	
	Terminal to Terminal Clearance	-	4.4	-	mm	
T_{jmax}	Maximum Junction Temperature	-	175	-	˚C	
T_{jop}	Operation Junction Temperature	-	-55 to +175	-	˚C	
T_{STG}	Storage Temperature Range	-	-55 to +175	-	˚C	
W	Weight	-	28.5	-	g	
T_M	Screws to Heatsink Mounting Torque	-	-	1.5	N·m	
T_C	Terminal Connection Torque (M4 *9mm)	-	-	1.3	N·m	

Note1' $R_{th\text{-}JC}$ for SiC MOS

Note2' $R_{th\text{-}JC}$ for SiC SBD

ằ

(Tc = 25°C unless otherwise specified)

$V_{(BR)DSS}$	Drain-source breakdown voltage	1200	-	-	V	V_{GS} = 0V, I_D = 100μA	
$V_{GS(th)}$	Gate threshold voltage	2.3	2.8	3.6	V	V_{DS} = V_{GS}, I_D = 28mA	Fig.11
		-	2.0	-	V	V_{DS} = V_{GS}, I_D = 28mA, T_J = 175°C	
I_{DSS}	Zero gate voltage drain current	-	1	10	μA	V_{DS} = 1200V, V_{GS} = 0V	
I_{GSS}	Gate source leakage current	-	-	100	nA	V_{GS} = 18V, V_{DS} = 0V	

