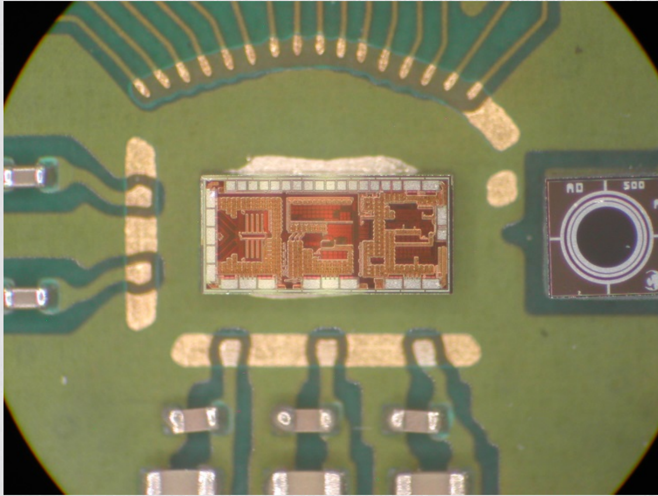
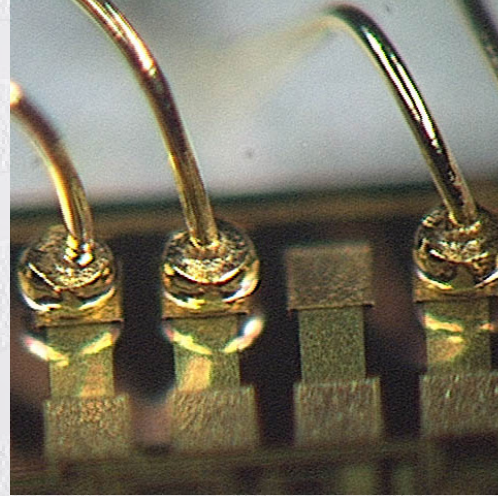
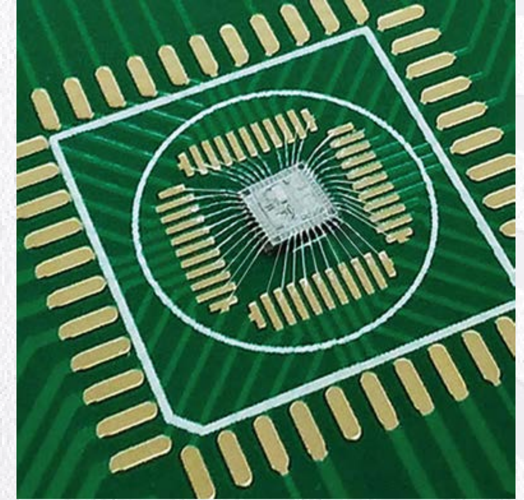
TechniPad ENEPIG

Wire Bond Data







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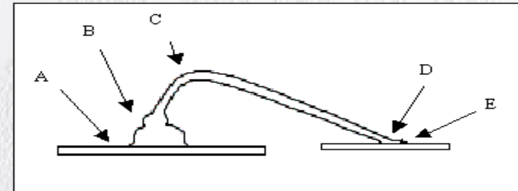
TechniPad 7611 Wire Bond Data

	27-69-8		27-69-9	
	5 m inch Pd		15 m inchPd	
Wire#	grams	code	grams	code
1	7.1	B	8.1	B
2	7.6	A	7.7	B
3	4.5	B	6.1	D
4	6.6	B	4	B
5	6	D	6.8	B
6	3.9	D	3.7	D
7	8	D	6.2	B
8	7.2	D	4.4	B
9	5	B	3.6	B
10	4	B	8.5	B
11	3.9	A	4.8	B
12	4.6	B	5.5	B
13	6.1	B	4.8	B
14	6.1	B	6.6	D
15	7.9	D	4.3	D
16	7.5	B	6.1	D
17	8	D	5.2	B
18	5.7	B	5.5	D
19	4.5	B	8.6	B
20	6	B	5.3	B
21	3.9	D	5.2	D
22	8.5	B	4.4	B
23	5	B	6.2	B
24	9	B	5.6	B
25	6.8	D	3.5	B
Ave	6.136		5.628	
SD	1.58977986		1.48001126	

Test Parameters:

- Bonder: AB356 Automatic Gold Wire Ball Bonder
- Wire: 99.99% Gold , Size=30 μ ϕ , T.S.=10-15 gm
- Capillary: GAISER Tool Company (1572-17-437GM-20D)



