

- High speed switching
- Very low switching losses
- High blocking voltage with low conduction losses
- Temperature independent turn-on and turn-off losses
- Halogen free, RoHS compliant

- Cooling effort reduction
- Efficiency improvement
- Reduced cooling requirements
- Increased rgh







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(Tc = 25°C unless otherw<sup>1</sup>



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$Q_{gs}$	Gate source charge	-	24	-	nC	$V_{DS} \approx 800V, V_{GS} = -4/+15+$
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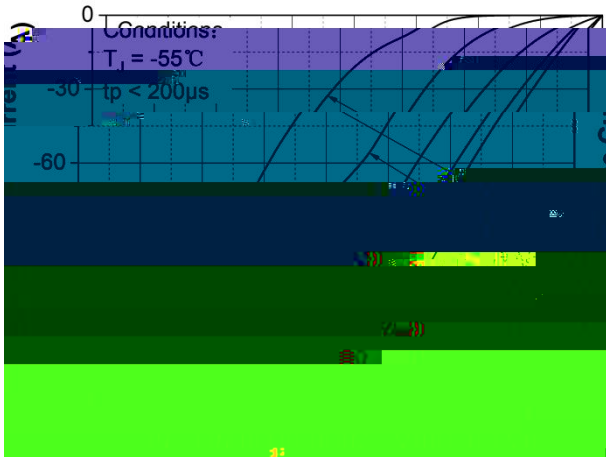


Figure 13. 3rd quadrant characteristic at  $T_j = -55\text{ }^\circ\text{C}$

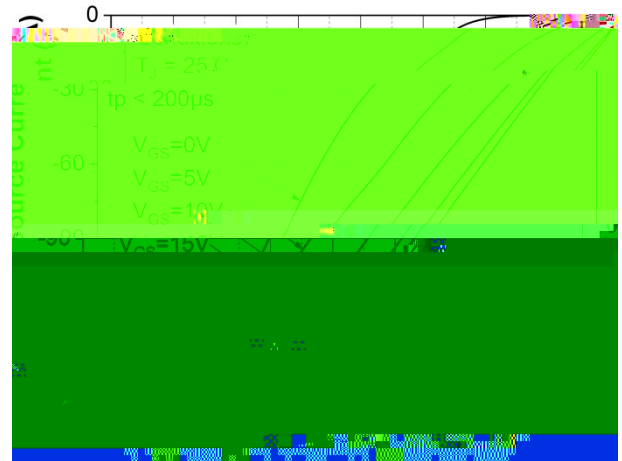


Figure 14. 3rd quadrant characteristic at  $T_j = 25\text{ }^\circ\text{C}$

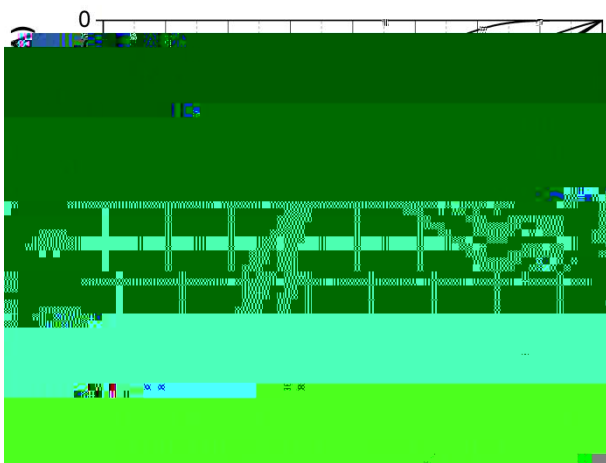


Figure 15. 3rd quadrant characteristic at  $T_j = 175\text{ }^\circ\text{C}$

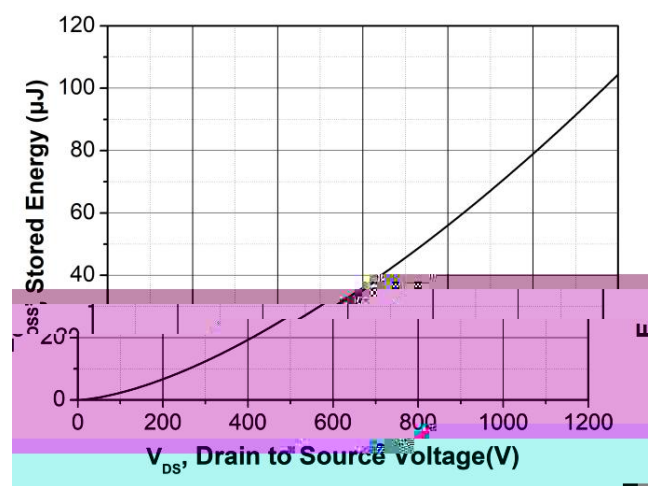


Figure 16. Output capacitor stored energy

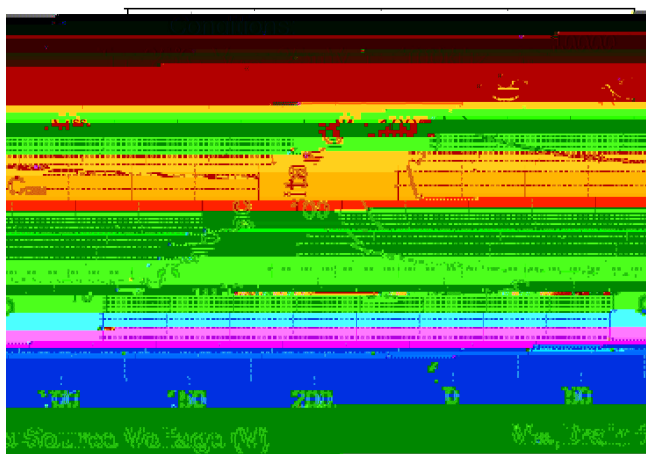


Figure 17. Capacitances vs. drain-source voltage (0 - 200V)

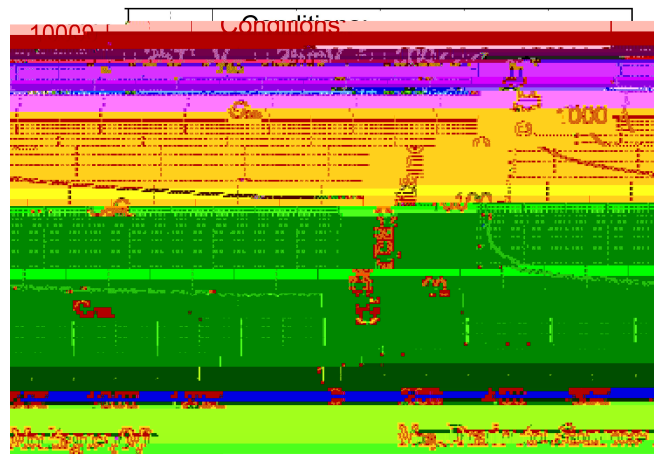


Figure 18. Capacitances vs. drain-source voltage (0 - 1200V)



Die size W x L	4.134 * 3.74	mm	
Gate pad size W x L	0.8 * 0.8	mm	
Die thickness	200	μm	
Top side source gate metallization	4	μm	Ti/Al
Back side drain metallization	1	μm	Ti/Ni/Ag

Symbol	Dimension / mm
B	3.740
b1	0.800
b2	0.900
b3	0.950
b4	0.900
A	4.134
a1	0.800
a2	3.434

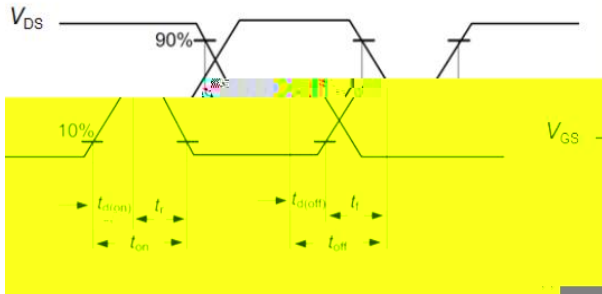


Figure A. Definition of switching times

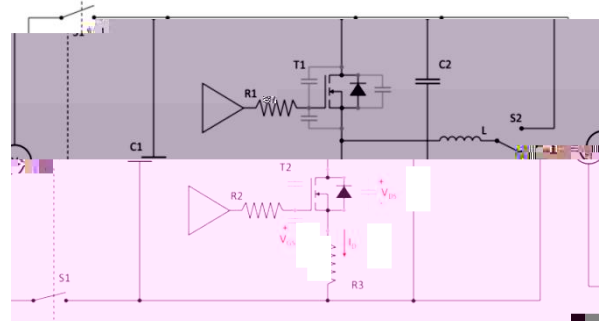


Figure B. Dynamic test circuit

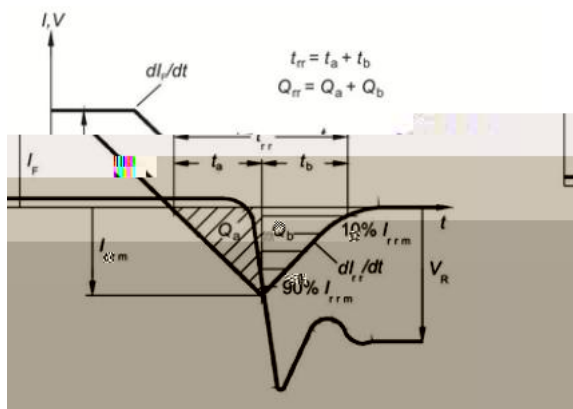


Figure C. Definition of body diode switching characteristics



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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.
3. With respect to information regarding the application of the product, Sichain hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.
4. Any information given in this documents subject to customer's compliance with its obligations and any applicable legal requirements, norms and standards concerning any use of the product of Sichain in any customer's applications.
5. Specifications of any and all products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment.
6. Due to technical requirements products may contain dangerous substances. For information on the types in question please contact Sichain office.