R

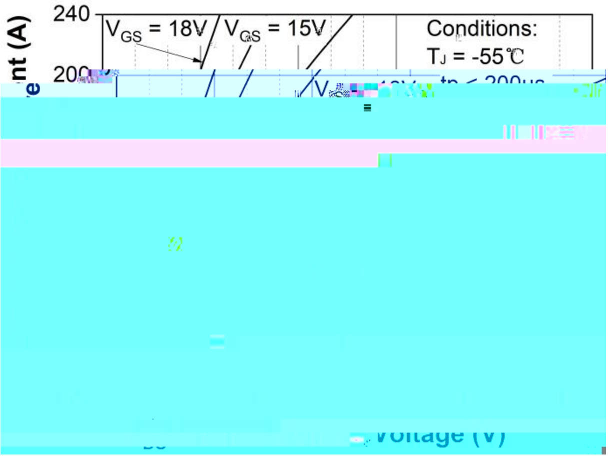


Figure 1. Output characteristics T_J = -55 ºC

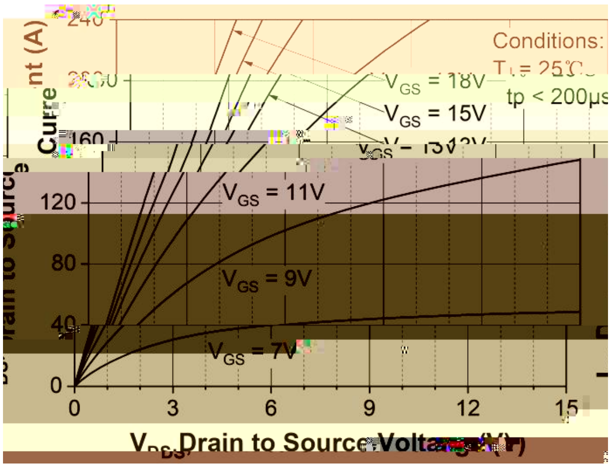


Figure 2. Output characteristics T_J = 25 ºC

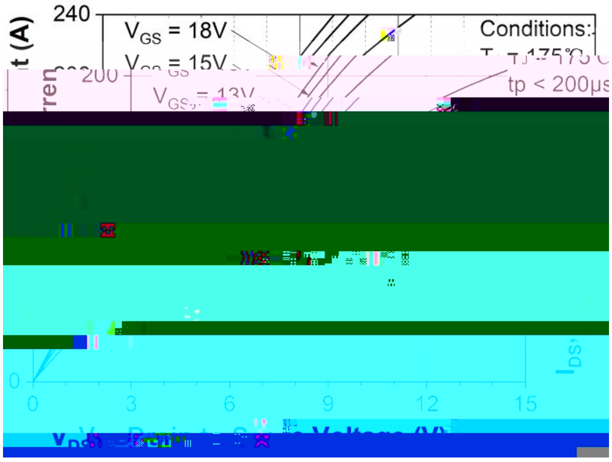


Figure 3. Output characteristics T_J = 175 ºC

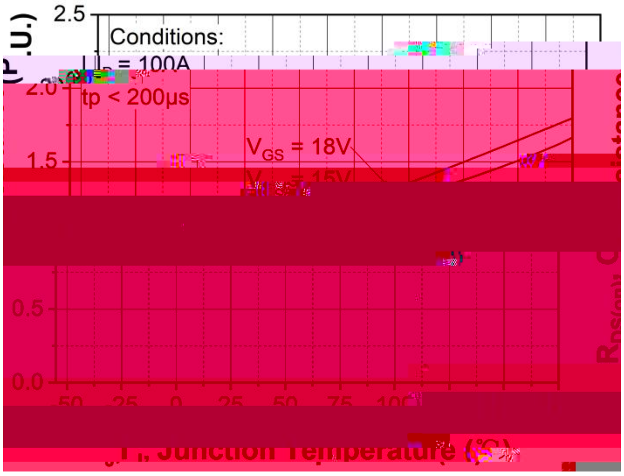


Figure 4. Normalized on-resistance vs. temperature

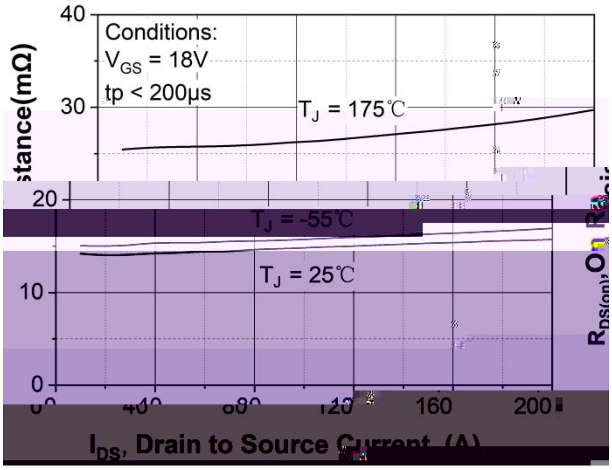


Figure 5. On-resistance vs. drain current

