

| | Standard | Advanced | Engineering | RoadMap | Projected Date |
|----------------------------------|--------------------|--------------------|--------------------|-----------------|----------------|
| Internal Trace & Space | 4/4 mils | 3/3 mils | 2.4/2.4 mils | Under 2.4 mils | 2017 |
| External Trace & Space | 5/5 mils | 3.75/3.75 mils | 2.8/2.8 mils | 2.6/2.6 mils | 2017 |
| Minimum Starting Foil | 1/2 Oz | 1/4 Oz (9 micron) | 1/8 Oz (5 micron) | | |
| Maximum Copper Thickness | 2 Ounce | 3 Ounce | 4 Ounce | Over 4 Ounce | 2017 |
| Minimum Dielectric for Rigid | 5 mils | 3 mils | 2 mils | 1 mil (film) | 2017 |
| Maximum Plating Aspect Ratio | 6:1 | 8:1 | 10:1 | 12:1 | 2017 |
| Minimum Starting Drill | 8 mils | 6 mils | 4 mils | 3 mils (Laser) | 2017 |
| Maximum Thickness | 0.125 | 0.125 | 0.125 | | |
| Via in Pad | Yes | Yes | Yes | | |
| Blind Via | Yes | Yes | Yes | | |
| Blind Via Formation | Drill, Segment Lam | Laser Ablate .004 | Laser Ablate .002 | | |
| Blind and Buried Types | N/A | 1/N/1 Type 1 & 2 | Type 3 Stacked | | |
| Stacked Via Structures 2/N/2 | N/A | N/A | Yes | | |
| Controlled Impedance Tolerance | + / - 10% | + / - 10% | + / - 10% | | |
| Surface Finishes | HASL, ENIG, ENEPIG | HASL, ENIG, ENEPIG | HASL, ENIG, ENEPIG | | |
| Selective Plating | N/A | Soft, Hard Gold | Soft, Hard Gold | | |
| Soldermask Dams | 4 mils | 3 mils | 3 mils | | |
| Drill Positioning (Hole/Feature) | + / - 3 mils | + / - 2 mils | + / - 1 mils | | |
| Fabrication Tolerances | + / - 5 mils | + / - 3 mils | + / - 2 mils | | |
| Ground Clearances | Drill + 20 mils | Drill + 15 mils | Drill + 13 mils | Drill + 12 mils | 2017 |

| Annular Ring Calculations | | | | |
|---|---------------|----------------|----------------|----------------|
| | Starting Foil | Standard | Advanced | Engineering |
| Class 3 | 1/2 Oz | Drilled + .013 | Drilled + .012 | Drilled + .011 |
| | 1 Oz | Drilled + .014 | Drilled + .013 | Drilled + .012 |
| | 2 Oz | Drilled + .015 | Drilled + .014 | Drilled + .013 |
| Class 2 | 1/2 Oz | Drilled + .010 | Drilled + .009 | Drilled + .008 |
| | 1 Oz | Drilled + .011 | Drilled + .010 | Drilled + .009 |
| | 2 Oz | Drilled + .012 | Drilled + .011 | Drilled + .010 |
| Class 1 | 1/2 Oz | Drilled + .010 | Drilled + .007 | Drilled + .006 |
| | 1 Oz | Drilled + .011 | Drilled + .008 | Drilled + .007 |
| | 2 Oz | Drilled + .012 | Drilled + .009 | Drilled + .008 |
| Note: Drilled size is .005 over the finished size for .001 plating in the hole, and .007 over finished for .0015 plating in the hole. | | | | |

| Wrap Plating Conductor Calculations | | | |
|--|-------------|-------------|-------------|
| | Class 2 | Class 3 | Class 2 |
| | Wrap X 1 | Wrap X 1 | Wrap X 2 |
| 1/8 oz | .0032/.0032 | .0036/.0036 | .0039/.0039 |
| 1/4 oz | .0035/.0035 | .0039/.0039 | .0042/.0042 |
| 1/2 oz | .0041/.0041 | .0045/.0045 | .0048/.0048 |
| 1 oz | .0054/.0054 | .0058/.0058 | .0062/.0062 |
| 2 oz | .0079/.0079 | .0083/.0083 | .0087/.0087 |
| Class 2 Wrap Plating is .00036 Thick to allow for Planerization. | | | |
| Class 3 Wrap Plating is .0006 Thick to allow for Planerization. | | | |