S

(Tc = 25°C unless otherwise specified)

$V_{DS,max}$	Drain source voltage	1200	V	V_{GS} = 0V, I_D = 100μA	
$V_{GS,max}$	Gate source voltage	-8 /+19	V	Absolute maximum values	Note1
V_{GSop}	Gate source voltage	-4 /+15	V	Recommended operational values	
I_D	Continuous drain current	8 6	A V	V_{GS} = 15V, T_C = 25˚C	

Datasheet

Q_{gs}	Gate-source charge	-	2.1	-	nC	V_{DS} = 800V, V_{GS} = -4/+15V I=2.5A	
Q_{gd}	Gate-drain charge	-	3.6	-			
Q_g	Gate charge	-	9.6	-			

Tc=25°C unless otherwise specified, data comes from TO-263-7L)

E_{on}	Turn-on switching energy	-	52	-	μJ	V_{DS} = 800V, V_{GS} = -4/+15V I_D = 2.5A, Rg = 2.5Ω L = 120μH
E_{off}	Turn-off switching energy	-	1.1	-		
$t_{d(on)}$	Turn-on delay time	-	8	-	ns	
t_r	Rise time					

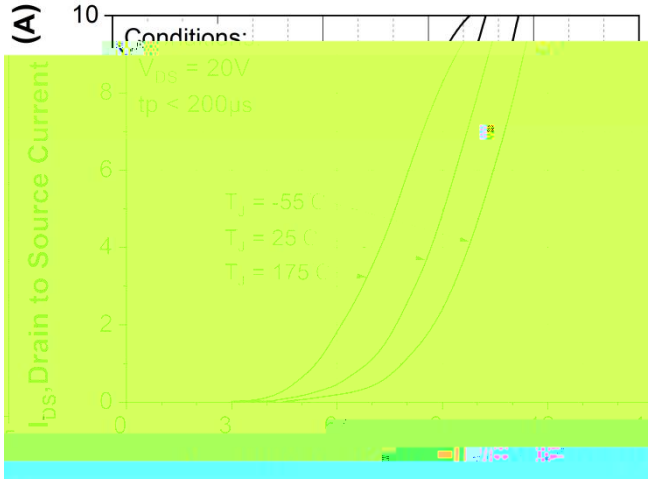


Figure 7. Transfer characteristic for various junction temperatures

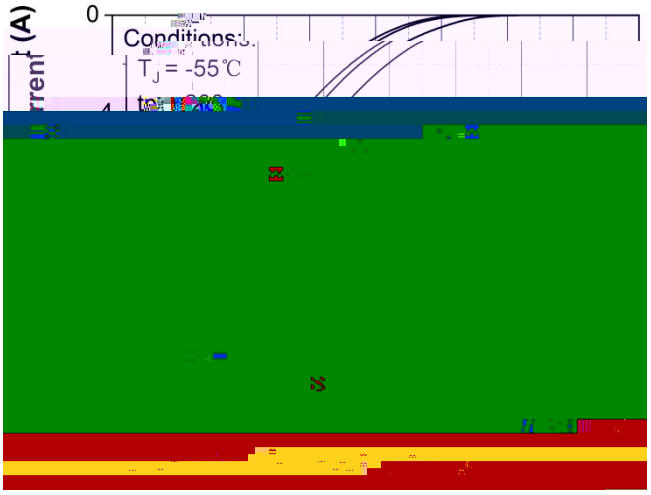


Figure 8. Body diode characteristic at T_J = -55 ºC

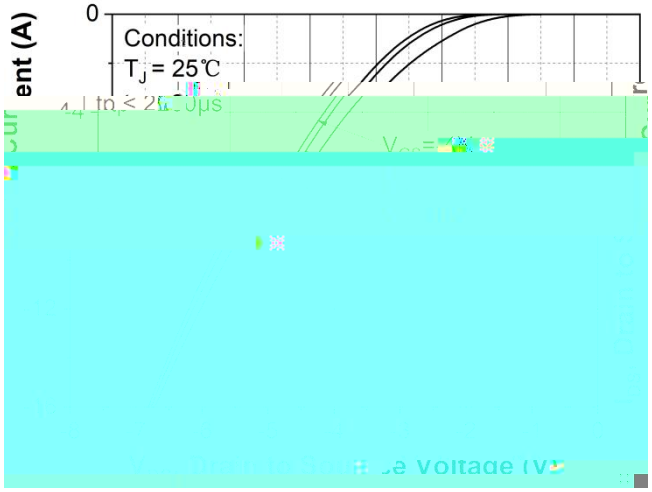


Figure 9. Body diode characteristic at T_J = 25 ºC

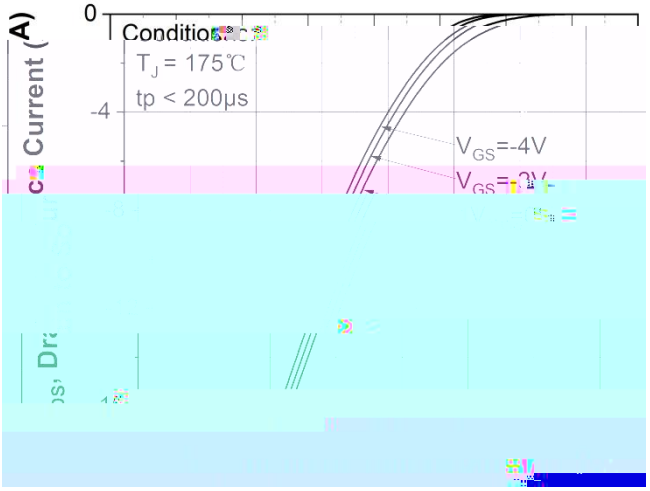


Figure 10. Body diode characteristic at T_J = 175ºC

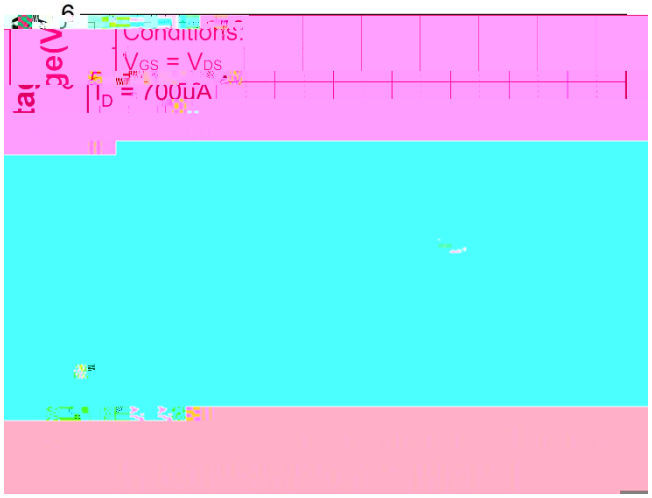