for various temperatures

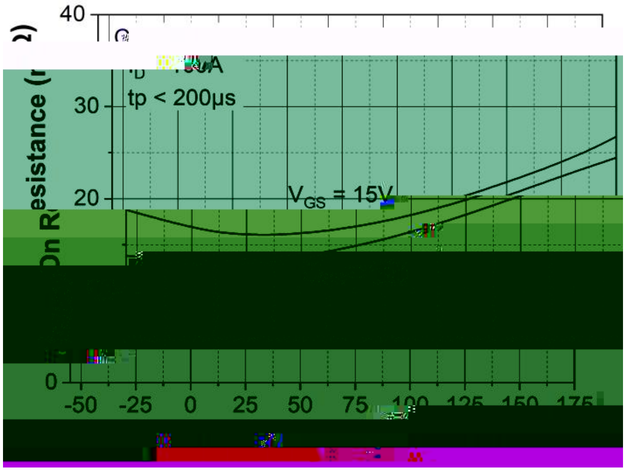


Figure 6. On-resistance vs. temperature

for various gate voltage

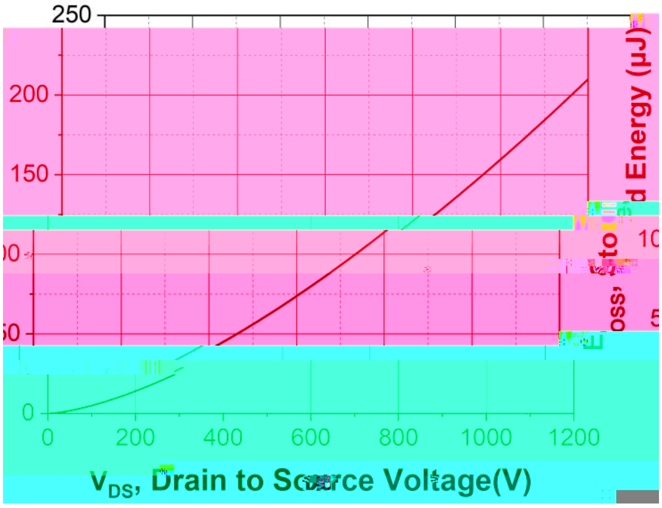


Figure 13. Output capacitor stored energy

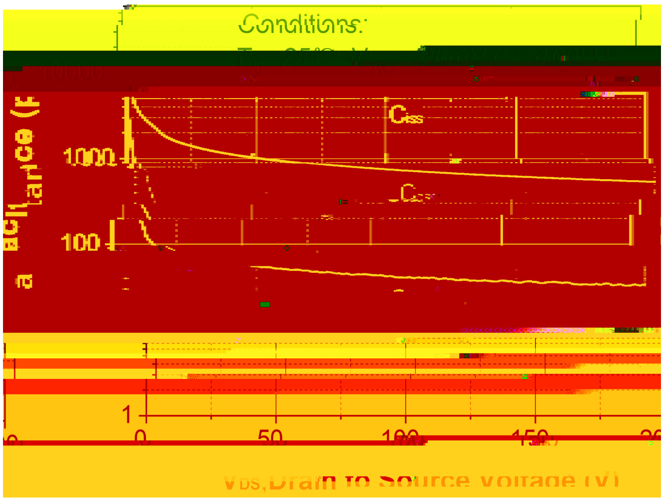


Figure 14. Capacitances vs. drain-source voltage (0 - 200V)

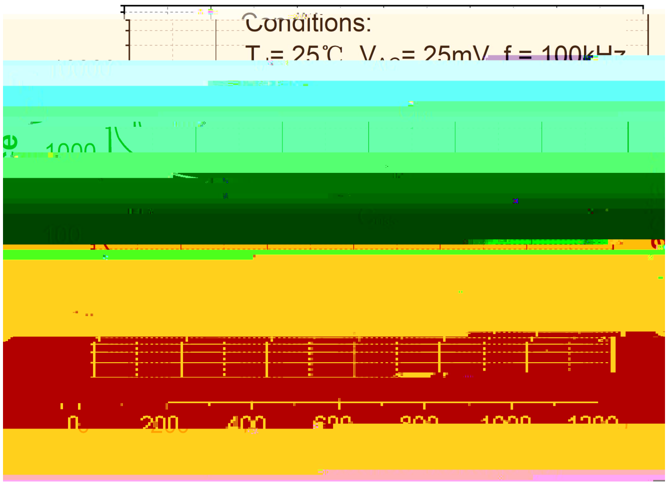


Figure 15. Capacitances vs. drain-source voltage (0 - 1200V)

