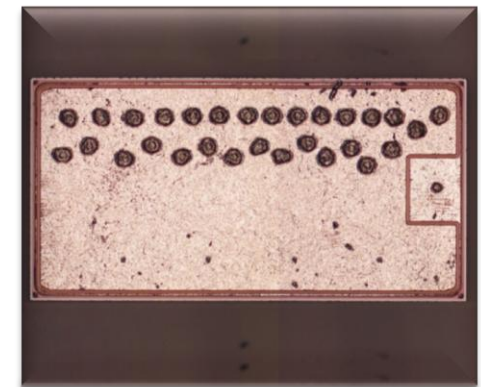
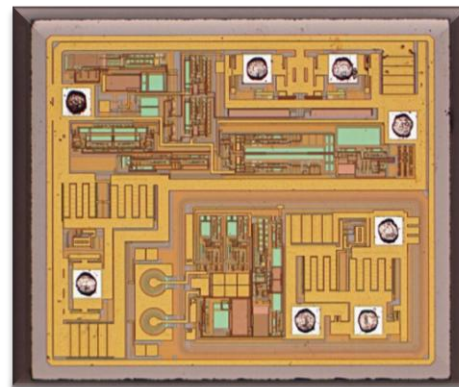


# IRSM005-800MH

Half-Bridge IPM for Low Voltage Applications

www.sitrigroup.com



## Product Analysis Report

This report is protected by copyright and may not be by way of trade or otherwise, be copied, reproduced, re-sold, lent, hired out in any form without express written permission from Shanghai Industrial  $\mu$ Technology Research Institute (Hereinafter referred to as SITRI). SITRI always endeavors to provide accurate and reliable information to its customers. However, it is not possible to guarantee absolute accuracy of all information contained herein and SITRI can assume no liability for inadvertent errors in this report.

This report was prepared for our Clients' private study, analysis or research and for no other purpose. The information contained in this report may describe technical innovations, which are the subject of patents held by third parties. The disclosure by SITRI of any such information is in no form whatsoever an inducement to infringe any patent. SITRI assumes no liability for patent infringement arising from the use of the information contained in this report.

Weibo



Wechat



To Know



[Table 1 IRSM005-800MH Device Summary](#)

[Figure1.1.1 Package OM Photo](#)

[Figure1.2.1 Package X-Ray Photo](#)

[Figure1.3.1 Package CT Photo-PCB1](#)

[Figure1.3.2 Package CT Photo-PCB2](#)

[Figure1.4.1 Package Pin Definition](#)

[Figure1.5.1 Package Internal Electrical Schematic correlated with Package Pin Definition](#)

[Figure2.1.1 IRSM005-800MH MOSFET Die1 Photo with Dimensions](#)

[Figure2.1.2 IRSM005-800MH MOSFET Die1 Corner](#)

[Figure2.1.3 IRSM005-800MH MOSFET Die1 Pad Size with Dimensions](#)

[Figure2.2.1 IRSM005-800MH MOSFET Die2 Photo with Dimensions](#)

[Figure2.3.1 IRSM005-800MH Gate Driver IC Die Photo with Dimensions](#)

[Figure2.3.2 IRSM005-800MH Gate Driver IC Die Corner](#)

[Figure2.3.3 IRSM005-800MH Gate Driver IC Die Mark](#)

[Figure2.3.4 IRSM005-800MH Gate Driver IC Die Pad Size](#)

[Figure3.1.1 SEM Cross Section Image with Dimension-Die Thickness](#)

[Figure3.1.2 SEM Cross Section Image with Dimension-Metal Al](#)

[Figure3.1.3 SEM Cross Section Image with Dimensions-Trench](#)

[Figure3.1.4 SEM Cross Section Image with Horizontal Dimensions](#)

[Figure3.1.5 SEM Cross Section Image with Vertical Dimensions](#)

[Figure3.1.6 SEM Cross Section Image with Dimensions-Top Trench](#)

[Figure3.1.7 SEM Cross Section Image with Dimensions-Middle Trench](#)

[Figure3.1.8 SEM Cross Section Image with Dimensions-Bottom Trench](#)

[Figure4.1.1 SEM Cross Section Image with Body Description-After Stained](#)

[Figure4.1.2 SEM Cross Section Image with P Body Dimension-After Stained](#)

[Figure4.1.3 SEM Cross Section Image with P+ Contact Implant Dimension-After Stained](#)

[Figure5.1.1 EDS Analysis in Cell Area](#)

[Figure5.1.2 EDS Analysis of Metal-Al](#)

[Figure5.1.3 EDS Analysis of Barrier Metal-TiN](#)

[Figure5.1.4 EDS Analysis of ILD2](#)

[Figure5.1.5 EDS Analysis of ILD1](#)

[Figure5.1.6 EDS Analysis of Trench Poly](#)

[Figure5.1.7 EDS Analysis of Gate Oxide](#)

[Figure6.1.1 Die Edge Guard Ring OM Image with Descriptions-After Stained](#)

[Figure6.2.1 Die Edge Guard Ring SEM Image with Dimensions-After Stained](#)

[Figure6.2.2 Die Edge Guard Ring SEM Image After Stained with N- Epi Dimension](#)

[Figure6.2.3 Die Edge Guard Ring SEM Image After Stained with P Body Dimension](#)

[Figure6.2.4 Die Edge Guard Ring SEM Image After Stained with Dimension-Area1&2](#)

[Figure6.2.5 Die Edge Guard Ring SEM Image After Stained with Dimension1-Area2](#)

[Figure6.2.6 Die Edge Guard Ring SEM Image After Stained with Dimensions2-Area2](#)

[Figure6.2.7 Die Edge Guard Ring SEM Image After Stained with Dimensions3-Area2](#)

[Figure6.2.8 Die Edge Guard Ring SEM Image After Stained with Dimension1-Edge](#)

[Figure6.2.9 Die Edge Guard Ring SEM Image After Stained with Dimension2-Edge](#)

[Figure6.2.10 Die Edge Guard Ring SEM Image After Stained with Dimensions3-Edge](#)

[Figure6.2.11 Die Edge Guard Ring SEM Image After Stained with Dimension1-Field Stop](#)

[Figure6.2.12 Die Edge Guard Ring SEM Image After Stained with Dimensions2-Field Stop](#)

[Figure6.2.13 Die Edge Guard Ring SEM Image After Stained with Dimension3-Field Stop](#)

[Points](#)