



ENGINEERED TECHNOLOGIES

## EpecDFx™ - Perfecting the DFM Process


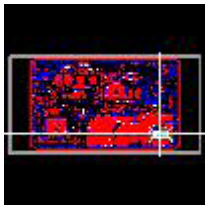
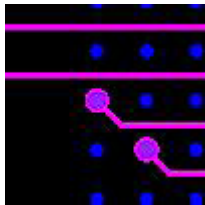
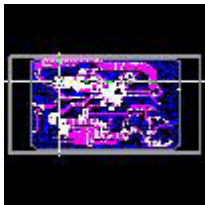

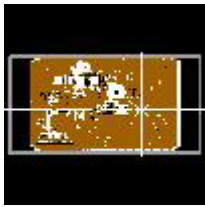
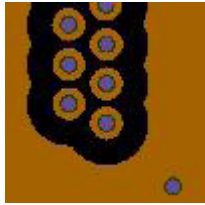
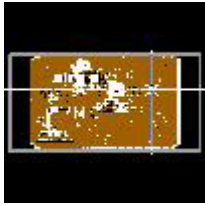
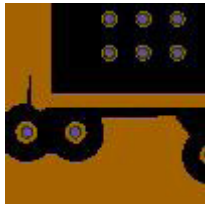
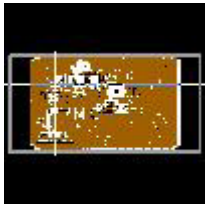
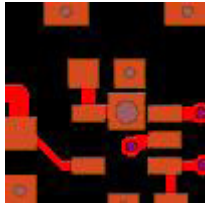

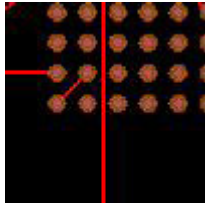
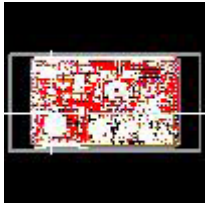
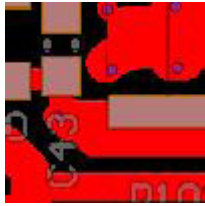
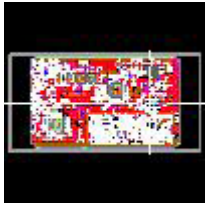
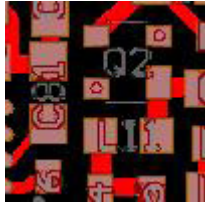

### FREE DFM - File Check Results

Customer Name: \_\_\_\_\_

Date Submitted: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Type	Layer	Image	Bird's Eye	X-Location	Y-location	Comment
Copper circuit width: 0.004330	1a SIG			-5.114325	1.516120	Trace ends at pad edge, not on pad center
Annular ring: 0.003000	1a SIG			-5.120790	1.376180	409 locations - breakout may be present on finished boards
Pad to pad spacing: 0.002700	1a SIG			-1.058300	0.665650	Areas may connect on finished product
Pad to trace spacing: 0.004000	1a SIG			-5.124290	1.376180	89 Locations less than .0045 spacing
Geometry to board edge: 0.000000	1a SIG			0.000000	2.280000	Exposed copper at board edge may burr on finished product
Geometry to board edge: 0.000000	1a SIG			-0.002500	0.075000	Copper to routed edge will have burrs

Type	Layer	Image	Bird's Eye	X-Location	Y-location	Comment
Thermal annular ring: 0.000000	2a GND			-0.769600	0.542700	3 Locations vias encroach by copper
Annular ring: 0.003500	5a SIG			-4.826045	2.909837	All locations pad to circuit should have tear drops added on internal layers
Pad to pad spacing: 0.001170	12a SIG			-1.523415	1.587100	Areas will connect on final product
Pad to pad spacing: 0.002900	12a SIG			-1.105150	2.469550	10 Locations less than .004 spacing
Self spacing: 0.002189	12a SIG			-5.095905	2.681045	Area of concern, is this correct?
Minimum sliver: 0.001555	1m SM			-1.189777	0.095465	Many locations less than .004 mask spacing needed to hold web
Trace overhang: 0.002000	1m SM			-5.125290	1.376180	Many locations mask may expose traces on finished product
Silkscreen width violation: 0.001000	1s SS			-1.144000	1.779000	Silk needs to be .006 to reproduce
Silkscreen width violation: 0.002360	1s SS			-1.495670	0.745630	Illegible silk screen where silk in on copper features- clipping will be needed