


## Product Change Notification

<b>PCN Date:</b>	Sep 30, 2019	
<b>Supplier Name:</b>	Pulse Electronics	
<b>Pulse PCN No.</b>	PCN-100000189 Rev. A	
<b>Description of Change</b>	Move the backend process including pin correction, testing, marking, coplanarity / dimension inspection and packaging from contract manufacturer into Pulse own factory located in Chang An, Dongguan (UPO). There's no change to product form, fit and function. Original location to be remained as backup.	
<b>Reason for Change</b>	Improve productivity and outgoing quality control	
<b>Summary of Changes between the new and old part</b>	<b>Present</b>	<b>New</b>
	Backend process at contract manufacturers	<ul style="list-style-type: none"> <li>- Backend process at Pulse own factory which locate at Chang An, Dongguan City, Guangdong, China.</li> <li>- Original location to be backup</li> </ul>
<b>Traceability guidelines</b>	By product date code, for example 1939-C.	
<b>Qualification Data attached? File name(s)</b>	<p>1.The Process Capability is stable. Refer to below CPK report.</p> <div style="text-align: center;">   H5120NL CPK report.pdf </div> <p>2.168 hours qualification report can be available in week 1941.</p>	
<b>Customer Part Number</b>	<b>Pulse Part Number</b>	<b>PCN Effectively Date</b>
	HX0068ANLT	Dec'2019
	HX0068ANL	Dec'2019
	HX5008NLT	Dec'2019
	HX5008NL	Dec'2019
	H5120NLT	Dec'2019
	H5120NL	Dec'2019
	HX5008FNLT	Dec'2019
	HX5008FNL	Dec'2019
	H5008FNLT	Dec'2019
	H5008FNL	Dec'2019
	HX6062FNLT	Dec'2019
	HX6062FNL	Dec'2019
	HX1330CNLT	Dec'2019
	HX1330CNL	Dec'2019
	HX5120NLT	Dec'2019
	HX5120NL	Dec'2019
	HX1260NLT	Dec'2019
	HX1260NL	Dec'2019

	HX5020NLT	Dec'2019
	HX5020NL	Dec'2019
	HX6117FNLT	Dec'2019
	HX6117FNL	Dec'2019
	HX6096FNLT	Dec'2019
	HX6096FNL	Dec'2019

**Customer: Generic**

**Originator: Levene Xu**

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**H5120NL Cpk Data**

SAMPLE SIZE: 50PCS  
DATE: 9/18/2019

TEST ITEM:	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR	DCR
PIN NO/ FRE.:	(3),(1)	(2),(3)	(4),(5)	(4),(6)	(8),(9)	(7),(9)	(10),(11)	(10),(12)	(15),(13)	(15),(14)	(16),(17)	(16),(18)	(21),(20)	(19),(21)	(23),(22)
UNIT:	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS	OHMS
MAX SPEC.:	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
MIN SPEC.:															
AVERAGE =	0.438	0.429	0.410	0.483	0.394	0.390	0.777	0.455	0.610	0.612	0.563	0.587	0.608	0.613	0.653
STD DEV =	0.047	0.014	0.028	0.143	0.048	0.034	0.123	0.052	0.062	0.041	0.031	0.063	0.047	0.051	0.033
MAX =	0.628	0.464	0.480	0.982	0.559	0.523	1.060	0.608	0.853	0.790	0.694	0.876	0.760	0.771	0.757
MIN =	0.384	0.403	0.369	0.385	0.366	0.345	0.510	0.377	0.552	0.552	0.511	0.527	0.562	0.545	0.611
Cpk Upper limit	6.11	21.03	10.71	1.91	6.35	8.85	1.42	5.45	3.74	5.55	7.96	3.76	4.93	4.52	6.54
Cpk Lower limit															

1	0.387	0.425	0.401	0.391	0.379	0.356	0.958	0.380	0.561	0.558	0.577	0.561	0.568	0.630	0.638
2	0.470	0.422	0.443	0.445	0.371	0.402	0.774	0.443	0.622	0.649	0.533	0.563	0.636	0.573	0.633
3	0.428	0.418	0.389	0.407	0.380	0.407	0.989	0.495	0.570	0.558	0.585	0.560	0.608	0.583	0.632
4	0.436	0.440	0.397	0.440	0.366	0.385	0.788	0.377	0.591	0.583	0.570	0.560	0.626	0.572	0.638
5	0.485	0.420	0.423	0.407	0.411	0.392	0.681	0.543	0.636	0.616	0.555	0.598	0.580	0.621	0.633
6	0.384	0.416	0.405	0.486	0.388	0.401	0.641	0.515	0.643	0.683	0.541	0.584	0.624	0.579	0.627
7	0.480	0.414	0.430	0.385	0.396	0.377	0.876	0.555	0.611	0.593	0.550	0.599	0.581	0.610	0.659
8	0.422	0.430	0.435	0.496	0.379	0.392	0.685	0.471	0.631	0.577	0.609	0.585	0.625	0.593	0.672
9	0.407	0.424	0.445	0.447	0.367	0.362	0.815	0.503	0.670	0.620	0.538	0.598	0.569	0.605	0.694
10	0.424	0.454	0.380	0.428	0.402	0.372	0.732	0.394	0.627	0.635	0.584	0.547	0.621	0.603	0.688
11	0.415	0.442	0.395	0.468	0.385	0.404	0.736	0.437	0.589	0.566	0.588	0.578	0.600	0.594	0.634
12	0.429	0.433	0.397	0.415	0.376	0.395	0.756	0.448	0.598	0.790	0.575	0.557	0.600	0.592	0.645
13	0.422	0.434	0.387	0.901	0.545	0.523	0.824	0.395	0.613	0.620	0.580	0.545	0.603	0.596	0.655
14	0.403	0.421	0.375	0.455	0.367	0.386	0.834	0.473	0.589	0.590	0.585	0.569	0.731	0.603	0.654
15	0.399	0.441	0.371	0.418	0.384	0.395	0.737	0.425	0.558	0.652	0.566	0.538	0.623	0.606	0.655
16	0.628	0.421	0.385	0.392	0.381	0.405	0.683	0.451	0.581	0.580	0.605	0.585	0.595	0.590	0.614
17	0.435	0.423	0.412	0.392	0.371	0.384	0.794	0.415	0.611	0.641	0.530	0.612	0.567	0.610	0.678
18	0.453	0.434	0.421	0.413	0.380	0.366	0.707	0.460	0.552	0.595	0.552	0.595	0.577	0.623	0.645
19	0.407	0.445	0.422	0.443	0.391	0.389	0.798	0.402	0.749	0.623	0.518	0.592	0.585	0.619	0.636
20	0.418	0.429	0.373	0.495	0.373	0.389	0.800	0.500	0.564	0.605	0.555	0.527	0.598	0.573	0.647
21	0.423	0.442	0.369	0.417	0.377	0.397	0.678	0.608	0.661	0.594	0.588	0.562	0.603	0.593	0.634
22	0.433	0.440	0.417	0.545	0.379	0.405	0.725	0.441	0.617	0.581	0.565	0.568	0.587	0.577	0.670
23	0.426	0.438	0.441	0.481	0.378	0.430	0.878	0.432	0.633	0.698	0.537	0.610	0.685	0.587	0.633
24	0.464	0.437	0.400	0.577	0.377	0.362	0.629	0.448	0.560	0.623	0.525	0.561	0.571	0.646	0.654
25	0.411	0.429	0.428	0.434	0.382	0.345	0.834	0.508	0.584	0.580	0.566	0.560	0.562	0.621	0.643
26	0.421	0.413	0.454	0.418	0.377	0.361	0.773	0.455	0.568	0.637	0.553	0.594	0.590	0.616	0.757
27	0.453	0.450	0.397	0.429	0.383	0.428	0.848	0.481	0.616	0.615	0.523	0.565	0.598	0.545	0.618
28	0.446	0.423	0.425	0.399	0.382	0.357	0.764	0.415	0.617	0.572	0.535	0.876	0.760	0.771	0.639
29	0.437	0.416	0.428	0.982	0.559	0.405	1.018	0.566	0.766	0.603	0.543	0.600	0.588	0.628	0.650
30	0.480	0.412	0.408	0.553	0.375	0.354	1.060	0.410	0.561	0.619	0.562	0.590	0.583	0.626	0.649
31	0.404	0.424	0.390	0.436	0.371	0.377	0.790	0.462	0.556	0.584	0.600	0.628	0.621	0.766	0.737
32	0.476	0.460	0.480	0.452	0.394	0.389	0.727	0.437	0.570	0.618	0.544	0.578	0.571	0.613	0.665
33	0.436	0.425	0.410	0.421	0.368	0.361	0.630	0.410	0.558	0.634	0.694	0.568	0.585	0.609	0.664
34	0.436	0.414	0.375	0.428	0.377	0.401	0.520	0.455	0.605	0.594	0.543	0.538	0.595	0.569	0.627
35	0.441	0.464	0.444	0.442	0.389	0.377	0.510	0.409	0.608	0.587	0.511	0.572	0.562	0.582	0.636
36	0.420	0.421	0.388	0.398	0.375	0.359	0.638	0.395	0.553	0.552	0.558	0.547	0.570	0.615	0.640
37	0.386	0.427	0.435	0.493	0.371	0.387	0.813	0.389	0.693	0.597	0.558	0.558	0.617	0.554	0.623
38	0.385	0.403	0.386	0.432	0.375	0.385	0.517	0.462	0.853	0.692	0.588	0.577	0.598	0.588	0.611
39	0.411	0.429	0.428	0.434	0.382	0.345	0.834	0.508	0.584	0.580	0.566	0.560	0.562	0.621	0.643
40	0.421	0.413	0.454	0.418	0.377	0.361	0.773	0.455	0.568	0.637	0.553	0.594	0.590	0.616	0.757
41	0.453	0.450	0.397	0.429	0.383	0.428	0.848	0.481	0.616	0.615	0.523	0.565	0.598	0.545	0.618
42	0.446	0.423	0.425	0.399	0.382	0.357	0.764	0.415	0.617	0.572	0.535	0.876	0.760	0.771	0.639
43	0.437	0.416	0.428	0.982	0.559	0.405	1.018	0.566	0.766	0.603	0.543	0.600	0.588	0.628	0.650
44	0.480	0.412	0.408	0.553	0.375	0.354	1.060	0.410	0.561	0.619	0.562	0.590	0.583	0.626	0.649
45	0.404	0.424	0.390	0.436	0.371	0.377	0.790	0.462	0.556	0.584	0.600	0.628	0.621	0.766	0.737
46	0.476	0.460	0.480	0.452	0.394	0.389	0.727	0.437	0.570	0.618	0.544	0.578	0.571	0.613	0.665
47	0.422	0.434	0.387	0.901	0.545	0.523	0.824	0.395	0.613	0.620	0.580	0.545	0.603	0.596	0.655
48	0.403	0.421	0.375	0.455	0.367	0.386	0.834	0.473	0.589	0.590	0.585	0.569	0.731	0.603	0.654
49	0.399	0.441	0.371	0.418	0.384	0.395	0.737	0.425	0.558	0.652	0.566	0.538	0.623	0.606	0.655
50	0.628	0.421	0.385	0.392	0.381	0.405	0.683	0.451	0.581	0.580	0.605	0.585	0.595	0.590	0.614