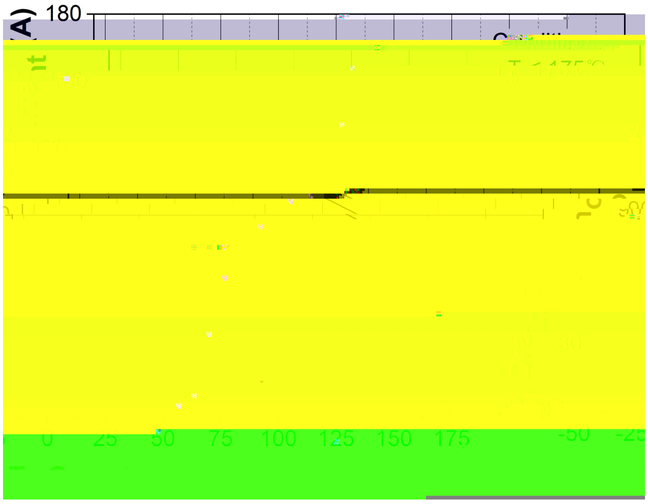


Figure 16. Continuous drain current derating vs. case temperature

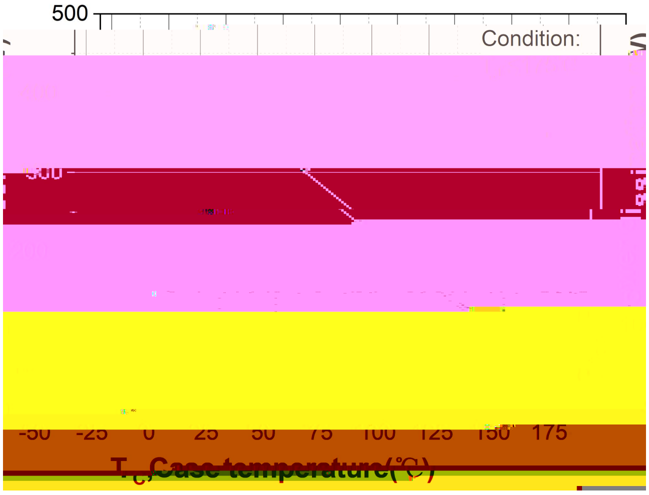


Figure 17. Maximum power dissipation derating vs. case temperature

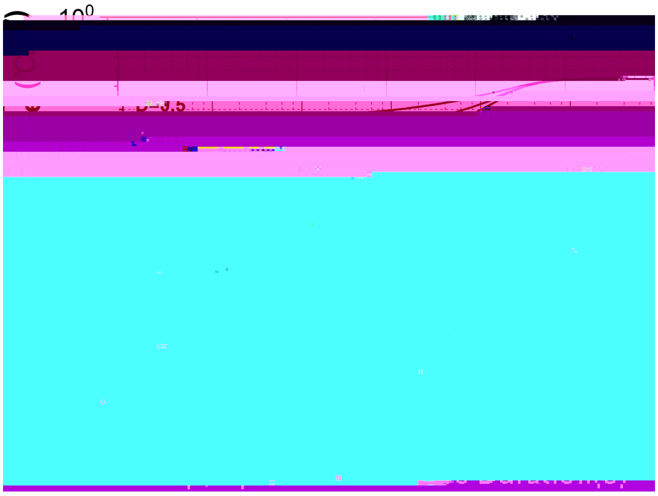


Figure 18. Transient thermal impedance (junction - case)

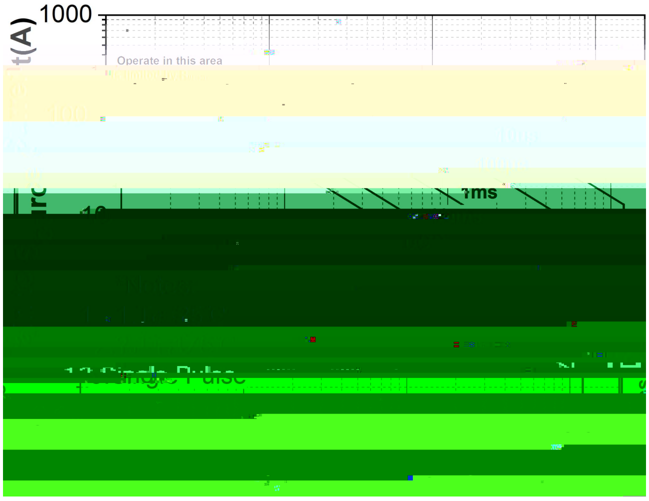
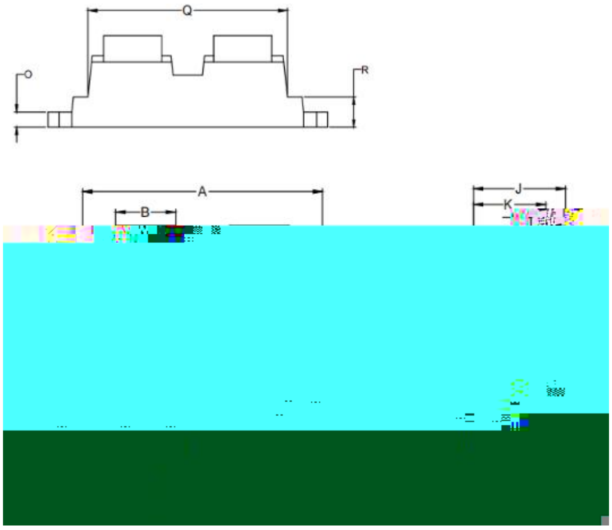
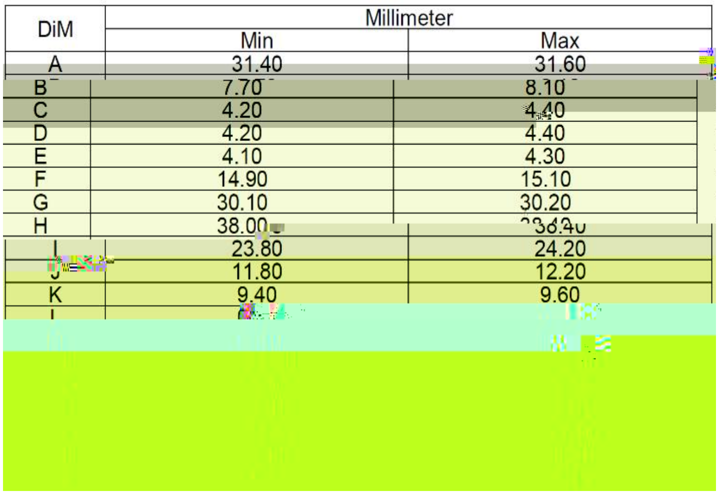


