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MIL-STD-883 TM 2017 Certification Test

Student Assessment

(Revised December 2020)

Name: ______________________________ Date: ____________________

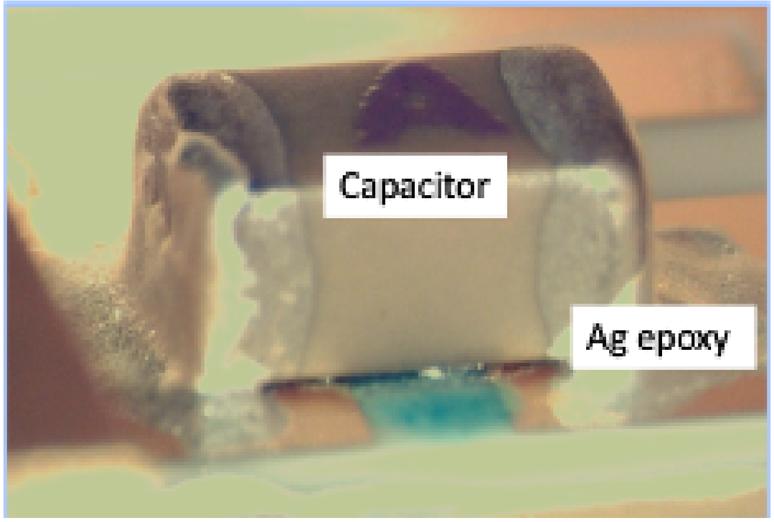
PART 1 – True/False Questions

	TRUE	FALSE
1. Test Method 2017 is part of Mil-Std-883 visual inspection criteria		
2. Metallization voids on IC greater than 75 % are acceptable		
3. A 100% epoxy fillet is required around the entire perimeter of an epoxy die bond		
4. A heel crack at the junction of a wire bond is OK		
5. 1.5X squash out on a 1 mil gold wire ball bond is ideal		
6. Loose foreign material or particles are acceptable at Pre Cap		
7. A crack at the edge of the die pointing away from the active area is acceptable		
8. All wires must have some loop for stress relief		
9. Lifted or peeling metal in a non-active area is acceptable		
10. Bonds that are not completely within the boundaries of the package post are OK		
11. A laser trim cut into a resistor more than 50% of the width is a reject		
12. A glassivation void that exposes two or more active metallization paths is OK		
13. Residual epoxy on the surface of the IC or MMIC is acceptable		
14. The diode inspection criteria is found in TM 2017		
15. Inspection criteria for capacitors and resistors is found in TM 2010 Low Mag		
16. Voids greater than 50% on an IC Metal run is cause for reject		
17. ESD precautions are not required at Pre Cap		
18. Cracks in epoxy are OK provided they are less than 3 mils in length		
19. At Pre Cap high mag inspection must be performed first followed by low mag		
20. High magnification IC inspection criteria is found in MIL-STD-750		

PART 2 – Multiple Choice/Essay Questions

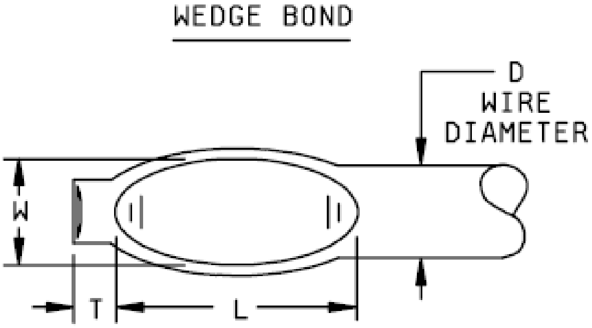
1. ACCEPT REJECT (Circle one and briefly explain why below.)

REASON:



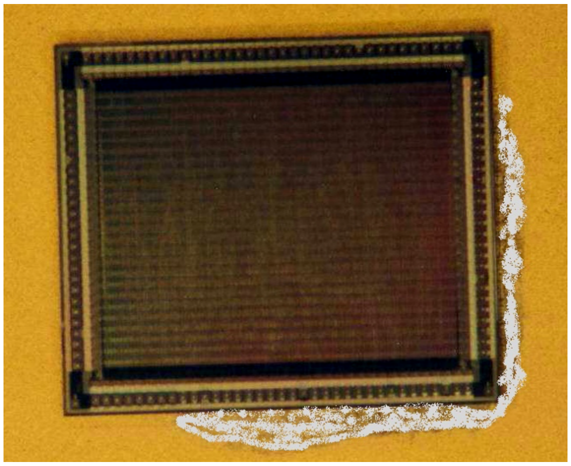
2. The maximum deformation on a thermosonic wedge bond (W) per TM 2017 is:

A. 1.5 X the wire diameter
B. 3.0 X the wire diameter
C. 2.0 X the wire diameter
D. None of the above



3. Below is a photo of a silicon die with silver epoxy die attach material visible at the perimeter. Choose the following:

   A. ACCEPT: Epoxy visible around 50% of the perimeter
   B. REJECT: Too much epoxy visible
   C. REJECT: Insufficient die attach material visible
   D. ACCEPT: Epoxy visible on two non-adjacent sides