**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:	DCR	OCL	OCL	OCL	OCL	OCL	OCL	OCL	OCL	OCL	OCL	OCL	OCL	OCL
PIN NO/ FRE.:	(22),(24)	(13),(14)	(17),(18)	(19),(20)	(23),(24),(1)	(1),(3)	(2),(3)	(4),(5)	(4),(6)	(9),(7)	(9),(8)	(10),(11)	(10),(12)	
UNIT:	OHMS	uH	uH	uH	uH	uH	uH	uH	uH	uH	uH	uH	uH	
MAX SPEC.:	1.3													
MIN SPEC.:		360	360	360	360	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
AVERAGE =	0.604	450.736	452.770	453.595	445.743	143.153	143.016	145.535	145.533	144.523	144.536	142.853	142.920	
STD DEV =	0.052	10.797	7.930	8.865	12.964	6.108	6.101	3.617	3.612	3.322	3.324	4.714	4.717	
MAX =	0.904	478.541	472.622	475.148	464.933	153.304	153.136	151.844	151.827	149.638	149.640	155.944	156.013	
MIN =	0.550	415.833	432.216	436.827	413.311	128.292	128.169	139.264	139.244	136.899	136.888	129.198	129.249	
Cpk Upper limit	4.49													
Cpk Lower limit		2.80	3.90	3.52	2.20	2.35	2.35	4.20	4.20	4.47	4.47	3.03	3.03	

1	0.610	415.833	462.753	447.577	436.565	147.500	147.367	145.296	145.289	148.305	148.314	129.198	129.249
2	0.562	451.779	463.317	449.831	435.094	138.282	138.180	145.500	145.497	149.557	149.572	144.510	144.555
3	0.603	437.594	453.020	464.261	446.385	140.923	140.799	150.846	150.846	143.090	143.096	137.926	138.004
4	0.595	462.172	442.584	452.479	456.084	148.405	148.279	145.971	145.956	143.867	143.902	150.230	150.302
5	0.616	455.769	458.623	446.538	416.035	128.292	128.169	139.264	139.244	145.828	145.852	144.488	144.588
6	0.563	439.853	442.520	469.404	448.316	142.696	142.565	151.360	151.365	145.138	145.127	138.075	138.151
7	0.604	454.201	445.395	450.124	434.508	137.935	137.811	144.306	144.313	140.624	140.652	144.903	144.981
8	0.626	465.664	443.869	475.148	464.790	149.207	149.067	150.323	150.321	138.333	138.335	149.799	149.884
9	0.642	461.010	456.998	446.810	459.902	145.724	145.574	140.298	140.282	146.426	146.458	145.895	145.956
10	0.610	463.806	449.207	457.781	452.559	145.787	145.651	147.013	147.015	143.840	143.862	148.375	148.447
11	0.904	447.670	458.589	448.543	444.111	140.672	140.537	144.875	144.841	147.466	147.462	143.129	143.203
12	0.628	453.140	456.367	460.258	448.267	139.306	139.176	145.867	145.875	145.060	145.054	143.007	143.084
13	0.608	431.272	445.104	450.505	458.513	150.481	150.352	142.126	142.128	140.424	140.425	135.838	135.897
14	0.616	447.209	458.758	448.947	450.754	149.616	149.496	141.413	141.433	146.629	146.653	143.722	143.778
15	0.590	451.366	449.428	436.827	459.413	153.304	153.136	140.369	140.379	141.847	141.858	142.314	142.392
16	0.580	454.403	448.803	467.169	426.483	134.489	134.351	150.021	150.036	142.880	142.909	145.355	145.439
17	0.585	440.940	458.255	463.146	457.957	152.712	152.549	150.843	150.844	147.344	147.358	139.931	139.981
18	0.583	462.170	448.267	451.510	440.423	141.032	140.887	143.678	143.690	141.820	141.832	146.896	146.931
19	0.570	467.845	455.142	449.592	448.120	145.115	144.966	142.209	142.230	147.240	147.247	149.310	149.363
20	0.598	449.026	455.541	454.221	464.933	151.137	150.973	144.720	144.717	144.292	144.322	140.564	140.614
21	0.583	450.254	443.430	451.951	444.589	143.809	143.696	144.167	144.173	139.992	139.991	140.733	140.828
22	0.634	453.116	436.697	463.913	443.717	142.315	142.207	146.771	146.790	137.413	137.426	141.338	141.410
23	0.550	437.616	458.134	455.247	440.625	139.429	139.308	143.836	143.845	143.722	143.745	137.690	137.747
24	0.560	478.541	432.216	454.802	458.240	148.797	148.643	150.974	150.920	136.899	136.888	155.944	156.013
25	0.613	459.840	458.079	465.267	461.201	146.808	146.657	146.917	146.918	146.648	146.648	147.519	147.593
26	0.693	455.522	453.944	439.622	444.290	140.586	140.463	141.140	141.131	149.638	149.640	146.152	146.210
27	0.550	458.728	457.070	443.169	445.967	143.768	143.603	143.557	143.551	146.862	146.873	145.656	145.747
28	0.610	450.555	447.788	457.084	439.363	138.837	138.724	151.377	151.359	141.768	141.788	141.587	141.622
29	0.585	455.887	454.544	458.794	449.300	142.489	142.373	148.679	148.667	147.048	147.064	145.292	145.365
30	0.593	448.985	472.622	457.309	438.121	138.345	138.222	147.759	147.743	149.595	149.633	139.976	140.008
31	0.571	451.163	449.416	454.943	413.311	129.398	129.262	146.362	146.333	144.333	144.331	140.706	140.748
32	0.599	444.779	451.792	446.857	451.329	143.815	143.642	142.940	142.937	141.914	141.938	139.809	139.910
33	0.599	440.107	462.398	438.476	458.220	147.445	147.280	141.012	141.020	149.453	149.485	137.085	137.142
34	0.573	456.424	454.670	455.032	463.610	151.719	151.558	148.509	148.525	144.236	144.246	143.794	143.875
35	0.587	447.854	464.942	455.629	449.690	143.557	143.435	146.765	146.782	148.838	148.816	142.740	142.831
36	0.615	426.751	451.586	444.202	424.786	141.939	141.813	139.709	139.732	143.096	143.105	132.715	132.784
37	0.610	457.725	440.575	468.690	448.412	146.951	146.807	151.844	151.827	140.540	140.544	148.648	148.699
38	0.575	440.509	448.689	451.582	425.123	133.082	132.945	145.492	145.504	144.560	144.569	137.858	137.940
39	0.613	459.840	458.079	465.267	461.201	146.808	146.657	146.917	146.918	146.648	146.648	147.519	147.593
40	0.693	455.522	453.944	439.622	444.290	140.586	140.463	141.140	141.131	149.638	149.640	146.152	146.210
41	0.550	458.728	457.070	443.169	445.967	143.768	143.603	143.557	143.551	146.862	146.873	145.656	145.747
42	0.610	450.555	447.788	457.084	439.363	138.837	138.724	151.377	151.359	141.768	141.788	141.587	141.622
43	0.585	455.887	454.544	458.794	449.300	142.489	142.373	148.679	148.667	147.048	147.064	145.292	145.365
44	0.593	448.985	472.622	457.309	438.121	138.345	138.222	147.759	147.743	149.595	149.633	139.976	140.008
45	0.571	451.163	449.416	454.943	413.311	129.398	129.262	146.362	146.333	144.333	144.331	140.706	140.748
46	0.599	444.779	451.792	446.857	451.329	143.815	143.642	142.940	142.937	141.914	141.938	139.809	139.910
47	0.608	431.272	445.104	450.505	458.513	150.481	150.352	142.126	142.128	140.424	140.425	135.838	135.897
48	0.616	447.209	458.758	448.947	450.754	149.616	149.496	141.413	141.433	146.629	146.653	143.722	143.778
49	0.590	451.366	449.428	436.827	459.413	153.304	153.136	140.369	140.379	141.847	141.858	142.314	142.392
50	0.580	454.403	448.803	467.169	426.483	134.489	134.351	150.021	150.036	142.880	142.909	145.355	145.439

**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:	OCL	OCL	OCL	OCL	OCL	OCL	OCL	OCL	LL	LL	LL	LL
PIN NO/ FRE.:	(13),(15)	(14),(15)	(16),(18)	(16),(17)	(21),(19)	(21),(20)	(22),(23)	(22),(24)	4),(23),(1,2,;0)	(19),(4,5,8)	(17),(7,8)	(13),(10,11)
UNIT:	uH	uH	uH	uH	uH	uH	uH	uH	uH	uH	uH	uH
MAX SPEC:									300	300	300	300
MIN SPEC.:	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0				
AVERAGE =	163.919	163.924	165.440	165.531	166.391	166.461	163.861	163.973	149.829	171.812	168.853	260.404
STD DEV =	4.633	4.615	3.327	3.333	3.646	3.642	6.305	6.314	18.458	15.797	16.731	7.978
MAX =	176.775	176.792	170.949	171.009	173.174	173.265	173.987	174.090	193.085	208.067	195.965	293.679
MIN =	150.394	150.612	157.974	158.042	160.335	160.421	146.322	146.373	114.740	144.695	130.585	250.264
Cpk Upper limit									2.71	2.70	2.61	1.65
Cpk Lower limit	4.60	4.62	6.56	6.55	6.07	6.08	3.38	3.38				