Figure 11. Threshold voltage vs. temperature

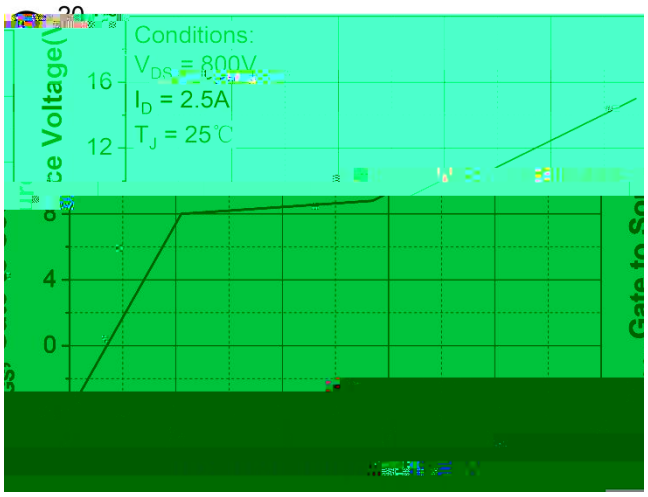


Figure 12. Gate charge characteristic

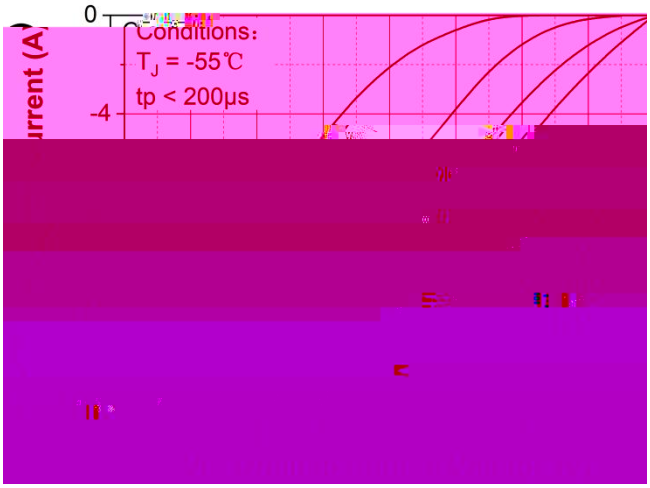


Figure 13. 3rd quadrant characteristic at T_J = -55 ºC

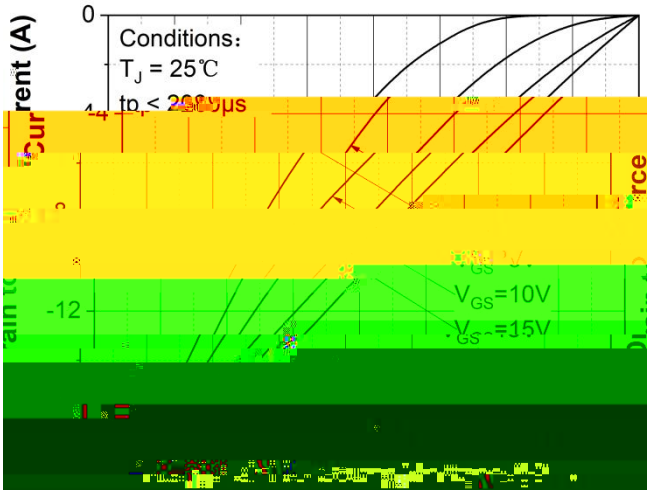


Figure 14. 3rd quadrant characteristic at T_J = 25 ºC

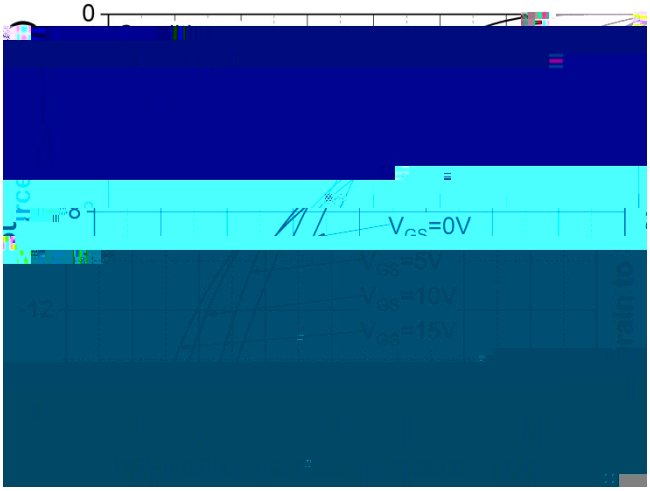


Figure 15. 3rd quadrant characteristic at T_J = 175 ºC

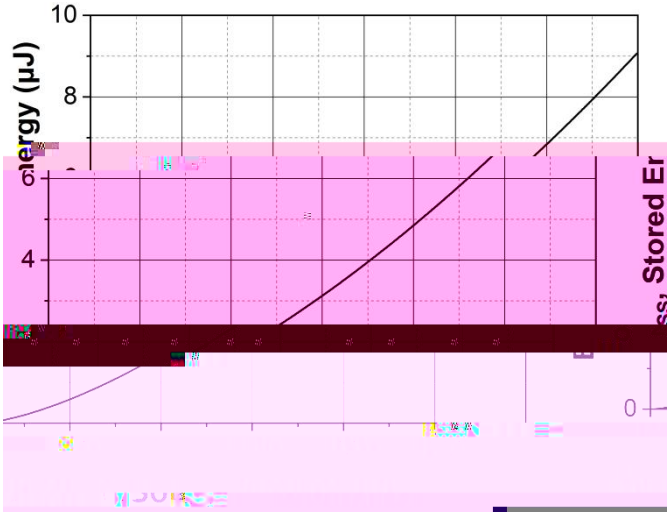


Figure 16. Output capacitor stored energy

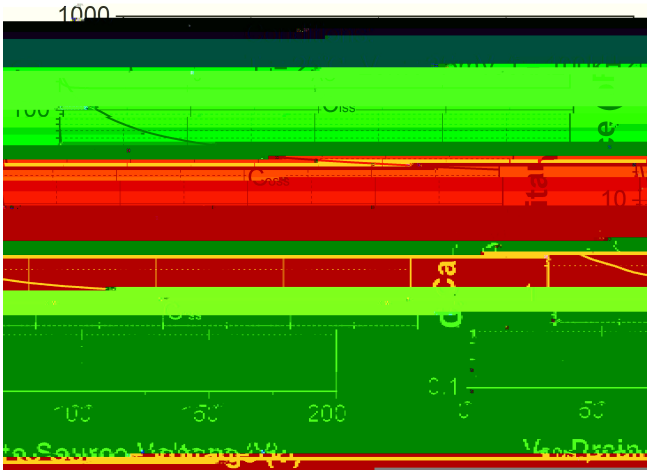


Figure 17. Capacitances vs. drain-source voltage (0 - 200V)