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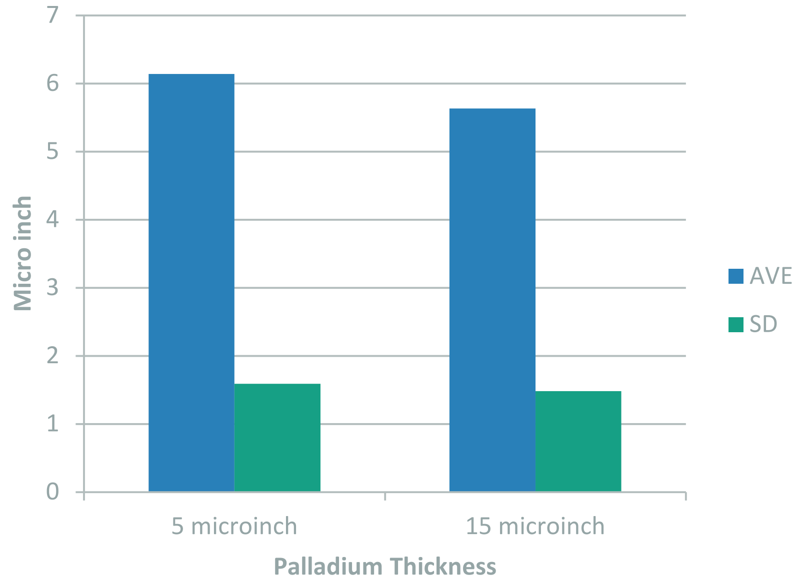
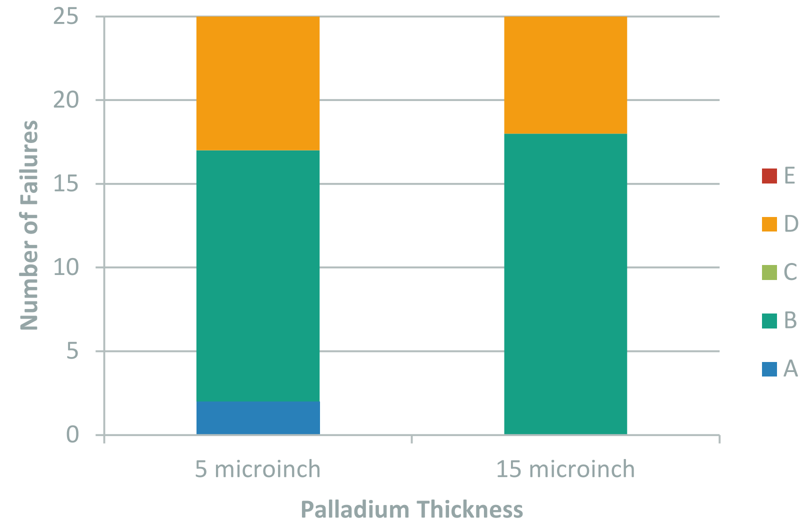
TechniPad 7611: Au Wire Bond Results





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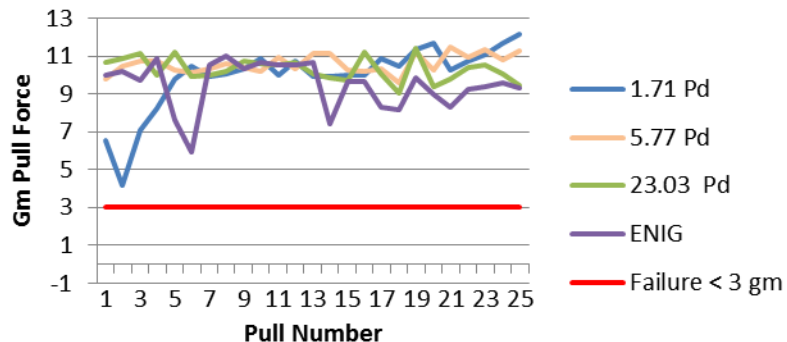
Wire Bond Testing TechniPad 7611 Thickness W & WO Aging

- Test Conditions
  - PCB plated with 0, 2, 10, & 20 micro inches of Pd from TechniPad 7611
  - As plated & after 4 hours @ 175 ^{0}C
- Wire Bonding Conditions
  - Iconn semi-automatic bonder
  - 1 mil gold wire
  - Capillary: GAISER Tool Company (1572-17-437GM-20D)
- Dage BT2400 Bond Tester