1	150.394	150.612	168.998	169.105	165.524	165.622	168.068	168.166	173.978	156.998	155.683	263.435
2	165.685	165.726	169.845	169.973	165.631	165.715	158.062	158.198	187.831	187.745	195.965	252.972
3	159.096	159.133	164.115	164.238	171.076	171.138	161.992	162.112	139.989	170.748	186.309	264.425
4	171.015	171.040	165.233	165.391	166.881	166.957	168.582	168.680	114.740	144.695	181.009	260.045
5	165.477	165.523	163.965	164.046	160.411	160.468	146.322	146.373	144.259	146.434	144.449	267.689
6	158.409	158.418	165.804	165.914	171.681	171.745	162.743	162.889	145.301	185.173	181.230	262.265
7	166.023	166.010	161.897	162.004	165.528	165.608	158.690	158.836	171.909	165.280	168.337	256.739
8	170.770	170.744	159.114	159.194	171.098	171.176	170.933	171.049	125.301	150.704	177.937	267.584
9	167.988	167.998	164.813	164.870	161.224	161.309	166.803	166.950	115.582	174.450	179.365	258.554
10	169.811	169.783	164.243	164.364	167.499	167.562	166.795	166.933	144.362	176.331	174.893	275.845
11	164.143	164.181	167.788	167.891	165.943	166.029	161.510	161.609	133.565	187.828	178.717	293.679
12	164.152	164.167	166.519	166.608	167.143	167.217	160.177	160.323	130.385	159.864	140.857	295.265
13	157.637	157.598	161.329	161.417	162.936	163.025	171.529	171.634	164.016	186.898	158.060	252.386
14	164.857	164.837	167.679	167.775	162.557	162.667	170.460	170.544	149.339	176.067	189.973	250.932
15	163.737	163.722	162.796	162.857	161.318	161.409	173.987	174.090	140.384	147.639	158.266	259.686
16	166.867	166.878	164.403	164.499	171.280	171.330	155.329	155.437	163.960	172.325	184.520	262.346
17	161.739	161.760	169.094	169.232	172.167	172.275	172.776	172.889	165.575	169.242	144.479	258.470
18	167.444	167.437	163.646	163.735	164.524	164.598	162.465	162.594	132.947	159.616	168.134	276.257
19	170.923	170.871	168.972	169.074	162.739	162.783	166.161	166.325	142.445	186.017	156.519	262.426
20	160.949	160.913	164.526	164.622	165.216	165.298	172.072	172.153	193.085	184.064	180.457	267.934
21	161.724	161.742	160.760	160.848	164.930	164.986	165.284	165.407	154.265	173.713	185.704	252.006
22	162.549	162.524	158.988	159.059	167.557	167.664	163.413	163.562	160.027	164.412	148.890	256.603
23	159.170	159.162	164.353	164.484	164.984	165.056	160.753	160.868	139.073	171.813	155.786	255.657
24	176.775	176.792	157.974	158.042	171.981	172.048	170.379	170.495	167.781	201.875	173.817	260.256
25	167.142	167.139	168.461	168.567	168.469	168.527	167.347	167.461	153.524	145.678	154.369	253.379
26	167.447	167.440	170.491	170.585	161.362	161.440	161.049	161.186	124.814	159.305	186.886	255.097
27	166.525	166.530	166.243	166.303	163.841	163.883	163.253	163.367	154.398	163.800	187.074	260.798
28	162.616	162.597	162.103	162.178	172.316	172.383	159.243	159.370	151.470	185.755	182.752	254.262
29	165.553	165.538	168.503	168.600	169.498	169.557	163.279	163.398	150.952	192.157	161.442	255.640
30	161.001	160.998	170.777	170.857	167.913	167.960	159.564	159.724	172.096	169.839	139.801	268.265
31	161.385	161.393	165.066	165.135	168.111	168.134	150.213	150.180	117.192	208.067	170.007	255.847
32	160.574	160.588	163.365	163.457	164.426	164.477	165.308	165.401	174.483	170.184	177.226	268.254
33	158.264	158.250	170.949	171.009	162.078	162.148	167.732	167.839	142.655	148.411	194.034	262.923
34	164.466	164.428	166.001	166.105	166.746	166.779	172.102	172.177	131.657	171.976	145.898	257.699
35	164.795	164.844	170.144	170.242	167.976	168.051	164.179	164.308	134.740	181.169	178.470	250.566
36	153.852	153.984	164.153	164.222	160.335	160.421	163.443	163.544	166.210	165.682	149.286	257.457
37	170.013	170.013	161.720	161.792	173.174	173.265	167.916	168.078	141.667	171.254	165.109	250.264
38	159.617	159.638	165.971	166.045	167.460	167.561	152.587	152.706	158.876	179.670	130.585	269.425
39	167.142	167.139	168.461	168.567	168.469	168.527	167.347	167.461	153.524	145.678	154.369	253.379
40	167.447	167.440	170.491	170.585	161.362	161.440	161.049	161.186	124.814	159.305	186.886	255.097
41	166.525	166.530	166.243	166.303	163.841	163.883	163.253	163.367	154.398	163.800	187.074	260.798
42	162.616	162.597	162.103	162.178	172.316	172.383	159.243	159.370	151.470	185.755	182.752	254.262
43	165.553	165.538	168.503	168.600	169.498	169.557	163.279	163.398	150.952	192.157	161.442	255.640
44	161.001	160.998	170.777	170.857	167.913	167.960	159.564	159.724	172.096	169.839	139.801	268.265
45	161.385	161.393	165.066	165.135	168.111	168.134	150.213	150.180	117.192	208.067	170.007	255.847
46	160.574	160.588	163.365	163.457	164.426	164.477	165.308	165.401	174.483	170.184	177.226	268.254
47	157.637	157.598	161.329	161.417	162.936	163.025	171.529	171.634	164.016	186.898	158.060	252.386
48	164.857	164.837	167.679	167.775	162.557	162.667	170.460	170.544	149.339	176.067	189.973	250.932
49	163.737	163.722	162.796	162.857	161.318	161.409	173.987	174.090	140.384	147.639	158.266	259.686
50	166.867	166.878	164.403	164.499	171.280	171.330	155.329	155.437	163.960	172.325	184.520	262.346

**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:

PIN NO/ FRE.:

UNIT:

MAX SPEC:

MIN SPEC.:

AVERAGE =

STD DEV =

MAX =

MIN =

Cpk Upper limit

Cpk Lower limit

CH1 IL	CH1 IL	CH1 IL	CH1 IL	CH1 IL	CH2 IL	CH2 IL	CH2 IL	CH2 IL	CH2 IL	CH2 IL	CH3 IL	CH3 IL	CH3 IL
1.000 M	30.000 M	60.000 M	100.000 M	125.000 M	1.000 M	30.000 M	60.000 M	100.000 M	125.000 M	1.000 M	30.000 M	60.000 M	
dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
-1	-1	-1	-1	-2	-1	-1	-1	-1	-2	-1	-1	-1	
0	0	0	0	0	0	0	0	0	0	0	0	0	0
-0.144	-0.229	-0.311	-0.853	-1.220	-0.146	-0.201	-0.283	-0.856	-0.985	-0.146	-0.209	-0.299	
0.009	0.014	0.022	0.029	0.193	0.008	0.013	0.023	0.032	0.184	0.008	0.015	0.025	
-0.130	-0.190	-0.269	-0.802	-0.817	-0.130	-0.169	-0.237	-0.803	-0.617	-0.128	-0.175	-0.247	
-0.172	-0.257	-0.369	-0.898	-1.596	-0.173	-0.237	-0.332	-0.899	-1.361	-0.168	-0.234	-0.341	
33.37	17.89	10.52	1.71	1.35	33.76	20.09	10.39	1.52	1.84	36.42	17.82	9.17	
5.60	5.31	4.75	9.92	2.11	5.76	5.04	4.09	9.03	1.79	6.24	4.70	3.91	

1	-0.138	-0.232	-0.304	-0.853	-1.014	-0.143	-0.201	-0.305	-0.898	-1.232	-0.139	-0.224	-0.312
2	-0.148	-0.236	-0.306	-0.897	-1.094	-0.152	-0.222	-0.31	-0.831	-0.941	-0.15	-0.226	-0.329
3	-0.146	-0.257	-0.369	-0.894	-1.588	-0.134	-0.224	-0.31	-0.855	-0.983	-0.145	-0.229	-0.333
4	-0.13	-0.23	-0.312	-0.869	-1.212	-0.14	-0.214	-0.312	-0.898	-1.245	-0.137	-0.222	-0.316
5	-0.136	-0.247	-0.343	-0.819	-1.455	-0.143	-0.213	-0.294	-0.823	-0.922	-0.132	-0.222	-0.313
6	-0.134	-0.242	-0.322	-0.832	-1.143	-0.145	-0.222	-0.312	-0.899	-1.214	-0.143	-0.217	-0.317
7	-0.139	-0.242	-0.323	-0.897	-1.254	-0.144	-0.185	-0.245	-0.887	-0.716	-0.143	-0.186	-0.251
8	-0.13	-0.211	-0.281	-0.851	-1.04	-0.147	-0.193	-0.267	-0.828	-0.951	-0.128	-0.199	-0.277
9	-0.14	-0.247	-0.329	-0.89	-1.073	-0.135	-0.197	-0.265	-0.816	-0.746	-0.145	-0.226	-0.32
10	-0.143	-0.234	-0.317	-0.815	-1.306	-0.135	-0.208	-0.303	-0.848	-1.144	-0.142	-0.221	-0.338
11	-0.136	-0.238	-0.333	-0.898	-1.439	-0.145	-0.201	-0.297	-0.875	-1.209	-0.141	-0.197	-0.284
12	-0.133	-0.214	-0.281	-0.852	-0.837	-0.143	-0.204	-0.292	-0.852	-0.964	-0.15	-0.208	-0.295
13	-0.141	-0.24	-0.329	-0.873	-1.224	-0.141	-0.191	-0.277	-0.888	-1.043	-0.16	-0.232	-0.341
14	-0.14	-0.231	-0.311	-0.831	-1.153	-0.146	-0.205	-0.279	-0.83	-0.943	-0.138	-0.208	-0.31
15	-0.137	-0.233	-0.31	-0.892	-1.089	-0.144	-0.187	-0.258	-0.883	-0.896	-0.141	-0.208	-0.297
16	-0.138	-0.206	-0.276	-0.817	-0.97	-0.137	-0.204	-0.307	-0.867	-1.171	-0.141	-0.201	-0.291
17	-0.132	-0.229	-0.307	-0.877	-1.214	-0.151	-0.202	-0.264	-0.844	-0.617	-0.14	-0.199	-0.285
18	-0.131	-0.227	-0.312	-0.828	-1.319	-0.148	-0.207	-0.303	-0.894	-1.042	-0.141	-0.2	-0.273
19	-0.145	-0.244	-0.324	-0.802	-1.257	-0.14	-0.208	-0.295	-0.813	-0.899	-0.136	-0.213	-0.294
20	-0.139	-0.223	-0.293	-0.843	-0.817	-0.14	-0.213	-0.29	-0.825	-0.927	-0.142	-0.208	-0.303
21	-0.146	-0.243	-0.335	-0.808	-1.269	-0.137	-0.196	-0.263	-0.884	-0.867	-0.149	-0.214	-0.307
22	-0.154	-0.21	-0.276	-0.866	-0.868	-0.147	-0.203	-0.28	-0.81	-0.932	-0.15	-0.186	-0.256
23	-0.145	-0.235	-0.314	-0.882	-1.235	-0.154	-0.203	-0.272	-0.897	-0.886	-0.138	-0.217	-0.301
24	-0.14	-0.221	-0.306	-0.804	-1.286	-0.144	-0.206	-0.285	-0.863	-0.83	-0.15	-0.234	-0.33
25	-0.151	-0.245	-0.319	-0.829	-1.15	-0.161	-0.237	-0.323	-0.872	-1.156	-0.166	-0.209	-0.292
26	-0.156	-0.249	-0.329	-0.839	-1.149	-0.162	-0.208	-0.308	-0.844	-1.273	-0.155	-0.22	-0.313
27	-0.149	-0.248	-0.325	-0.83	-1.159	-0.143	-0.196	-0.29	-0.833	-1.14	-0.151	-0.218	-0.304
28	-0.172	-0.247	-0.337	-0.818	-1.443	-0.167	-0.226	-0.325	-0.892	-1.361	-0.168	-0.195	-0.255
29	-0.142	-0.232	-0.317	-0.855	-1.202	-0.152	-0.219	-0.332	-0.859	-1.285	-0.147	-0.22	-0.313
30	-0.15	-0.245	-0.337	-0.844	-1.308	-0.146	-0.196	-0.263	-0.894	-0.851	-0.153	-0.2	-0.276
31	-0.147	-0.235	-0.325	-0.821	-1.283	-0.137	-0.196	-0.273	-0.893	-0.87	-0.161	-0.227	-0.321
32	-0.137	-0.248	-0.352	-0.895	-1.581	-0.13	-0.211	-0.294	-0.816	-1.068	-0.142	-0.223	-0.328
33	-0.162	-0.216	-0.281	-0.811	-1.14	-0.173	-0.204	-0.265	-0.803	-0.721	-0.159	-0.229	-0.33
34	-0.157	-0.215	-0.289	-0.883	-1.263	-0.153	-0.196	-0.257	-0.878	-1.017	-0.151	-0.224	-0.337
35	-0.153	-0.226	-0.312	-0.872	-1.397	-0.152	-0.206	-0.303	-0.878	-1.35	-0.152	-0.212	-0.309
36	-0.14	-0.233	-0.343	-0.876	-1.596	-0.142	-0.195	-0.27	-0.897	-0.878	-0.144	-0.175	-0.251
37	-0.14	-0.212	-0.302	-0.841	-1.353	-0.14	-0.169	-0.237	-0.835	-0.809	-0.145	-0.177	-0.254
38	-0.149	-0.223	-0.308	-0.891	-1.268	-0.148	-0.188	-0.27	-0.87	-1.039	-0.147	-0.192	-0.277
39	-0.145	-0.217	-0.319	-0.884	-1.59	-0.138	-0.192	-0.266	-0.898	-0.894	-0.139	-0.19	-0.272
40	-0.138	-0.19	-0.269	-0.841	-1.216	-0.157	-0.175	-0.244	-0.895	-0.736	-0.146	-0.196	-0.298
41	-0.149	-0.223	-0.292	-0.843	-0.823	-0.142	-0.182	-0.246	-0.822	-0.779	-0.148	-0.199	-0.301
42	-0.14	-0.207	-0.283	-0.849	-1.023	-0.138	-0.192	-0.287	-0.818	-1.069	-0.14	-0.21	-0.296
43	-0.148	-0.228	-0.316	-0.844	-1.319	-0.154	-0.201	-0.277	-0.807	-0.9	-0.15	-0.212	-0.311
44	-0.153	-0.216	-0.28	-0.844	-1.007	-0.143	-0.196	-0.281	-0.828	-0.939	-0.144	-0.189	-0.264
45	-0.142	-0.225	-0.308	-0.858	-1.371	-0.146	-0.194	-0.289	-0.848	-1.112	-0.14	-0.209	-0.312
46	-0.143	-0.221	-0.301	-0.869	-1.237	-0.14	-0.183	-0.26	-0.89	-0.887	-0.148	-0.209	-0.311
47	-0.139	-0.233	-0.326	-0.889	-1.422	-0.142	-0.184	-0.255	-0.833	-0.782	-0.148	-0.193	-0.269
48	-0.136	-0.199	-0.278	-0.872	-1.198	-0.14	-0.181	-0.245	-0.812	-0.742	-0.151	-0.218	-0.332
49	-0.153	-0.219	-0.282	-0.81	-0.955	-0.156	-0.203	-0.282	-0.813	-0.911	-0.147	-0.181	-0.247
50	-0.157	-0.22	-0.311	-0.863	-1.4	-0.149	-0.196	-0.302	-0.867	-1.347	-0.151	-0.213	-0.299