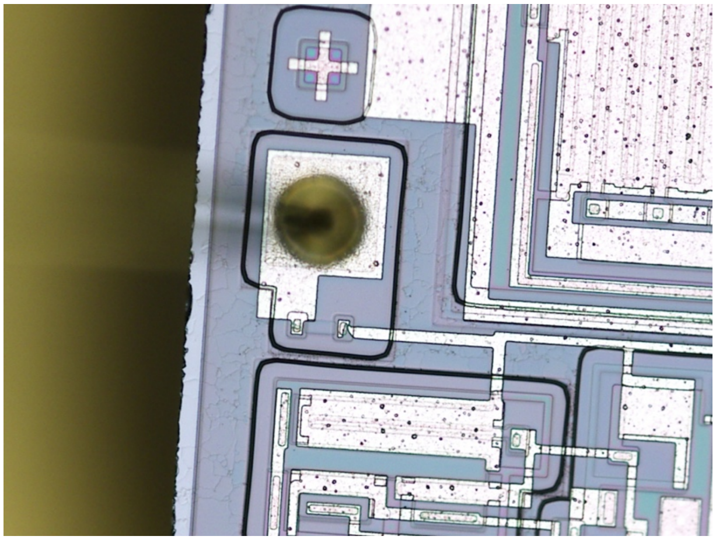
4. Draw a line from the device on the left matching the appropriate test method on the right :

   A. DIODES
   B. MMICS AND ICS
   C. RESISTORS
   D. WIREBONDS
   E. POWER MOSFETS

   TM 2010
   TM 2073
   TM 2069
   TM 2017
   TM 2032

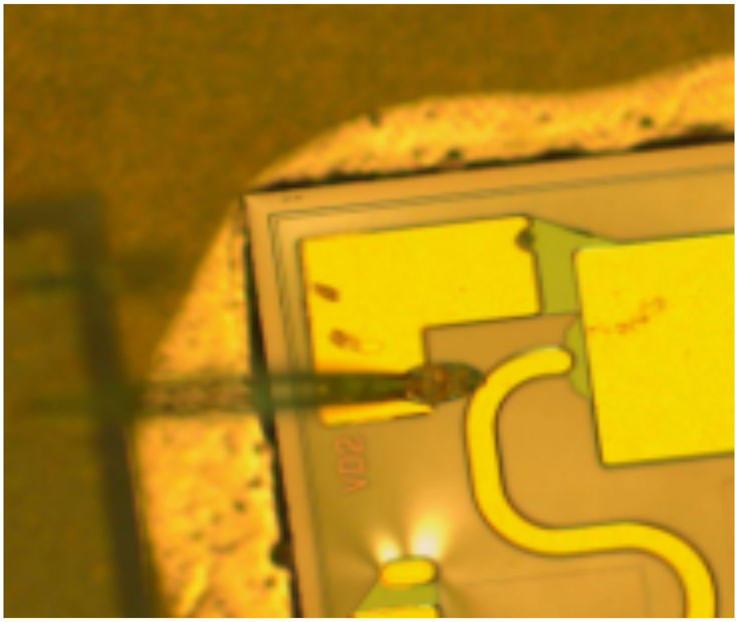
5. ACCEPT REJECT (Circle one and briefly explain why below.)

REASON:



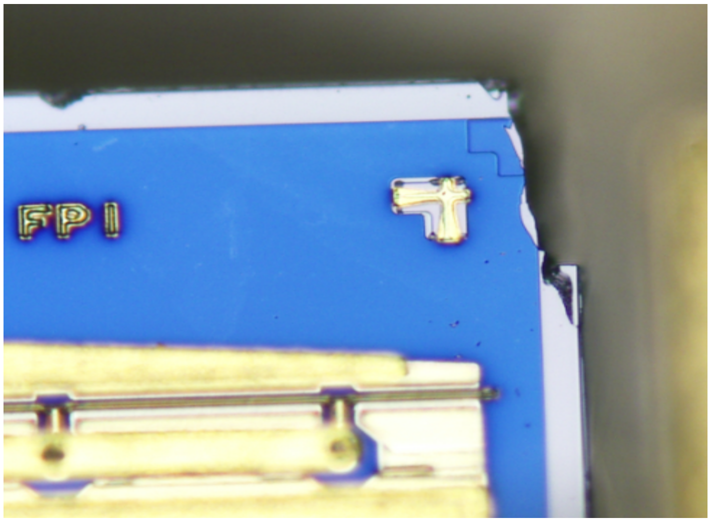
6. ACCEPT REJECT (Circle one and briefly explain why below.)