Raw Data Wire Bond TechniPad 7611 W & WO Aging

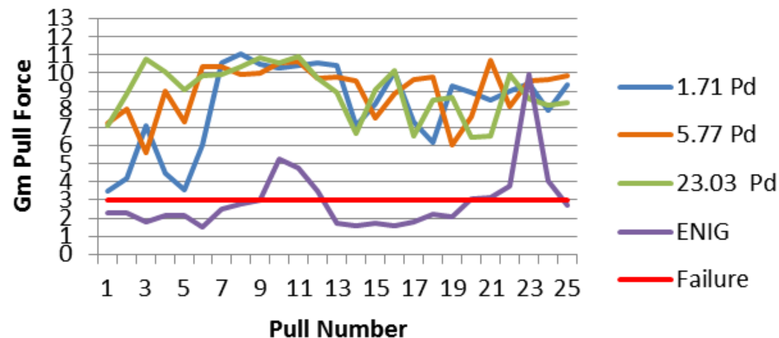
As Plated

- All pass biggest variation with ENIG & 2 micro inch Pd
- Little difference 5 & 20 m inch Pd



After 4 Hours 175 °C

- Complete ENIG failure & greater variation with 2 micro inch Pd
- Little difference 5 & 20 m inches Pd



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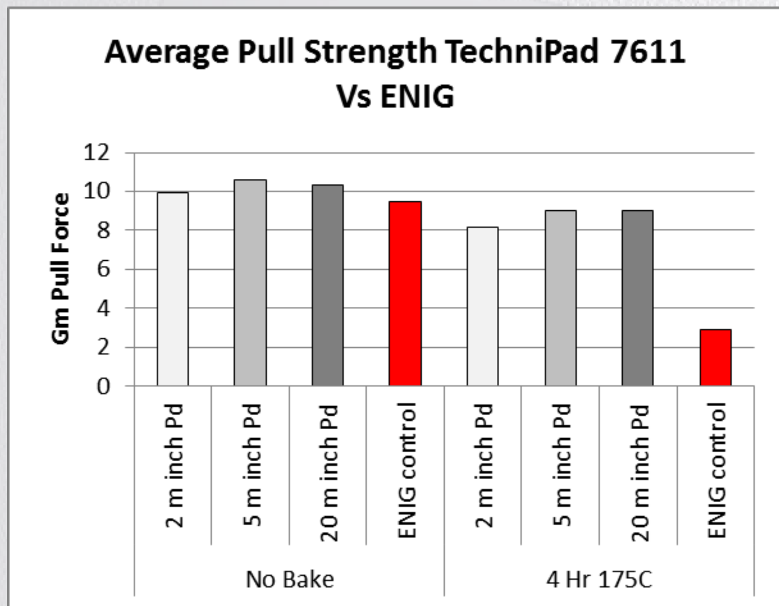
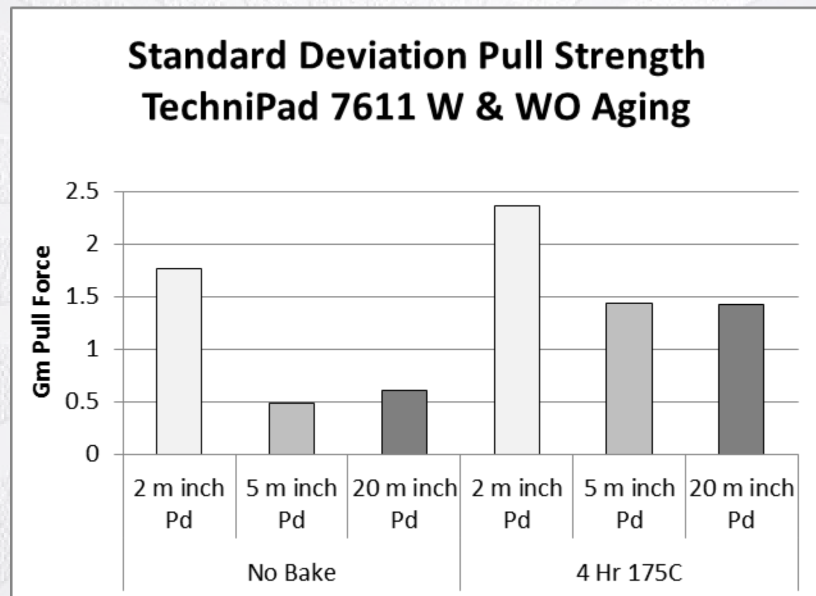
Average & Std Dev TechniPad 7611 W & WO Aging