**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:	CH3 IL	CH3 IL	CH4 IL	CH4 IL	CH4 IL	CH4 IL	CH4 IL	CH4 IL	CH1 CT1	CH1 CT1	CH1 CT1	CH1 CT1	CH1 CT2	CH1 CT2	CH1 CT2
PIN NO/ FRE.:	100.000 M	125.000 M	1.000 M	30.000 M	60.000 M	100.000 M	125.000 M	1.000 M	32.000 M	62.000 M	100.000 M	1.000 M	32.000 M	62.000 M	
UNIT:	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
MAX SPEC:	-1	-2	-1	-1	-1	-1	-2	-100	-100	-100	-100	-100	-100	-100	-100
MIN SPEC:	0	0	0	0	0	0	0	-50	-45	-40	-36	-50	-45	-40	-40
AVERAGE =	-0.775	-1.089	-0.154	-0.243	-0.334	-0.772	-0.915	-77.084	-62.733	-64.764	-62.278	-75.362	-65.908	-55.980	
STD DEV =	0.053	0.166	0.025	0.033	0.045	0.056	0.181	5.298	4.316	3.894	5.800	5.335	3.210	3.208	
MAX =	-0.704	-0.754	-0.131	-0.199	-0.267	-0.660	-0.470	-67.674	-52.049	-50.829	-50.026	-67.309	-60.009	-50.340	
MIN =	-0.884	-1.394	-0.236	-0.351	-0.480	-0.923	-1.244	-93.686	-66.995	-71.496	-69.985	-90.674	-73.345	-65.190	
Cpk Upper limit	1.41	1.83	11.35	7.54	4.95	1.36	2.00	1.44	2.88	3.02	2.17	1.54	3.54	4.57	
Cpk Lower limit	4.84	2.19	2.06	2.43	2.49	4.61	1.68	1.70	1.37	2.12	1.51	1.58	2.17	1.66	

1	-0.723	-1.029	-0.197	-0.285	-0.389	-0.749	-0.941	-77.152	-60.277	-54.408	-50.376	-67.972	-65.497	-57.717
2	-0.853	-1.256	-0.18	-0.277	-0.368	-0.66	-0.8	-73.824	-57.111	-50.829	-67.613	-80.085	-64.248	-58.64
3	-0.856	-1.252	-0.135	-0.254	-0.347	-0.723	-0.927	-79.07	-53.137	-67.643	-65.294	-75.686	-69.579	-53.246
4	-0.825	-1.206	-0.149	-0.236	-0.317	-0.764	-0.663	-71.386	-52.049	-65.368	-62.055	-71.199	-60.279	-53.154
5	-0.734	-1.054	-0.225	-0.343	-0.455	-0.851	-1.07	-75.293	-56.896	-61.972	-50.777	-73.693	-60.009	-53.212
6	-0.736	-1.056	-0.136	-0.242	-0.327	-0.707	-0.752	-86.698	-57.019	-62.406	-50.663	-73.463	-66.793	-50.34
7	-0.733	-0.913	-0.143	-0.227	-0.309	-0.743	-0.807	-81.821	-58.435	-62.955	-69.982	-70.792	-68.798	-59.174
8	-0.712	-0.86	-0.141	-0.24	-0.326	-0.74	-0.967	-84.831	-53.957	-67.804	-64.223	-67.921	-67.082	-51.195
9	-0.847	-1.24	-0.236	-0.351	-0.48	-0.923	-1.163	-71.197	-66.563	-61.96	-64.013	-80.119	-62.133	-54.773
10	-0.704	-1.363	-0.139	-0.229	-0.312	-0.762	-0.66	-75.834	-55.924	-60.834	-67.904	-72.369	-63.859	-57.476
11	-0.772	-0.979	-0.178	-0.296	-0.416	-0.903	-1.2	-75.288	-61.772	-70.585	-61.953	-72.16	-68.769	-58.998
12	-0.726	-1.039	-0.14	-0.245	-0.332	-0.791	-0.715	-71.627	-62.916	-69.898	-62.581	-90.674	-71.069	-57.808
13	-0.863	-1.257	-0.132	-0.236	-0.31	-0.737	-0.807	-84.453	-58.902	-63.526	-50.396	-78.962	-60.47	-53.403
14	-0.822	-1.208	-0.181	-0.282	-0.392	-0.795	-1.036	-70.069	-66.995	-69.963	-67.661	-73.895	-62.656	-55.517
15	-0.782	-1.15	-0.199	-0.294	-0.408	-0.835	-1.087	-70.445	-66.865	-68.109	-64.567	-72.149	-64.187	-55.603
16	-0.776	-1.122	-0.135	-0.23	-0.312	-0.73	-0.781	-72.106	-66.471	-61.589	-67.994	-80.405	-66.871	-57.603
17	-0.783	-0.977	-0.144	-0.247	-0.349	-0.75	-1.014	-78.373	-66.161	-60.93	-67.743	-76.035	-73.345	-65.19
18	-0.713	-0.864	-0.135	-0.235	-0.335	-0.757	-0.993	-79.723	-66.834	-69.181	-67.417	-77.675	-64.753	-58.635
19	-0.73	-1.054	-0.141	-0.24	-0.322	-0.772	-0.675	-78.8	-66.51	-62.045	-50.026	-89.511	-65.897	-62.834
20	-0.709	-1.013	-0.216	-0.327	-0.433	-0.736	-0.858	-83.179	-66.074	-68.585	-65.196	-71.685	-68.012	-51.321
21	-0.787	-1.134	-0.134	-0.231	-0.319	-0.747	-0.996	-78.698	-60.337	-65.688	-52.707	-72.207	-65.291	-59.171
22	-0.758	-0.791	-0.139	-0.218	-0.294	-0.723	-0.6	-74.076	-58.983	-62.845	-69.615	-79.539	-60.159	-53.593
23	-0.717	-1.031	-0.135	-0.227	-0.321	-0.767	-1.03	-93.686	-66.008	-67.794	-64.348	-79.434	-60.35	-53.596
24	-0.792	-1.133	-0.141	-0.236	-0.317	-0.749	-0.832	-81.382	-64.561	-64.31	-61.492	-71.354	-69.833	-52.08
25	-0.714	-1.025	-0.155	-0.261	-0.363	-0.824	-1.125	-77.368	-58.092	-62.974	-59.452	-73.518	-66.052	-59.787
26	-0.733	-1.04	-0.154	-0.225	-0.306	-0.72	-0.769	-67.674	-66.272	-67.156	-63.602	-72.133	-67.971	-51.185
27	-0.792	-0.991	-0.142	-0.238	-0.331	-0.811	-1.121	-76.197	-66.422	-68.057	-64.65	-77.762	-64.458	-57.831
28	-0.707	-0.866	-0.169	-0.238	-0.3	-0.793	-0.944	-70.072	-66.557	-61.646	-57.92	-78.556	-64.183	-57.529
29	-0.806	-1.142	-0.135	-0.24	-0.34	-0.777	-1.058	-76.864	-58.938	-63.768	-60.98	-69.647	-62.946	-54.116
30	-0.746	-0.875	-0.143	-0.234	-0.32	-0.732	-0.963	-74.894	-64.377	-71.496	-60.867	-74.722	-65.384	-58.891
31	-0.778	-1.108	-0.133	-0.217	-0.332	-0.87	-1.212	-77.445	-66.53	-60.628	-68.176	-67.864	-63.546	-58.27
32	-0.869	-1.267	-0.131	-0.231	-0.309	-0.797	-0.879	-84.182	-66.527	-67.162	-63.083	-71.289	-64.815	-55.969
33	-0.744	-1.394	-0.165	-0.246	-0.331	-0.793	-0.899	-79.515	-66.419	-65.651	-62.114	-73.212	-69.943	-53.352
34	-0.751	-1.374	-0.159	-0.218	-0.319	-0.903	-1.244	-80.923	-66.221	-67.112	-64.828	-81.251	-69.728	-52.615
35	-0.877	-1.259	-0.149	-0.222	-0.297	-0.72	-0.784	-82.975	-66.263	-60.076	-68.994	-83.079	-69.267	-52.757
36	-0.767	-0.806	-0.138	-0.202	-0.279	-0.73	-0.47	-72.713	-66.859	-69.064	-65.88	-71.931	-65.872	-58.119
37	-0.795	-0.839	-0.149	-0.209	-0.292	-0.735	-1.01	-86.237	-58.64	-62.772	-59.355	-67.309	-69.786	-53.626
38	-0.714	-1.038	-0.139	-0.212	-0.288	-0.727	-0.618	-76.063	-66.397	-65.725	-62.732	-70.628	-68.629	-52.7
39	-0.753	-1.096	-0.136	-0.22	-0.307	-0.705	-0.917	-79.537	-66.28	-65.433	-62.299	-87.287	-69.037	-57.611
40	-0.852	-1.251	-0.139	-0.204	-0.284	-0.781	-0.914	-71.214	-66.785	-64.829	-60.863	-71.458	-69.047	-56.552
41	-0.816	-1.186	-0.147	-0.222	-0.319	-0.769	-1.048	-68.686	-59.087	-62.204	-67.983	-78.641	-70.203	-56.798
42	-0.749	-1.075	-0.142	-0.221	-0.312	-0.704	-0.918	-78.638	-61.496	-67.797	-69.985	-72.51	-65.234	-58.782
43	-0.87	-1.282	-0.149	-0.232	-0.318	-0.744	-0.965	-78.529	-66.508	-65.757	-62.32	-78.289	-63.227	-54.333
44	-0.753	-0.754	-0.169	-0.256	-0.354	-0.825	-1.106	-70.768	-62.22	-66.751	-54.486	-83.787	-61.042	-56.565
45	-0.847	-1.242	-0.14	-0.199	-0.267	-0.777	-0.531	-74.701	-66.034	-68.734	-65.79	-75.262	-64.609	-58.312
46	-0.884	-1.296	-0.139	-0.223	-0.315	-0.79	-0.714	-72.025	-59.586	-66.207	-67.297	-77.428	-66.292	-60.543
47	-0.722	-0.87	-0.189	-0.292	-0.413	-0.893	-1.171	-82.251	-59.998	-67.672	-54.199	-74.339	-69.351	-52.486
48	-0.724	-1.344	-0.143	-0.22	-0.32	-0.76	-0.996	-76.967	-66.503	-61.874	-58.282	-70.295	-67.077	-50.961
49	-0.746	-0.923	-0.146	-0.227	-0.304	-0.743	-1.015	-73.706	-66.302	-61.233	-68.884	-71.024	-64.651	-57.952
50	-0.777	-1.138	-0.161	-0.236	-0.31	-0.743	-0.988	-75.055	-60.601	-65.215	-52.268	-75.881	-63.087	-57.058

