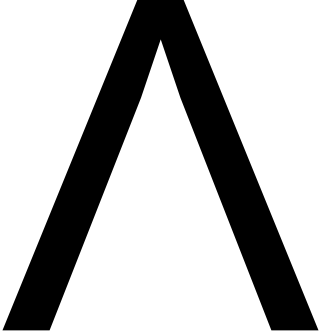


(Tc = 25°C unless otherwise specified)

$V_{(BR)DSS}$	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 = 20mA	Fig.11
		-	2.1	-	V	V_{DS} = V_{GS}, I_D = 20mA, 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	
$R_{DS(on)}$	Current drain-source on-state resistance	-	15	21	mΩ	V_{GS} = 15V, I_D = 70A	Fig.4,5,6
		-	24	-		V_{GS} = 15V, I_D = 70A, T_J = 175°C	
		-	12.6	17		V_{GS} = 18V, I_D = 70A	
		-	23	-		V_{GS} = 18V, I_D = 70A, T_J = 175°C	
g_{fs}	Transconductance	-	52	-	S	V_{DS} = 20V, I_D = 70A	Fig.7
		-	49	-		V_{DS} = 20V, I_D = 70A, T_J = 175°C	
$R_{g,int}$	Internal gate resistance	-	8.4	-	Ω	V_{AC} = 25mV, f = 1MHz, open drain	

Q_{gs}	Gate source charge	-	58	-	nC	V_{DS} = 800V, V_{GS} = -4/+18V I_D = 70A	Fig.12
Q_{gd}	Gate drain charge	-	40	-			
Q_g	Gate charge	-	197	-			

Tc = 25°C unless otherwise specified,the data comes from TO-247-4L)

E_{on}	Turn on switching energy	-	1901	-	μJ	V_{DS} = 800V, V_{GS} = -4/+18V I_D = 70A, Rg = 2.5Ω, L = 16.7μH	
E_{off}	Turn off switching energy	-	687	-			
$t_{d\ on}$	Turn on delay time	-	41	-	ns		
t_r	Rise time	-	37	-			
$t_{d\ off}$	Turn off delay time	-	93	-			
t_f	Fall time	-	20	-			

The data comes from TO-247-4L)

V_{SD}	Diode forward voltage	-	3.7	-	V	V_{GS} = -4V, I_{SD} = 35A	Fig.8,9,10
		-	3.3	-	V	V_{GS} = -4V, I_{SD} = 35A T_J = 175°C	
I_S	Continuous diode forward current	-	125	-	A	V_{GS} = -4V, Tc = 25°C	Note2
t_{rr}	Reverse recovery time	-	80	-	ns	V_R = 800V, V_{GS} = -4V I_D = 70A di/dt = 2150A/μs T_J = 175°C	
Q_{rr}	Reverse recovery charge	-	1247	-	nC		
I_{rrm}	Peak reverse recovery current	-	31	-	A		

