Hi-Q Electronics Pvt.Ltd.

Quality PCB's for tommorrow's technology

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Certificate of Conformance number:	26957	Date:	21-Apr-14

Customer name	MINDTECK
Customer P.O. #	MT/Po/BLR/2014-15/640/15-4-2014
PCB Part number	17-600541-100 REV A IOP-AI1 CARD
Applicable Standard	IPC-600-Class 2
Invoice reference #	0111/2014-2015

1)	Manufacturing Date Code		WK15 / YR2014		Quantity	12 No's	
1) a)	Layer Count :	8L					
2)	PTH Copper Hole Thickness (Microns)		Avg 20 microns, min 18 microns		IPC-600 Class 2	31-35 µ	
3)	PCB Thickness (Metal To Metal in mm)		Requirement	Tolerance +	Tolerance -	Actual Measured	
			1.530	0.077	0.070	1.540	
3) a)	MINIMUM LINE WIDTH		Requirement	Tolerance +	Tolerance -	Actual Measured	
			5.93	20.00%	20.00%	5.93 MIL	
3) b)	MINIMUM SPACING		Requirement	Tolerance +	Tolerance -	Actual Measured	
			5.99	20.00%	20.00%	5.99 MIL	
4)	SURFACE FINISH		TYPE	Thickness required	Reference	Thickness Actual	ROHS
			Immersion Ni/Au	NI - 3 To 6 µ	IPC 4552	4.461	Yes
				Au - 0.05 µ min		0.059	
5)	Material Requested		FR4 High Tg		Laminate used	EMC 827	
	Material Reference		-				
6)	TG Requested (DEG)		170 Deg C		TG used (degrees)	170 Deg C	
7)	SOLDER MASK TYPE		PISM BLACK		Reference	Black	
8)	SOLDER MASK ADHESION TEST		Tape test-Passed				
9)	SOLDERABILITY TEST		Passed				
10)	SOLDER MASK REQUIREMENT		complete coverage and no Cu exposure			YES	
11)	Legend Color		White, No Serial Number				
12)	ELECTRICAL /BBT TEST		Passed				
13)	UL LOGO PRINTING		YES				
14)	Warpage value		Tolerance +	Tolerance -	Actual Measured		
			0.75%	0.75%	OK		
15)	Impedance Measured with coupon using TDR		Tolerance +	Tolerance -	Actual Measured		
			10.00%	10.00%	Report enclosed		

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16)	Trace Copper thickness (microns)							
	Layer #	Customer requirement		Tolerance		Tol Ref	Actual Measured Finished	Ref #
		Base	Finish	Positve	Negative			
	L1	18 µ	50 µ	No value	0 µ	IPC-600 Class 2	56 µ	
	L2-L3	35 µ	35 µ	No value	24.9 µ	IPC-600 Class 2	35 µ	
	L4-L5	35 µ	35 µ	No value	24.9 µ	IPC-600 Class 2	35 µ	
	L6-L7	35 µ	35 µ	No value	24.9 µ	IPC-600 Class 2	35 µ	
	L8	18 µ	50 µ	No value	0 µ	IPC-600 Class 2	56 µ	

17)	Drill Diameter information							
Tool No.	Size in mm	No. of holes	PTH / NPTH	Tolerance +	Tolerance -	Tol Ref	Actual Measured	
1	0.2540	593	PTH	0.0800	0.0800	IPC-600 Class 2	-	
2	0.3048	1031	PTH	0.0800	0.0800	IPC-600 Class 2	-	
3	0.4064	14	PTH	0.0500	0.0500	IPC-600 Class 2	-	
4 *	0.5001	144	PTH	0.0800	0.0800	IPC-600 Class 2	0.520	
5	0.5080	5	PTH	0.0800	0.0800	IPC-600 Class 2	-	
6 *	0.7500	18	PTH	0.0800	0.0800	IPC-600 Class 2	0.760	
7	0.8001	2	PTH	0.0800	0.0800	IPC-600 Class 2	0.820	
8	0.8636	5	PTH	0.0800	0.0800	IPC-600 Class 2	0.870	
9	0.8999	8	PTH	0.0800	0.0800	IPC-600 Class 2	0.920	
10	1.0160	8	PTH	0.0800	0.0800	IPC-600 Class 2	1.020	
11	1.1176	18	PTH	0.0800	0.0800	IPC-600 Class 2	1.120	
12	2.0000	2	PTH	0.0800	0.0800	IPC-600 Class 2	2.070	
13	3.5560	4	PTH	0.0800	0.0800	IPC-600 Class 2	3.610	
14	4.0000	3	PTH	0.0800	0.0800	IPC-600 Class 2	4.060	
15	1.0200	4	NPTH	0.0500	0.0500	IPC-600 Class 2	1.020	
16	2.1000	2	NPTH	0.0500	0.0500	IPC-600 Class 2	2.110	
17	2.4384	1	NPTH	0.0500	0.0500	IPC-600 Class 2	2.460	

18)	DIMENSION WITH TOLERANCE (MM)	Required	Tolerance +	Tolerance -	Tolerance Ref	Measured
		161.82	0.20	0.20	IPC-600 Class 2	161.87
		127.00	0.20	0.20	IPC-600 Class 2	126.98

We confirm all PCB's shipped herewith are in conformance with all your specificatons , requirements , drawings , order and in conformance with IPC standards. **These boards are ROHS compliant boards.**

Certified by	
Signature