**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:	CH1 CT2	CH1 CT3	CH1 CT3	CH1 CT3	CH1 CT3	CH2 RL1	CH2 RL1	CH2 RL1	CH2 RL1	CH2 RL1	CH2 RL2	CH2 RL2	CH2 RL2	CH2 RL2
PIN NO/ FRE.:	100.000 M	1.000 M	32.000 M	62.000 M	100.000 M	1.000 M	40.000 M	60.000 M	80.000 M	100.000 M	1.000 M	40.000 M	60.000 M	80.000 M
UNIT:	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
MAX SPEC:	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100
MIN SPEC:	-36	-50	-45	-40	-36	-18	-16	-14	-12	-10	-18	-16	-14	-12
AVERAGE =	-47.323	-77.475	-59.150	-56.495	-56.007	-32.796	-33.102	-31.599	-29.161	-25.645	-35.468	-22.884	-22.555	-21.542
STD DEV =	2.717	5.411	2.999	3.749	3.708	0.683	2.780	2.060	1.637	1.357	0.645	1.602	1.503	1.224
MAX =	-42.456	-69.036	-54.823	-51.020	-50.057	-30.631	-29.015	-28.330	-26.623	-23.553	-33.571	-20.354	-19.388	-18.962
MIN =	-54.912	-95.289	-69.708	-68.899	-66.362	-34.364	-40.909	-37.125	-33.599	-29.253	-36.624	-28.428	-26.643	-24.735
Cpk Upper limit	6.46	1.39	4.54	3.87	3.96	32.81	8.02	11.07	14.42	18.27	33.37	16.04	17.18	21.37
Cpk Lower limit	1.39	1.69	1.57	1.47	1.80	7.22	2.05	2.85	3.49	3.84	9.03	1.43	1.90	2.60
1	-47.753	-80.458	-58.761	-52.842	-50.767	-32.981	-36.411	-34.014	-30.997	-27.163	-34.976	-20.738	-21.113	-20.525
2	-48.7	-79.317	-61.072	-55.135	-53.646	-33.082	-34.302	-32.647	-29.952	-26.347	-36.621	-23.864	-23.634	-22.432
3	-46.564	-79.209	-55.035	-59.26	-56.005	-32.1	-29.137	-28.542	-26.701	-23.611	-36.624	-23	-23.053	-22.06
4	-46.127	-80.22	-55.714	-55.183	-57.939	-32.721	-32.63	-31.288	-28.804	-25.443	-36.092	-21.086	-21.238	-20.415
5	-47.326	-69.975	-54.823	-59.069	-55.927	-32.168	-30.361	-29.376	-27.346	-24.074	-35.033	-22.932	-22.803	-21.736
6	-44.297	-70.988	-58.363	-52.996	-50.057	-33.315	-33.885	-32.24	-29.689	-26.026	-35.485	-20.483	-21.043	-20.191
7	-54.7	-77.199	-69.708	-68.899	-63.047	-33.835	-32.228	-30.931	-28.48	-24.987	-35.791	-25.544	-24.629	-23.173
8	-45.507	-95.289	-57.361	-52.006	-58.651	-32.225	-34.873	-33.064	-30.186	-26.493	-35.501	-21.953	-22.24	-21.364
9	-47.654	-78.137	-61.063	-58.536	-56.748	-34.364	-36.534	-33.907	-30.991	-27.076	-36.568	-25.138	-24.372	-23.037
10	-49.3	-72.612	-58.162	-55.107	-50.697	-32.804	-31.637	-30.546	-28.323	-24.972	-35.26	-21.371	-21.469	-20.59
11	-49.86	-71.561	-57.525	-55.506	-56.888	-32.581	-30.172	-29.232	-27.197	-24.013	-35.858	-20.946	-21.254	-20.567
12	-50.623	-71.543	-57.415	-59.734	-56.378	-33.085	-39.179	-36.135	-32.742	-28.68	-35.038	-22.354	-22.75	-21.779
13	-47.417	-84.146	-61.984	-57.852	-54.921	-32.987	-33.234	-31.6	-29.129	-25.624	-35.198	-21.508	-21.64	-20.885
14	-47.624	-82.283	-57.049	-58.097	-54.671	-32.384	-33.378	-31.974	-29.669	-26.006	-35.426	-22.517	-22.502	-21.566
15	-47.974	-74.592	-57.377	-52.824	-59.282	-32.529	-34.829	-32.921	-30.143	-26.376	-35.467	-23.315	-23.154	-21.966
16	-47.988	-81.29	-57.378	-59.65	-56.49	-33.775	-35.458	-33.332	-30.549	-26.839	-35.22	-20.354	-20.789	-20.057
17	-54.912	-83.759	-68.761	-61.086	-61.304	-32.701	-31.205	-30.448	-28.271	-24.848	-36.463	-28.428	-26.643	-24.735
18	-50.782	-76.136	-59.698	-54.241	-50.239	-33.122	-31.162	-30.204	-27.998	-24.666	-35.76	-22.086	-22.393	-21.32
19	-51.132	-75.969	-58.854	-53.141	-51.711	-31.898	-32.349	-30.975	-28.706	-25.088	-35.715	-23.437	-23.219	-22.023
20	-45.879	-75.373	-57.154	-55.198	-56.073	-33.915	-40.835	-37.125	-33.371	-29.061	-34.606	-23.2	-23.318	-22.182
21	-43.935	-69.103	-58.661	-56.305	-58.304	-30.631	-32.094	-30.908	-28.608	-25.059	-35.321	-23.521	-23.306	-21.976
22	-47.723	-75.829	-60.998	-56.436	-52.346	-33.114	-38.197	-35.167	-31.955	-28.035	-36.046	-23.417	-23.546	-22.376
23	-47.229	-80.452	-62.294	-55.981	-55.165	-32.983	-32.676	-31.282	-28.87	-25.415	-35.439	-22.986	-22.926	-21.802
24	-47.106	-72.613	-57.76	-52.621	-58.829	-33.357	-32.338	-31.25	-28.997	-25.489	-35.353	-24.954	-24.465	-23.121
25	-44.606	-79.432	-57.786	-58.542	-53.418	-32.827	-34.54	-33.013	-30.28	-26.633	-35.488	-21.309	-21.623	-20.754
26	-44.842	-73.822	-57.369	-65.57	-66.021	-31.326	-34.26	-32.521	-29.853	-26.154	-35.402	-22.393	-19.865	-19.264
27	-43.03	-79.667	-60.747	-52.393	-57.553	-32.89	-33.952	-32.398	-29.936	-26.317	-36.502	-21.557	-21.818	-21.002
28	-42.456	-79.263	-57.756	-55.361	-57.523	-32.098	-30.208	-29.372	-27.424	-24.236	-35.432	-22.309	-19.904	-19.384
29	-47.251	-75.704	-57.638	-56.229	-52.929	-32.076	-33.351	-31.868	-29.407	-25.853	-34.375	-22.837	-20.321	-19.835
30	-43.657	-89.141	-57.666	-67.236	-66.362	-32.548	-32.063	-30.967	-28.606	-25.195	-33.999	-22.796	-22.935	-21.823
31	-49.375	-74.84	-61.979	-56.926	-50.126	-31.61	-32.241	-31.037	-28.742	-25.264	-36.165	-23.981	-23.633	-22.321
32	-47.677	-87.84	-57.252	-51.02	-57.976	-33.37	-29.303	-28.553	-26.747	-23.659	-35.804	-20.807	-21.308	-20.666
33	-46.295	-81.175	-62.983	-53.498	-58.624	-33.416	-33.844	-32.307	-29.859	-26.155	-35.326	-25.597	-24.938	-23.524
34	-45.312	-72.317	-59.894	-54.871	-50.73	-32.62	-31.768	-30.575	-28.373	-24.929	-35.473	-20.868	-21.306	-20.494
35	-45.055	-78.473	-57.898	-53.871	-52.961	-31.872	-30.454	-29.53	-27.553	-24.268	-34.777	-22.519	-19.388	-18.962
36	-50.902	-74.89	-66.164	-61.49	-55.941	-32.72	-30.22	-29.369	-27.375	-24.157	-35.417	-23.3	-23.057	-21.903
37	-48.181	-70.791	-57.27	-57.565	-54.098	-33.001	-31.026	-30.036	-27.963	-24.747	-35.87	-23.838	-23.586	-22.429
38	-46.083	-69.036	-61.365	-56.952	-53.336	-32.573	-31.812	-30.501	-28.346	-25.01	-35.352	-21.637	-22.028	-21.243
39	-48.673	-70.84	-57.436	-51.729	-59.598	-31.988	-29.015	-28.33	-26.623	-23.553	-35.317	-23.539	-23.196	-22.104
40	-47.908	-74.162	-57.191	-55.509	-55.752	-33.148	-32.264	-31.184	-28.794	-25.51	-34.725	-25.348	-24.564	-23.271
41	-47.536	-74.807	-57.042	-56.811	-53.291	-32.953	-40.909	-36.915	-33.599	-29.253	-36.215	-24.513	-24.2	-22.971
42	-43.685	-73.614	-57.688	-59.338	-53.379	-33.122	-36.144	-33.913	-31.064	-27.275	-35.895	-21.177	-21.298	-20.529
43	-46.565	-81.252	-57.458	-52.139	-59.356	-32.96	-30.792	-29.902	-27.923	-24.665	-35.294	-23.033	-23.067	-21.97
44	-50.312	-80.276	-63.12	-58.617	-53.952	-33.062	-35.334	-33.399	-30.542	-26.801	-35.23	-22.729	-22.792	-21.654
45	-42.889	-74.085	-59.213	-53.654	-57.708	-32.191	-30.46	-29.498	-27.407	-24.266	-34.196	-20.66	-20.888	-20.116
46	-51.053	-87.289	-57.188	-52.692	-59.737	-33.649	-32.782	-31.656	-29.203	-25.745	-35.467	-23.608	-23.508	-22.255
47	-47.559	-79.308	-57.847	-59.225	-53.726	-32.994	-30.827	-29.955	-27.828	-24.573	-35.914	-24.163	-23.681	-22.403
48	-45.422	-79.636	-60.136	-54.713	-59.273	-33.422	-31.524	-30.366	-28.227	-24.914	-36.215	-25.132	-24.487	-23.259
49	-43.348	-80.841	-59.163	-55.211	-53.172	-33.419	-36.38	-34.123	-31.194	-27.451	-35.108	-23.032	-22.958	-21.767
50	-48.373	-73.186	-57.3	-55.882	-57.707	-33.279	-30.508	-29.556	-27.519	-24.3	-33.571	-22.397	-19.907	-19.303