Note2 : When using SiC Body Diode the maximum recommended V_{GS} = -4 V

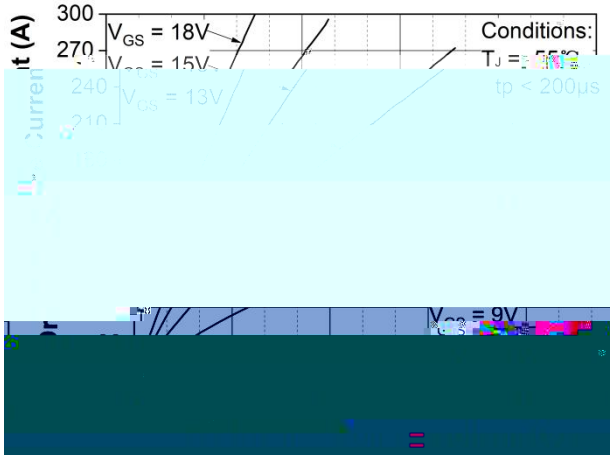


Figure 1. Output characteristics T_J = -55 ºC

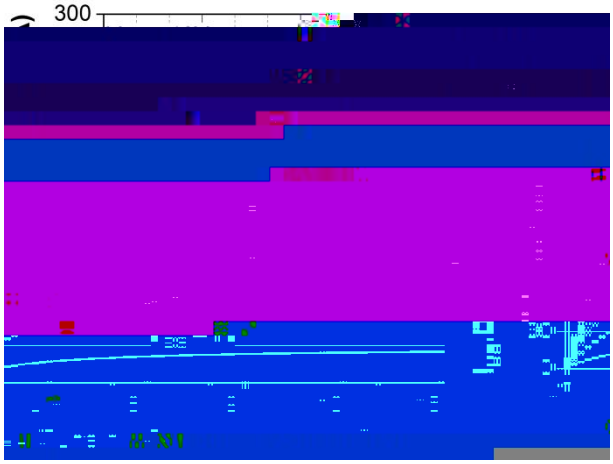


Figure 2. Output characteristics T_J = 25 ºC

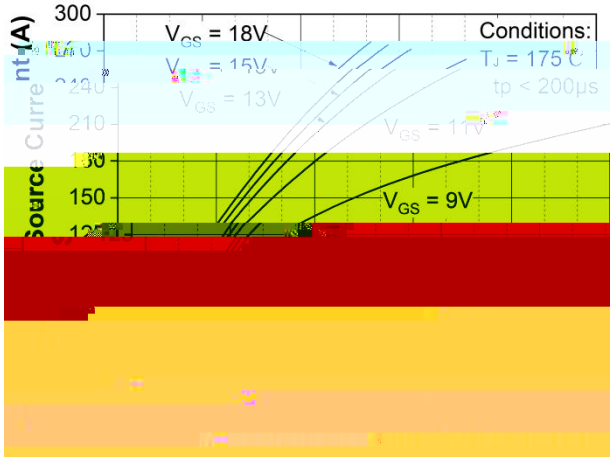


Figure 3. Output characteristics T_J = 175 ºC

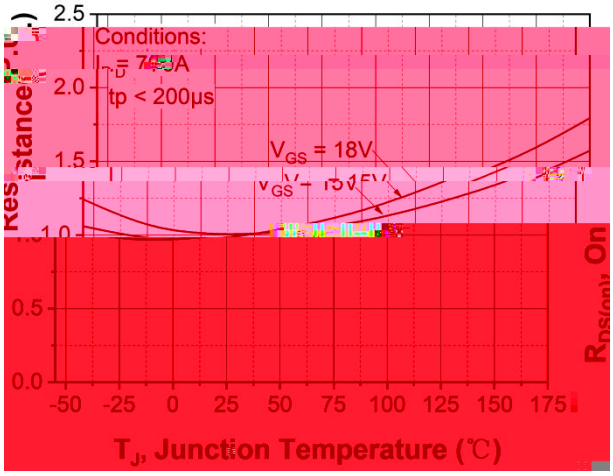


Figure 4. Normalized on-resistance vs. temperature

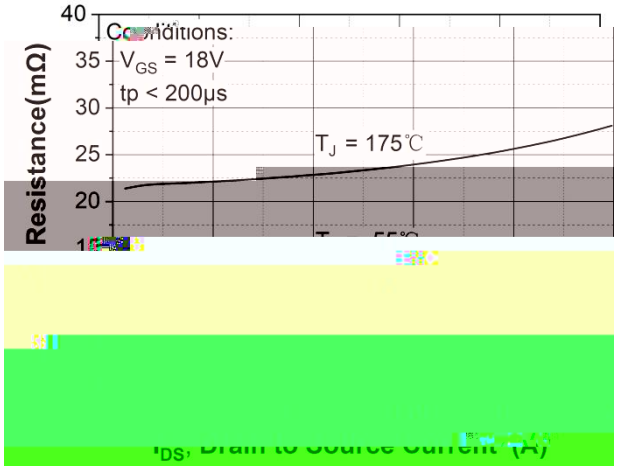


Figure 5. On-resistance vs. drain current for various temperatures

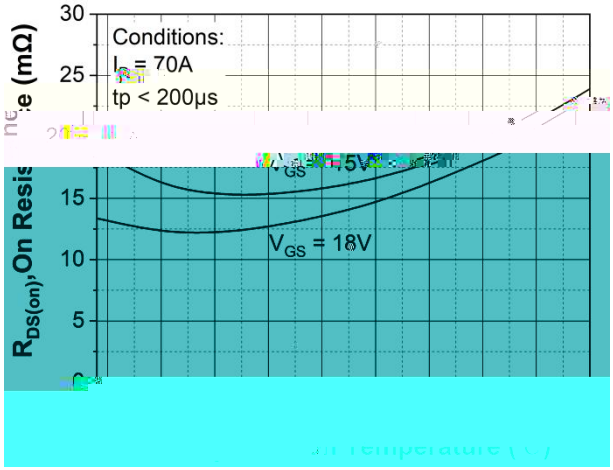


Figure 6. On-resistance vs. temperature for various gate voltages

Figure 7. Transfer characteristic for various junction t]rãtj he ʁm "

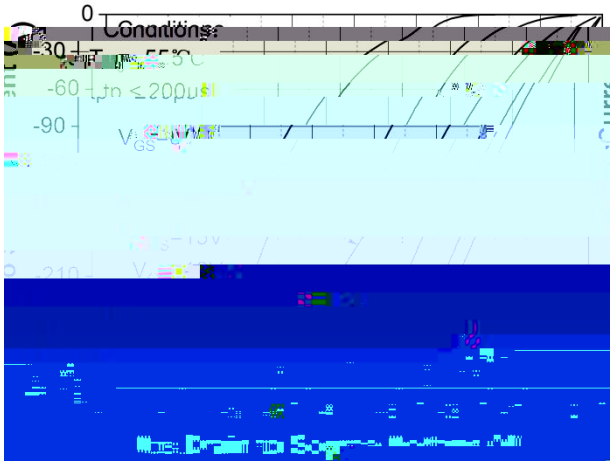


Figure 13. 3rd quadrant characteristic at T_J = -55 ºC

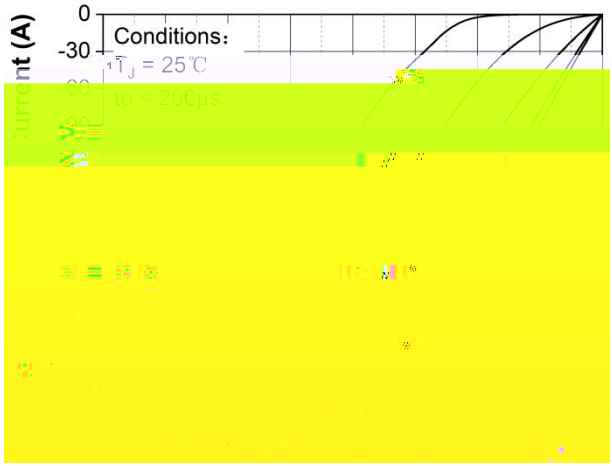


Figure 14. 3rd quadrant characteristic at T_J = 25 ºC

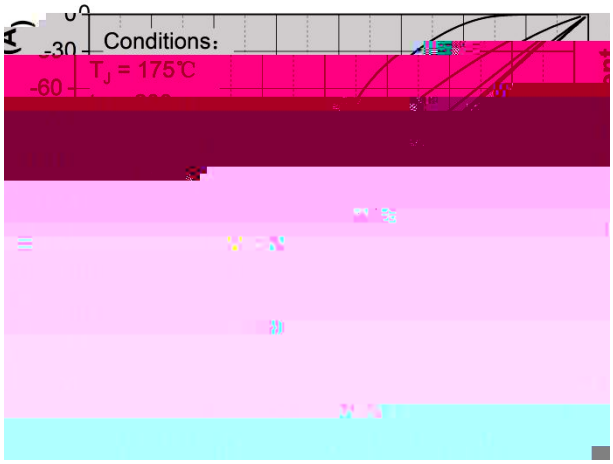


Figure 15. 3rd quadrant characteristic at T_J = 175 ºC

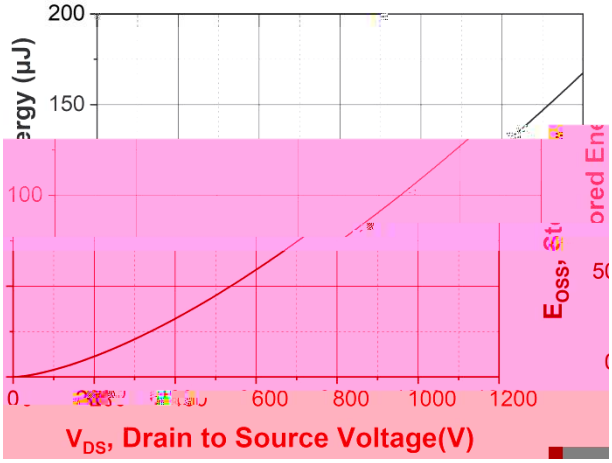


Figure 16. Output capacitor stored energy

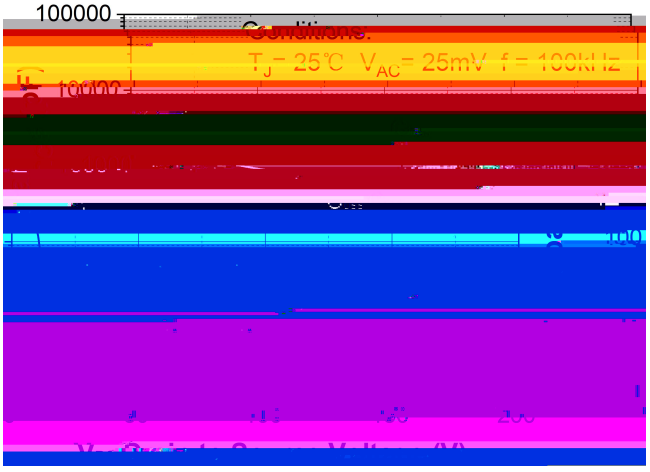


Figure 17. Capacitances vs. drain-source voltage (0 - 200V)