- As Plated all samples have similar results
- After bake Ave falls slightly & ENIG fails

- As plated SD high with 2 m inch Pd
- Similar SD with 5 & 20 W & WO bake

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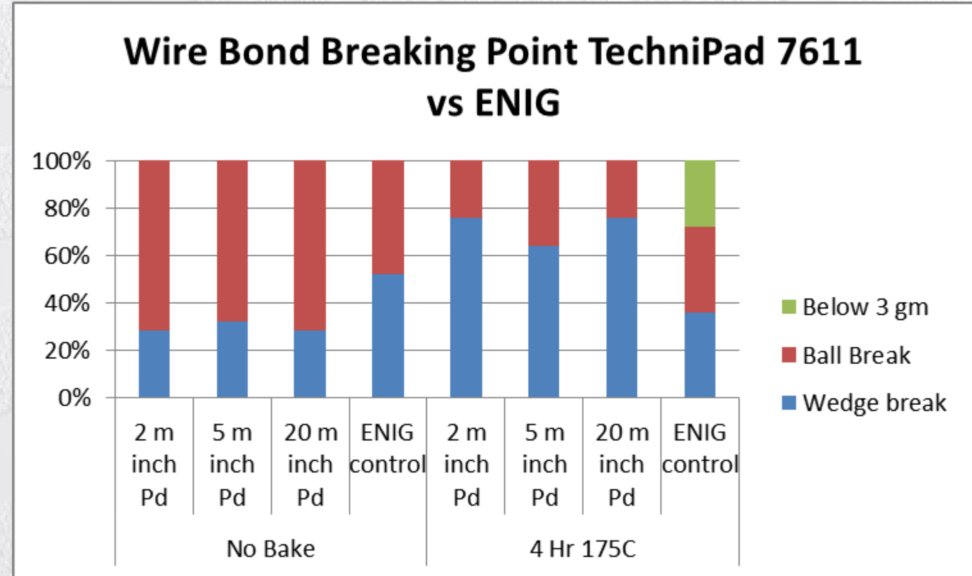
Wire Bond Results TechniPad 7611 W & WO Bake

- No failures of the bond to the ENEPIG were observed
- Even thin Pd improves protection of Ni substrate
- But thin Pd yields greater variation in bond strength
- For wire bonding applications 10 micro inch min suggested



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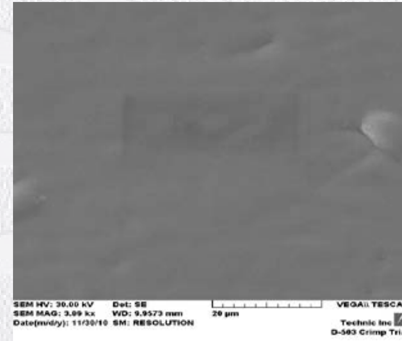
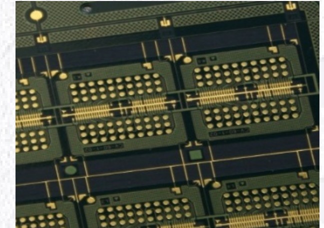
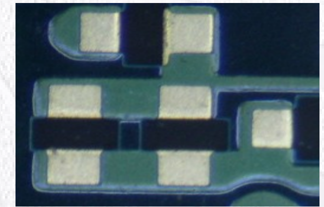
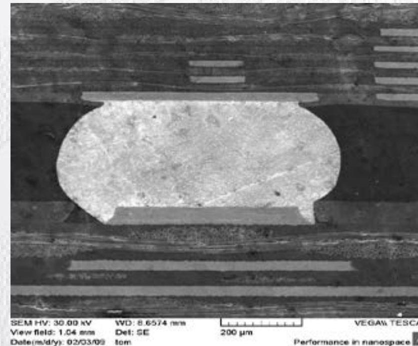
THE SOLUTION: TechniPad ENIG & ENEPIG

- **Outstanding Assembly Performance**
  - Flat EN = No black pad/corrosion products on EN Surface
  - Proprietary immersion gold process with almost no Ni removal
  - Thin intermetallic
- **Lowest Operating Cost**
- **Solves ENIG Process Issues**
- **All Interconnect Applications**
  - Low contact & good wear resistance
  - Wire bondable
  - Solderable









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