**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:	CH2 RL2	CH2 RL3	CH2 RL3	CH2 RL3	CH2 RL3	CH2 RL3	CH2 RL4	CH2 RL4	CH2 RL4	CH2 RL4	CH2 RL4	CH2 RL4	CMR 1	CMR 1	CMR 1
PIN NO/ FRE.:	100.000 M	1.000 M	40.000 M	60.000 M	80.000 M	100.000 M	1.000 M	40.000 M	60.000 M	80.000 M	100.000 M	1.000 M	30.000 M	60.000 M	
UNIT:	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
MAX SPEC:	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100
MIN SPEC:	-10	-18	-16	-14	-12	-10	-18	-16	-14	-12	-10	-42	-31	-27	
AVERAGE =	-20.378	-34.191	-23.714	-22.918	-22.082	-21.513	-31.699	-22.466	-19.192	-18.807	-17.166	-62.034	-41.324	-35.723	
STD DEV =	1.058	0.680	1.634	1.332	1.121	1.009	0.535	1.584	1.282	1.453	1.590	3.954	0.948	1.792	
MAX =	-18.205	-32.679	-21.084	-20.562	-19.879	-19.539	-30.541	-20.082	-18.020	-17.070	-14.251	-58.046	-36.163	-32.055	
MIN =	-23.153	-35.520	-27.375	-25.896	-24.545	-23.724	-32.841	-27.799	-24.007	-23.305	-22.098	-76.722	-41.985	-37.821	
Cpk Upper limit	25.09	32.26	15.56	19.29	23.17	25.94	42.52	16.32	21.01	18.62	17.36	3.20	20.64	11.96	
Cpk Lower limit	3.27	7.94	1.57	2.23	3.00	3.80	8.53	1.36	1.35	1.56	1.50	1.69	3.63	1.62	

1	-19.528	-35.205	-24.234	-23.48	-22.762	-22.156	-30.541	-22.039	-18.272	-18.584	-17.409	-59.089	-41.378	-36.44
2	-21.145	-34.155	-22.515	-21.926	-21.28	-20.756	-31.991	-21.509	-20.056	-20.239	-18.786	-59.594	-41.295	-32.165
3	-20.773	-34.049	-22.121	-21.637	-20.944	-20.541	-32.143	-25.658	-18.61	-17.933	-16.756	-58.972	-41.729	-36.737
4	-19.366	-34.94	-22.692	-21.934	-21.288	-20.802	-32.372	-22.492	-20.971	-20.781	-19.31	-59.527	-41.327	-32.22
5	-20.491	-33.873	-24.24	-23.414	-22.51	-21.868	-31.258	-21.864	-18.287	-17.672	-16.484	-58.798	-41.606	-36.609
6	-19.288	-34.847	-24.52	-23.486	-22.551	-21.987	-31.629	-21.766	-20.169	-20.196	-18.637	-58.454	-41.137	-32.123
7	-21.726	-33.71	-24.757	-23.673	-22.599	-21.899	-31.933	-22.739	-18.626	-18.861	-17.532	-65.976	-41.361	-36.582
8	-20.1	-34.421	-26.287	-24.915	-23.66	-23.001	-31.189	-21.58	-18.977	-17.456	-16.333	-65.722	-41.891	-36.941
9	-21.645	-33.73	-22.28	-21.789	-21.124	-20.584	-31.296	-21.239	-18.663	-17.274	-16.13	-58.663	-41.881	-36.89
10	-19.476	-33.358	-22.247	-21.829	-21.191	-20.715	-32.573	-23.279	-21.458	-21.087	-19.643	-59.101	-41.111	-36.995
11	-19.535	-34.11	-24.797	-23.696	-22.714	-21.987	-31.179	-22.474	-18.517	-18.303	-15.188	-65.078	-41.401	-36.61
12	-20.68	-34.498	-23.903	-22.95	-22.131	-21.505	-32.006	-22.479	-21.218	-20.936	-19.406	-58.667	-41.091	-36.963
13	-19.782	-33.78	-22.309	-21.79	-21.148	-20.641	-32.2	-22.694	-18.704	-19.123	-17.764	-59.215	-41.985	-36.911
14	-20.348	-34.447	-22.556	-21.996	-21.307	-20.813	-31.736	-21.965	-18.151	-17.674	-16.589	-58.597	-41.872	-36.906
15	-20.642	-34.21	-23.134	-22.46	-21.657	-21.091	-31.239	-21.087	-18.522	-17.133	-16.097	-65.347	-41.207	-37.821
16	-19.086	-34.441	-23.031	-22.477	-21.797	-21.283	-32.32	-20.216	-19.077	-19.271	-17.998	-62.877	-36.163	-32.817
17	-23.153	-34.892	-24.875	-23.799	-22.541	-21.879	-31.218	-25.75	-18.954	-18.123	-16.783	-58.368	-41.135	-32.056
18	-20.207	-34.703	-26.709	-25.236	-23.814	-22.971	-31.468	-21.328	-18.683	-17.07	-15.951	-58.723	-41.86	-36.097
19	-20.785	-35.135	-23.748	-23.069	-22.202	-21.622	-31.782	-22.49	-21.019	-20.838	-19.157	-63.973	-41.692	-36.596
20	-20.929	-34.591	-24.888	-24.272	-23.226	-22.579	-31.269	-21.036	-19.752	-19.793	-18.323	-65.13	-41.951	-36.233
21	-20.631	-33.366	-22.961	-22.373	-21.674	-21.05	-30.956	-21.402	-18.696	-17.116	-16.014	-58.668	-41.487	-32.347
22	-21.096	-34.657	-27.126	-25.51	-24.283	-23.339	-32.122	-23.498	-21.734	-21.337	-19.83	-74.293	-37.921	-34.449
23	-20.594	-32.912	-24.085	-23.298	-22.408	-21.815	-31.608	-21.757	-18.02	-17.566	-16.39	-76.722	-41.896	-36.188
24	-21.685	-33.941	-23.048	-22.463	-21.631	-21.031	-32.013	-22.465	-18.455	-18.785	-17.485	-62.319	-41.651	-36.33
25	-19.715	-33.643	-24.506	-23.643	-22.737	-22.16	-30.772	-21.37	-18.633	-17.143	-16.018	-61.08	-41.959	-36.109
26	-18.364	-33.303	-24.366	-23.495	-22.687	-21.973	-31.92	-20.557	-19.424	-19.515	-18.055	-58.286	-41.64	-36.788
27	-20.096	-33.53	-25.018	-24.198	-23.17	-22.596	-32.433	-22.446	-18.903	-18.62	-15.653	-58.728	-41.646	-36.596
28	-18.592	-34.809	-25.718	-24.554	-23.632	-22.918	-31.489	-25.234	-18.382	-17.847	-16.623	-61.134	-41.973	-36.134
29	-18.956	-34.273	-22.731	-22.105	-21.447	-20.912	-31.634	-21.979	-18.311	-17.836	-16.553	-58.536	-41.053	-36.975
30	-20.636	-35.117	-25.343	-24.377	-23.249	-22.63	-32.841	-25.062	-18.363	-17.81	-16.499	-62.289	-41.185	-36.479
31	-21.057	-33.809	-23.94	-23.17	-22.407	-21.696	-32.417	-22.474	-18.811	-18.366	-15.333	-60.083	-41.854	-36.364
32	-19.528	-34.099	-22.417	-21.915	-21.362	-20.875	-31.798	-25.169	-18.04	-17.612	-16.391	-63.549	-41.064	-36.995
33	-22.117	-34.467	-21.219	-20.921	-20.445	-20.053	-32.45	-20.259	-19.25	-19.468	-17.952	-60.733	-41.154	-36.654
34	-19.417	-33.682	-21.084	-20.562	-19.879	-19.539	-31.786	-21.62	-18.43	-18.127	-14.251	-58.046	-41.942	-36.872
35	-18.205	-34.143	-21.754	-21.105	-20.44	-20.018	-31.919	-20.082	-18.937	-19.047	-17.714	-65.289	-41.281	-32.369
36	-20.627	-34.294	-26.984	-25.269	-24.006	-23.319	-31.804	-27.799	-24.007	-23.305	-22.098	-65.759	-41.477	-36.762
37	-21.209	-34.288	-25.712	-24.569	-23.492	-22.731	-30.993	-21.091	-18.557	-17.098	-16.071	-65.713	-41.266	-36.574
38	-20.198	-33.549	-23.874	-22.951	-22.187	-21.674	-32.569	-22.924	-21.064	-20.991	-19.727	-59.013	-41.788	-36.65
39	-20.823	-35.142	-23.151	-22.491	-21.762	-21.244	-31.348	-21.881	-18.078	-17.453	-16.3	-63.753	-41.72	-36.312
40	-21.849	-32.679	-21.656	-21.098	-20.455	-20.003	-31.455	-25.293	-18.391	-17.739	-16.564	-63.81	-41.006	-36.295
41	-21.692	-33.221	-22.09	-21.594	-21.014	-20.607	-31.828	-21.421	-18.682	-17.201	-16.128	-58.953	-41.785	-36.783
42	-19.573	-35.248	-23.28	-22.523	-21.843	-21.391	-31.717	-21.956	-18.049	-17.334	-16.312	-58.297	-41.977	-36.907
43	-20.814	-34.622	-21.982	-21.655	-21.113	-20.673	-30.741	-21.21	-18.503	-18.883	-15.912	-65.424	-41.855	-36.16
44	-20.348	-35.427	-27.375	-25.896	-24.545	-23.724	-31.521	-22.393	-18.823	-18.374	-15.454	-65.224	-41.058	-32.136
45	-19.068	-33.566	-22.65	-21.956	-21.291	-20.839	-31.401	-24.467	-22.238	-21.886	-20.348	-65.26	-41.501	-36.63
46	-21.046	-34.151	-21.501	-21.047	-20.476	-20.07	-32.401	-22.821	-20.722	-20.673	-19.266	-58.784	-41.255	-32.188
47	-21.161	-34.537	-25.82	-24.674	-23.646	-23.065	-30.715	-22.44	-18.798	-18.563	-15.609	-58.849	-41.107	-36.977
48	-21.981	-33.502	-21.133	-20.763	-20.244	-19.919	-31.285	-22.881	-18.171	-18.758	-15.825	-65.771	-41.086	-32.055
49	-20.671	-35.52	-24.29	-23.459	-22.419	-21.782	-31.533	-22.606	-18.048	-18.631	-15.669	-63.895	-41.056	-36.694
50	-18.467	-32.936	-23.02	-22.422	-21.7	-21.309	-32.124	-21.05	-18.395	-18.941	-15.965	-63.566	-41.472	-36.65

