APPLICATION NOTE

Eutectic Die Bond Procedure

Introduction

This procedure is a general guideline for eutectic die bonding of SiC MESFET and GaN HEMT devices using West·Bond equipment. Processing is similar when using equipment from other manufacturers.

Tools, Material and Equipment List

Equipment	Tools	Material
West·Bond 7316 Eutectic Bonder	Tweezers	Die
	Die Collet	Preform, 80/20 AuSn, 0.0007" thick
	Vacuum Pick	Forming Gas, 95% N_2, 5% H_2
	Work Tray	
	Cooling Plate	

Set-Up Procedure

1. Check for proper grounding.
2. Turn on the bonder.
3. Check and ensure the forming gas is on.
4. Set the forming gas flow rate to 5 SCFH and the pressure to 12.5 PSI.
5. Check the vacuum.
6. Allow the work holder to warm up to 300°C.
7. Set the collet temperature to 180°C

Process

1. Place the package on the work holder.
2. Pick up preform with the vacuum pick up tool and place it into the correct position in the package based on the assembly drawing.
3. Pick up the die with the die collet.
4. Move the die bond heads over the package and preform to the specified location.
5. Monitor the preform until it melts.
6. Place the die on top of the preform.
7. Scrub the die into the package to the die orientation specified in the assembly drawing.
8. Remove the completed package from the work holder and place it onto the cooling plate.
9. Allow the part to cool.
10. Transfer the cooled part to the work tray.

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Cree, Inc.
4600 Silicon Drive
Durham, NC 27703
USA Tel: +1.919.313.5300
Fax: +1.919.313.5778
www.cree.com/wireless