Figure 19. Safe operating area

ằ





DiM	Millimeter	
	Min	Max
A	31.40	31.60
B	7.70	8.10
C	4.20	4.40
D	4.20	4.40
E	4.10	4.30
F	14.90	15.10
G	30.10	30.20
H	38.00	38.40
I	23.80	24.20
J	11.80	12.20
K	9.40	9.60
L	[illegible]	[illegible]

à

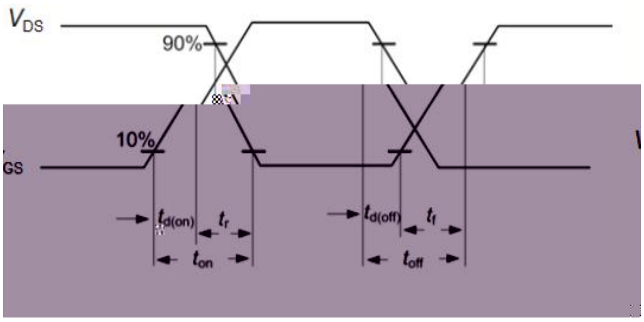


Figure A. Definition of switching times

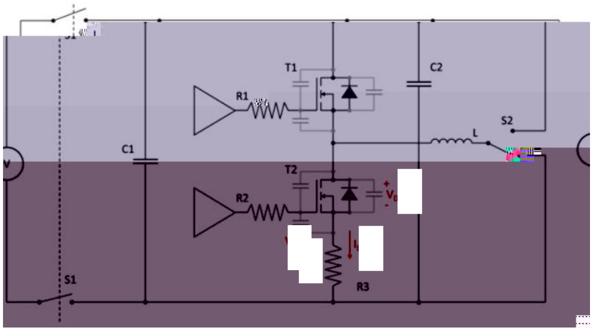


Figure B. Dynamic test circuit

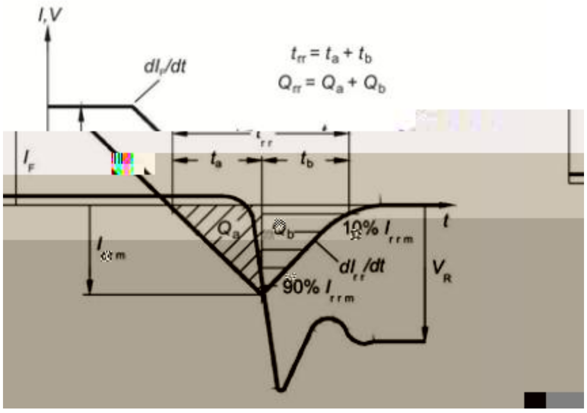


Figure C. Definition of body diode
switching characteristics

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.