**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:	CMR 1	CMR 1	CMR 1	CMR 1	CMR 2	CMR 2	CMR 2	CMR 2	CMR 2	CMR 2	CMR 2	CMR 2	CMR 3	CMR 3	CMR 3
PIN NO/ FRE.:	100.000 M	125.000 M	200.000 M	300.000 M	1.000 M	30.000 M	60.000 M	100.000 M	125.000 M	200.000 M	300.000 M	1.000 M	30.000 M	60.000 M	
UNIT:	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
MAX SPEC:	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100
MIN SPEC:	-23	-21	-17	-14	-42	-31	-27	-23	-21	-17	-14	-42	-31	-27	
AVERAGE =	-27.633	-35.060	-26.421	-30.009	-60.847	-45.485	-42.843	-30.633	-38.700	-27.372	-29.362	-69.271	-44.953	-39.129	
STD DEV =	0.771	2.879	0.825	2.314	3.235	2.862	3.313	1.614	3.213	0.903	2.388	6.078	1.825	2.422	
MAX =	-25.248	-32.512	-24.835	-27.569	-56.915	-43.008	-38.143	-28.156	-35.998	-26.000	-27.247	-60.056	-43.018	-37.048	
MIN =	-31.972	-43.842	-28.363	-33.790	-65.992	-56.155	-48.089	-33.127	-43.964	-29.429	-32.998	-82.600	-47.973	-46.967	
Cpk Upper limit	31.28	7.52	29.74	10.08	4.03	6.35	5.75	14.32	6.36	26.80	9.86	1.69	10.05	8.38	
Cpk Lower limit	2.00	1.63	3.81	2.31	1.94	1.69	1.59	1.58	1.84	3.83	2.14	1.50	2.55	1.67	

1	-27.184	-33.051	-25.85	-28.287	-58.17	-43.723	-40.536	-29.833	-36.326	-27.048	-27.451	-66.262	-43.839	-37.548
2	-27.24	-34.255	-25.439	-28.54	-59.301	-43.336	-40.868	-29.58	-36.963	-26.287	-27.482	-66.883	-43.793	-37.414
3	-27.28	-33.737	-25.135	-27.962	-60.682	-43.317	-40.886	-29.789	-36.913	-26.3	-27.502	-66.257	-43.91	-37.551
4	-27.507	-33.648	-26.467	-28.026	-59.924	-43.157	-40.783	-29.796	-36.55	-27.033	-27.678	-66.914	-43.853	-37.397
5	-27.326	-33.548	-25.396	-27.949	-59.071	-43.248	-40.743	-29.813	-36.721	-26.724	-27.453	-66.214	-43.614	-37.298
6	-27.487	-33.661	-26.459	-28.355	-58.384	-43.603	-40.432	-29.947	-36.336	-27.01	-27.496	-66.885	-43.153	-37.07
7	-27.671	-33.077	-25.678	-28.632	-58.887	-43.383	-40.958	-29.863	-36.449	-26.736	-27.647	-66.466	-43.588	-37.379
8	-27.765	-33.731	-26.523	-29.102	-58.151	-43.559	-40.361	-29.826	-36.929	-27.017	-27.453	-66.003	-43.94	-37.507
9	-27.494	-33.449	-25.643	-28.032	-58.986	-43.135	-40.814	-29.915	-36.343	-26.741	-27.55	-66.525	-43.04	-37.687
10	-27.492	-33.917	-26.251	-28.298	-57.979	-43.661	-40.437	-29.796	-36.23	-26.988	-27.367	-66.894	-43.496	-37.363
11	-27.75	-32.891	-26.401	-28.704	-59.745	-43.213	-40.682	-29.58	-36.066	-27.124	-27.709	-66.115	-43.674	-37.444
12	-27.334	-33.314	-26.492	-28.176	-59.085	-43.929	-40.571	-29.807	-36.252	-27.346	-27.706	-66.885	-43.137	-37.658
13	-27.412	-33.48	-25.818	-28.155	-57.564	-43.075	-40.767	-29.901	-36.523	-26.401	-27.726	-66.858	-43.776	-37.458
14	-27.597	-33.578	-25.517	-28.485	-57.685	-43.846	-40.631	-29.945	-36.256	-26.448	-27.437	-66.202	-43.647	-37.327
15	-29.293	-40.228	-28.363	-33.13	-64.094	-46.817	-38.143	-28.156	-38.551	-28.725	-32.1	-66.753	-47.679	-41.016
16	-27.595	-36.097	-27.952	-27.979	-57.373	-43.417	-40.461	-29.243	-36.788	-28.047	-27.956	-60.746	-43.753	-37.47
17	-27.688	-32.857	-27.069	-28.446	-57.387	-43.57	-40.349	-29.902	-36.667	-26.371	-27.616	-66.536	-43.018	-37.181
18	-27.43	-32.512	-25.747	-27.837	-58.579	-43.351	-40.941	-29.863	-36.82	-27.113	-27.954	-66.803	-43.857	-37.466
19	-27.709	-36.051	-27.076	-33.062	-65.447	-48.613	-47.808	-32.836	-43.057	-28.353	-32.552	-66.042	-47.218	-41.219
20	-27.576	-43.797	-26.497	-33.314	-65.707	-48.631	-47.799	-32.907	-43.111	-28.181	-32.49	-81.252	-47.02	-46.933
21	-27.674	-32.77	-26.002	-28.301	-56.915	-43.773	-40.59	-29.177	-36.068	-26.568	-27.491	-66.789	-43.898	-37.599
22	-26.803	-37.285	-27.45	-32.463	-58.946	-48.061	-40.304	-29.148	-36.372	-26.21	-28.053	-60.056	-43.499	-37.048
23	-27.458	-43.727	-26.614	-33.341	-65.102	-48.408	-47.407	-32.768	-42.782	-28.288	-32.434	-78.887	-47.013	-41.256
24	-27.718	-43.842	-26.625	-33.79	-65.231	-48.84	-47.6	-33.016	-43.324	-28.4	-32.862	-82.6	-47.973	-41.193
25	-27.598	-36.643	-27.187	-32.824	-65.704	-48.223	-47.644	-32.941	-43.185	-28.884	-32.908	-79.227	-47.395	-41.322
26	-27.834	-33.047	-26.843	-29.503	-57.543	-43.587	-40.391	-29.947	-36.687	-27.519	-27.702	-66.307	-43.112	-37.693
27	-27.401	-32.95	-25.51	-28.036	-59.599	-43.341	-40.924	-29.09	-36.41	-27.313	-27.794	-66.893	-43.157	-37.657
28	-27.672	-36.074	-26.5	-33.057	-65.606	-48.821	-47.933	-33.079	-43.964	-27.837	-32.744	-81.968	-47.576	-41.557
29	-27.732	-33.598	-26.366	-28.371	-57.41	-43.017	-40.781	-29.069	-36.268	-27.603	-27.383	-66.438	-47.493	-41.555
30	-27.525	-36.628	-26.715	-33.59	-65.702	-48.627	-47.677	-32.961	-43.776	-28.135	-32.633	-66.885	-47.97	-41.287
31	-27.726	-36.671	-27.135	-33.031	-65.487	-48.144	-47.213	-32.863	-43.47	-27.626	-32.581	-79.852	-47.459	-41.477
32	-27.684	-36.426	-26.867	-33.059	-65.175	-48.746	-47.41	-33.127	-43.269	-27.88	-32.423	-82.437	-47.749	-41.332
33	-27.849	-36.463	-26.688	-33.75	-65.576	-48.388	-47.298	-32.87	-43.294	-27.463	-32.133	-78.349	-47.052	-46.967
34	-27.721	-33.127	-26.36	-28.123	-58.867	-48.532	-47.272	-32.583	-42.92	-28.944	-32.478	-60.68	-44.55	-37.742
35	-25.248	-33.431	-26.374	-28.824	-58.55	-43.868	-40.68	-29.036	-36.97	-26.646	-27.492	-66.064	-43.998	-37.555
36	-27.869	-32.972	-25.394	-29.134	-57.495	-43.8	-40.652	-29.116	-36.901	-26.301	-27.529	-66.753	-43.874	-37.547
37	-27.378	-36.144	-27.108	-32.804	-65.076	-56.155	-47.516	-32.795	-43.104	-28.778	-32.451	-66.041	-47.273	-41.331
38	-27.283	-32.753	-24.835	-27.569	-59.497	-43.173	-40.754	-29.877	-36.237	-26.472	-27.504	-66.454	-43.992	-37.581
39	-27.753	-36.841	-27.809	-33.064	-65.992	-48.877	-48.089	-33.119	-43.668	-29.429	-32.714	-79.789	-47.956	-41.495
40	-27.695	-36.373	-27.354	-32.849	-65.09	-48.755	-47.625	-32.767	-43.053	-28.149	-32.998	-78.977	-43.63	-41.841
41	-27.526	-32.836	-26.706	-28.663	-58.486	-43.086	-40.752	-29.063	-36.21	-28.009	-27.61	-66.21	-47.536	-41.524
42	-27.674	-33.202	-25.475	-28.072	-58.062	-43.979	-40.686	-29.027	-36.108	-26.606	-27.247	-66.511	-43.978	-37.657
43	-27.599	-36.252	-27.573	-32.83	-65.278	-48.393	-47.975	-33.086	-43.922	-28.523	-32.805	-77.164	-47.284	-41.575
44	-27.896	-33.228	-25.921	-28.004	-59.231	-43.206	-40.799	-29.003	-36.258	-26.534	-27.492	-66.532	-43.766	-37.482
45	-27.597	-32.736	-25.633	-28.136	-59.895	-43.324	-40.884	-29.837	-36.922	-26.574	-27.513	-66.435	-43.73	-37.508
46	-27.668	-33.08	-25.895	-27.872	-58.918	-43.33	-40.889	-29.92	-36.237	-26.595	-27.692	-66.109	-43.935	-37.584
47	-27.522	-33.027	-25.344	-27.935	-59.058	-43.101	-40.697	-29.851	-36.144	-26.129	-27.606	-66.059	-43.876	-37.861
48	-27.686	-33.295	-25.461	-28.335	-58.95	-43.008	-40.599	-29.806	-36.051	-26	-27.386	-66.38	-43.66	-37.315
49	-31.972	-39.818	-27.339	-31.336	-61.802	-48.788	-40.259	-29.303	-35.998	-28.545	-31.159	-74.816	-47.051	-37.832
50	-27.068	-36.857	-28.21	-33.298	-65.906	-48.332	-47.884	-33.115	-43.567	-28.629	-32.936	-66.408	-43.211	-41.713