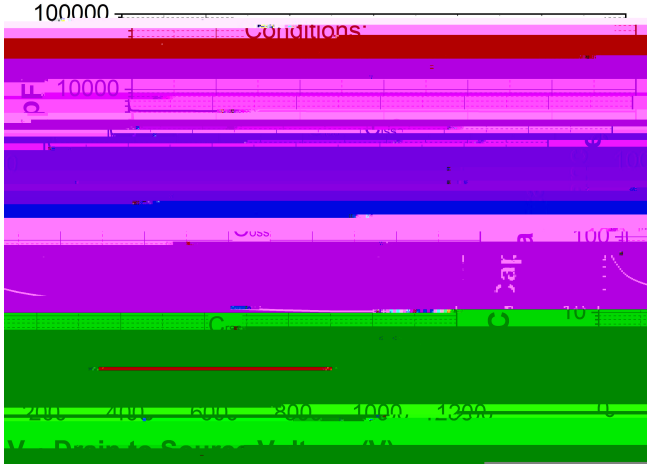
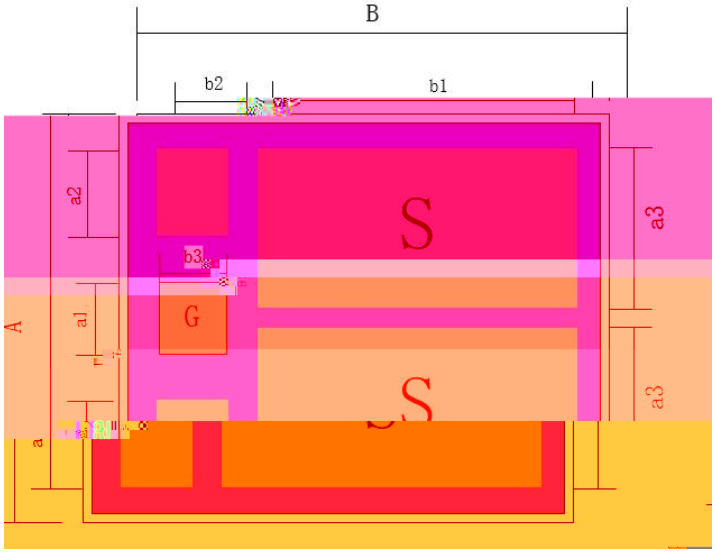


Figure 18. Capacitances vs. drain-source voltage (0 - 1200V)

Die size W x L	5 * 5	mm
Gate pad size W x L	0.78 * 0.68	mm
Source pad size W x L	1.9 * 3.1	mm
Kelvin pad size W x L	1.25 * 0.70	mm
Die thickness	150 ± 20	µm
Top side source gate metallization	4/4/ r/ ĩ	



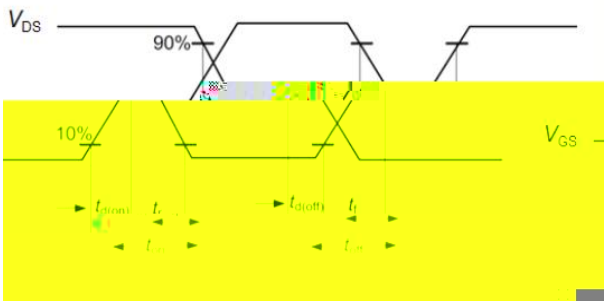


Figure A. Definition of switching times

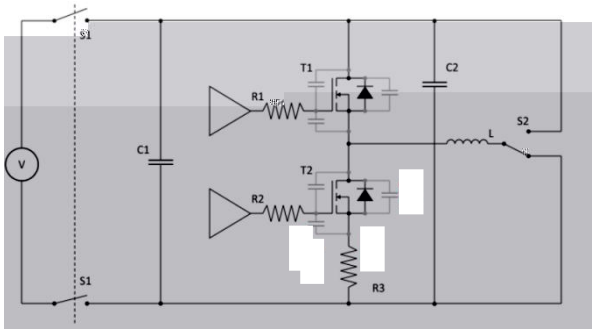


Figure B. Dynamic test circuit

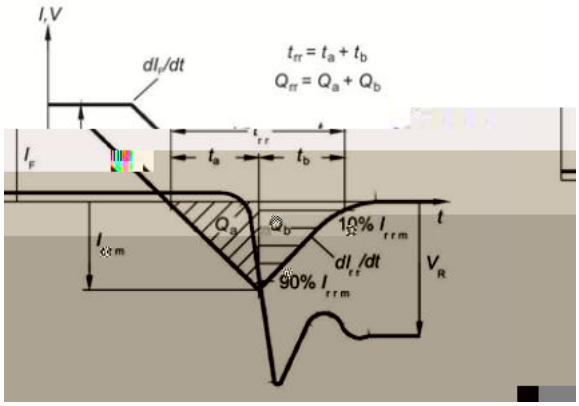


Figure C. Definition of body diode switching characteristics

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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.

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