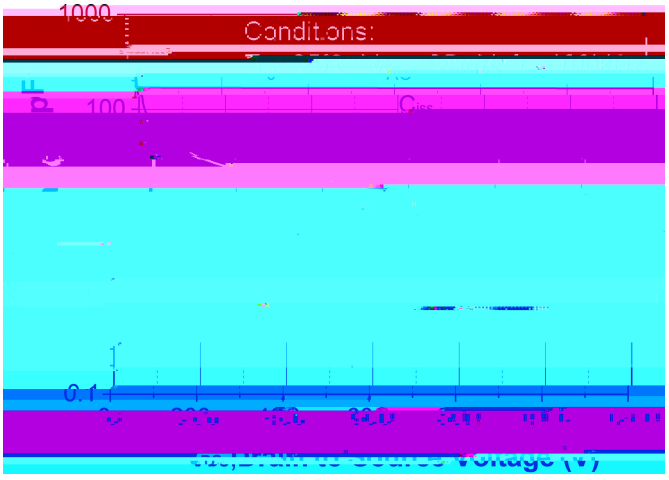
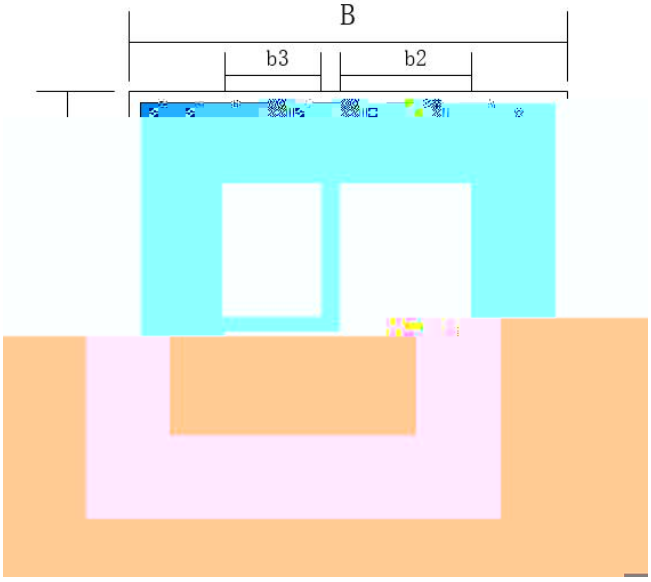


Figure 18. Capacitances vs. drain-source voltage (0 - 1200V)

Die size W x L	1.39 * 1.39	mm	
Gate pad size W x L	0.40 * 0.30	mm	
Die thickness	175	μm	
Top side source gate metallization	4	μm	Al
Back side drain metallization	1	μm	Ag



Symbol	Dimension / mm
B	1.39
b1	0.81
b2	0.43
b3	0.30
A	1.39
a1	0.40
a2	0.33
a3	0.81

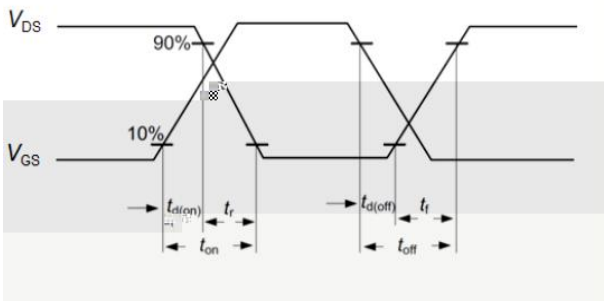


Figure A. Definition of switching times

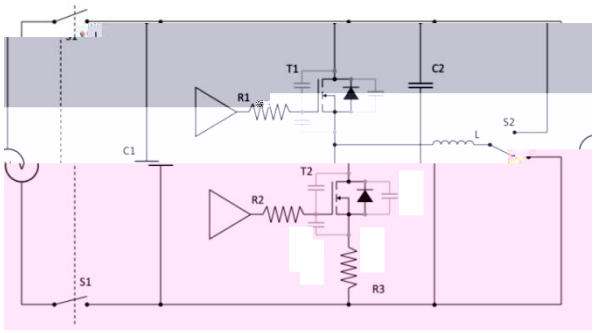


Figure B. Dynamic test circuit

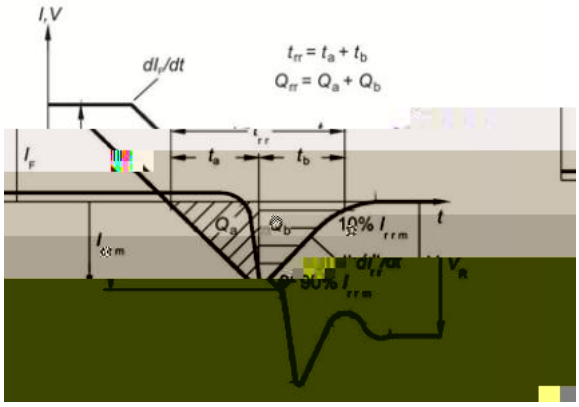


Figure C. Definition of body diode switching characteristics

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1.
The levels of 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 EU Directive 2011/65/ EC (RoHS2), as implemented January 2, 2013.

2.
REACh substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, please contact a Sichain representative to insure you get the most up-to-date REACh SVHC Declaration. REACh banned substance information (REACh Article 67) is also available upon request.

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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.