**H5120NL Cpk Data**

SAMPLE SIZE:

DATE:

TEST ITEM:	CMR 3	CMR 3	CMR 3	CMR 3	CMR 4	CMR 4	CMR 4	CMR 4	CMR 4	CMR 4	CMR 4
PIN NO/ FRE.:	100.000 M	125.000 M	200.000 M	300.000 M	1.000 M	30.000 M	60.000 M	100.000 M	125.000 M	200.000 M	300.000 M
UNIT:	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB
MAX SPEC:	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100	-100
MIN SPEC:	-23	-21	-17	-14	-42	-31	-27	-23	-21	-17	-14
AVERAGE =	-30.774	-39.068	-27.464	-30.377	-70.910	-48.484	-38.627	-27.556	-35.317	-24.365	-28.298
STD DEV =	1.494	3.439	1.028	2.452	6.969	2.704	1.485	0.909	3.499	0.702	2.444
MAX =	-29.053	-36.005	-25.911	-27.940	-59.489	-47.005	-37.030	-27.025	-32.045	-23.175	-26.043
MIN =	-32.929	-44.078	-31.625	-34.203	-86.952	-55.950	-40.918	-31.903	-40.381	-26.153	-32.292
Cpk Upper limit	15.44	5.91	23.51	9.46	1.39	6.35	13.78	26.55	6.16	35.91	9.78
Cpk Lower limit	1.73	1.75	3.39	2.23	1.38	2.16	2.61	1.67	1.36	3.50	1.95

1	-29.482	-36.424	-27.231	-28.319	-59.745	-47.636	-37.49	-27.124	-32.751	-24.413	-26.22
2	-29.053	-36.411	-26.202	-28.219	-66.562	-47.865	-37.885	-27.298	-32.168	-24.29	-26.514
3	-29.51	-36.473	-26.393	-28.434	-66.502	-47.418	-37.281	-27.808	-32.69	-23.251	-26.097
4	-29.348	-36.538	-26.765	-28.425	-66.929	-47.712	-37.526	-27.983	-32.845	-24.086	-26.116
5	-29.418	-36.526	-26.466	-28.216	-66.664	-47.863	-37.718	-27.19	-32.133	-23.894	-26.247
6	-29.565	-36.919	-26.892	-27.94	-66.474	-47.513	-37.404	-27.101	-32.972	-24.039	-26.423
7	-29.64	-36.36	-26.601	-28.323	-66.629	-47.973	-37.767	-27.081	-32.621	-23.841	-26.211
8	-29.435	-36.428	-27.363	-28.257	-66.188	-47.393	-37.331	-27.943	-32.728	-24.367	-26.147
9	-29.502	-36.005	-26.858	-28.362	-66.718	-47.014	-37.147	-27.099	-32.635	-23.671	-26.174
10	-29.773	-36.265	-27.388	-28.301	-59.489	-47.901	-37.692	-27.025	-32.73	-24.393	-26.41
11	-29.644	-36.244	-27.39	-28.353	-66.297	-47.707	-37.584	-27.063	-32.725	-24.39	-26.333
12	-29.542	-36.374	-27.599	-28.624	-66.971	-47.665	-37.499	-27.941	-32.561	-24.471	-26.305
13	-29.43	-36.227	-26.429	-28.385	-66.251	-47.676	-37.477	-27.899	-32.704	-23.584	-26.091
14	-29.512	-36.294	-26.329	-28.239	-66.08	-47.375	-37.284	-27.682	-32.111	-24.554	-26.607
15	-32.463	-43.053	-27.863	-33.232	-79.564	-55.45	-40.036	-31.725	-39.15	-24.071	-31.015
16	-29.798	-36.966	-28.27	-28.438	-66.959	-47.693	-37.543	-27.298	-32.483	-24.948	-26.665
17	-29.982	-36.571	-27.047	-28.53	-66.279	-47.689	-37.542	-27.171	-32.045	-23.852	-26.403
18	-29.584	-36.882	-26.818	-28.403	-66.566	-47.364	-37.305	-27.174	-32.352	-23.743	-26.38
19	-32.649	-43.242	-28.146	-33.321	-79.688	-55.715	-40.129	-27.16	-39.514	-24.963	-31.22
20	-32.652	-43.181	-27.573	-33.219	-79.069	-47.626	-40.75	-27.356	-39.667	-25.229	-31.828
21	-29.846	-36.51	-26.753	-28.349	-66.516	-47.373	-37.252	-27.075	-32.443	-23.387	-26.061
22	-29.791	-36.153	-26.832	-28.718	-66.573	-47.452	-37.229	-27.783	-32.989	-24.281	-27.281
23	-32.407	-42.78	-28.006	-33.286	-79.499	-55.95	-40.232	-27.212	-39.756	-24.894	-31.203
24	-32.929	-43.196	-28.409	-33.401	-77.749	-47.295	-40.795	-27.405	-40.108	-24.922	-31.333
25	-32.637	-43.277	-28.631	-33.517	-83.629	-47.395	-40.745	-27.335	-39.77	-25.578	-31.567
26	-29.662	-36.863	-28.092	-28.272	-66.56	-47.475	-37.466	-27.511	-32.747	-25.156	-26.969
27	-29.957	-36.1	-31.625	-31.113	-66.813	-47.731	-37.773	-27.675	-32.647	-25.222	-27.021
28	-32.739	-43.827	-27.715	-33.4	-79.917	-47.005	-40.918	-27.413	-40.131	-24.574	-31.47
29	-32.73	-43.681	-27.961	-33.2	-82.191	-55.909	-40.832	-27.579	-40.381	-24.861	-31.366
30	-32.489	-43.727	-27.481	-33.358	-79.447	-47.285	-40.376	-27.025	-39.802	-24.359	-30.999
31	-32.751	-44.078	-28.011	-34.203	-66.85	-47.72	-40.808	-27.181	-39.45	-25.005	-32.292
32	-32.638	-43.588	-27.56	-33.018	-75.923	-47.247	-40.465	-27.548	-40.009	-25.253	-31.61
33	-32.455	-43.364	-27.504	-33.22	-75.176	-47.389	-40.669	-27.125	-39.288	-24.866	-31.165
34	-32.635	-43.297	-28.504	-33.536	-79.176	-47.106	-40.012	-27.52	-39.539	-26.153	-31.829
35	-29.621	-36.099	-26.538	-28.333	-66.743	-47.746	-37.539	-27.253	-32.59	-23.469	-26.205
36	-29.779	-36.3	-26.348	-28.049	-66.842	-47.39	-37.406	-27.45	-32.709	-23.524	-26.453
37	-32.878	-43.436	-28.925	-33.576	-80.981	-55.95	-40.19	-31.903	-39.529	-24.629	-30.846
38	-29.671	-36.251	-26.666	-28.431	-66.65	-47.667	-37.441	-27.078	-32.219	-23.513	-26.361
39	-32.698	-43.711	-28.612	-33.472	-79.956	-47.098	-40.58	-27.181	-39.813	-25.138	-31.13
40	-32.843	-43.26	-28.728	-33.475	-66.807	-47.967	-40.628	-27.519	-40.086	-25.138	-31.609
41	-32.711	-43.565	-28.477	-33.411	-86.051	-47.259	-40.329	-27.216	-39.883	-25.094	-31.156
42	-29.73	-36.24	-26.775	-28.063	-66.531	-47.243	-37.275	-27.333	-32.551	-23.758	-26.391
43	-32.755	-43.93	-28.164	-33.331	-86.952	-47.456	-40.58	-27.199	-39.904	-24.763	-31.352
44	-29.759	-36.284	-26.366	-28.192	-66.928	-47.047	-37.814	-27.437	-32.831	-23.428	-26.403
45	-29.768	-36.054	-26.664	-28.319	-66.173	-47.728	-37.522	-27.131	-32.258	-23.471	-26.284
46	-29.696	-36.081	-26.752	-28.417	-66.703	-47.925	-37.776	-27.395	-32.541	-23.902	-26.608
47	-29.68	-36.577	-26.098	-28.107	-66.963	-47.228	-37.125	-27.836	-32.837	-23.175	-26.043
48	-29.485	-36.185	-25.911	-28.286	-66.686	-47.042	-37.753	-27.298	-32.689	-23.2	-26.182
49	-29.309	-36.316	-29.148	-31.802	-66.27	-47.239	-37.03	-27.654	-32.858	-24.213	-26.806
50	-32.654	-43.305	-28.339	-33.43	-76.629	-55.653	-40.382	-27.405	-39.884	-25.274	-31.495