REASON:



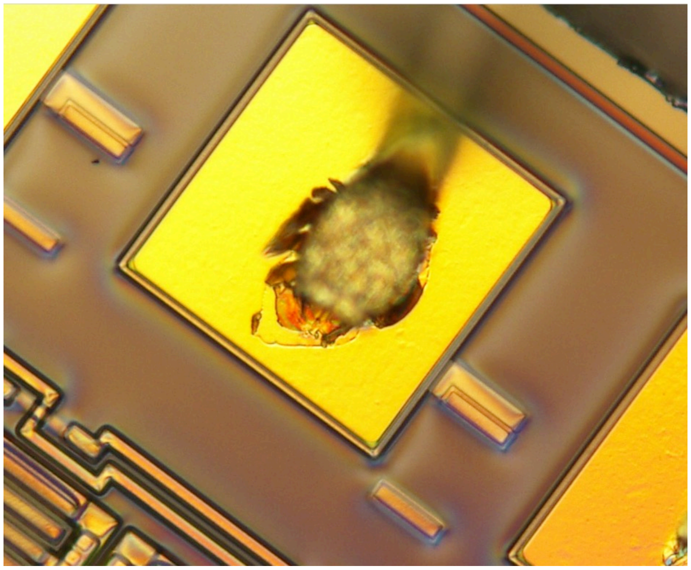
7. ACCEPT REJECT (Circle one and briefly explain why below.)

<u>REASON:</u>



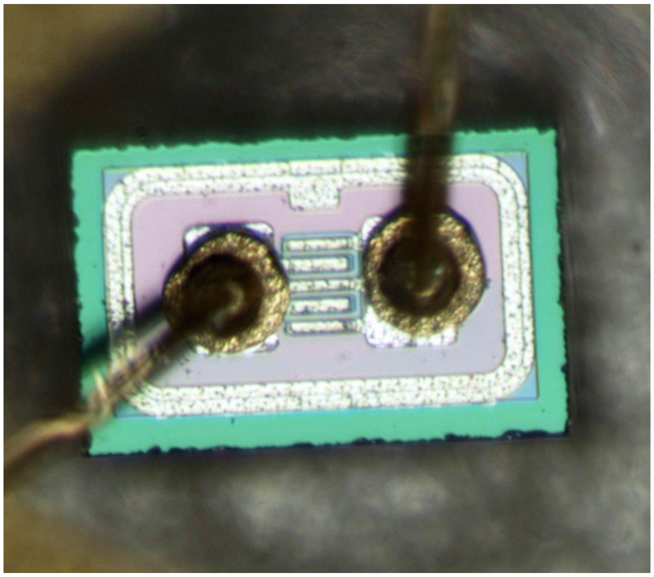
8. ACCEPT REJECT (Circle one and briefly explain why below.)

<u>REASON:</u>



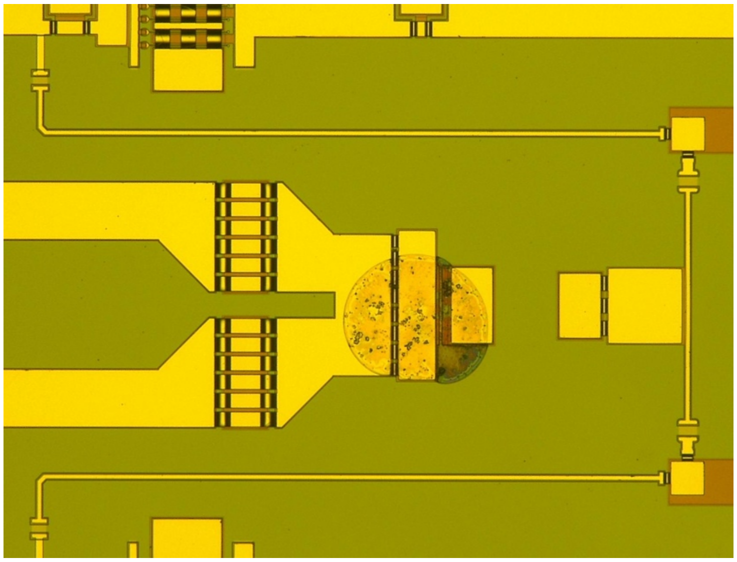
9. ACCEPT REJECT (Circle one and briefly explain why below.)

REASON:



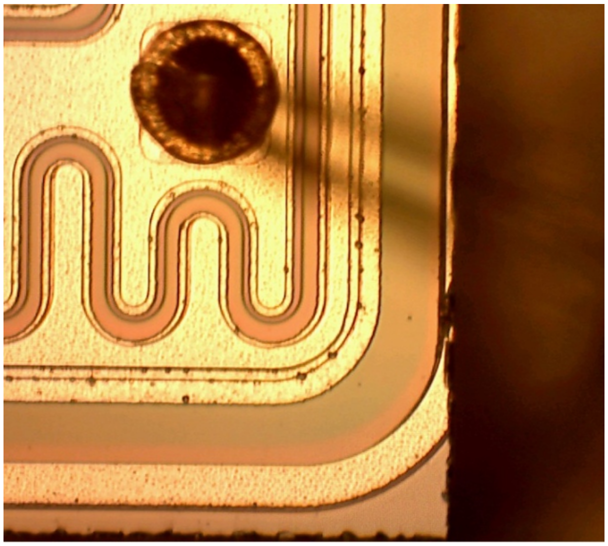
10. ACCEPT REJECT (Circle one and briefly explain why below.)

REASON:



11. ACCEPT REJECT (Circle one and briefly explain why below.)

REASON:



12. ACCEPT REJECT (Circle one and briefly explain why below.)

REASON: