Eight Discipline Report (8D Report)

To:

From:：Chicony Power Technology

CC： N/A

8D report No.: CPCQ0421

RMA claim No.: N/A

Chicony P/N: A045R00CH-HW01-0A

Customer P/N:

Submit date: 2015/05/11

Receive date: 2015/04/21

Product description: 45W adapter

Defect D/C or Lot No.: WEJZB0AGC7J0D2(Version 0A)

Subject：45W adapter sample ISN failed

D1.) 問題解決成員:Use Team Approach

主持者 (Team Leader)：Henry_Zhang

內部成員 (Internal Team Members):

CQS	Ganjian_Guan
MFG	Ice_Liu
IPQC/QE	BL_Zhang
PE	Changchun_Li
TE	Zhaohui_Shen
TPE	Brandon/Frankly/Jackson

外部成員 (External Team Member):

N/A

D2.)問題說明:Problem Description:

(Note: Use who, what, when, where, why, how, how many to specify the Customer's problem.)

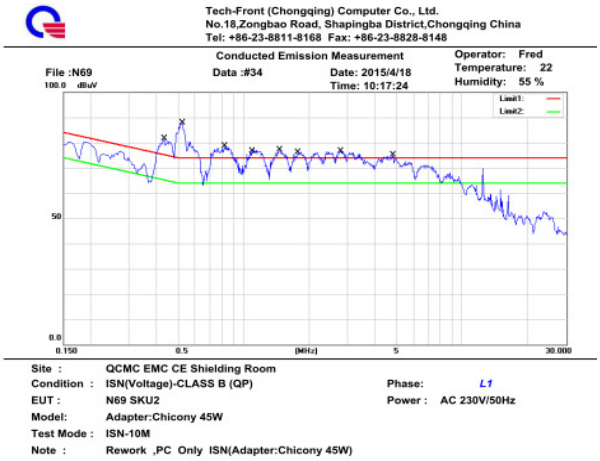
2015/4/21,廣達反饋有 1pcs A045R00CH 於 ISN 測試 Fail

Vendor P/N: A045R00CH-HW01-0A

Defect S/N & Defect D/C: Fail sample: WEJZB0AGC7J0D2(Version 0A)

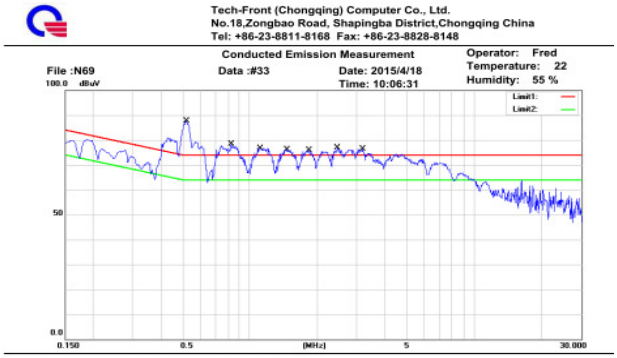
良機與不良機於客戶端之測試結果如下:

Fail sample: (Version 0A S/N: WEJZB0AGC7J0D2)



Site : QCMC EMC CE Shielding Room
Condition : ISN(Voltage)-CLASS B (QP) Phase: L1
EUT : N69 SKU2 Power : AC 230V/50Hz
Model: Adapter:Chicony 45W
Test Mode : ISN-10M
Note : Rework ,PC Only ISN(Adapter:Chicony 45W)

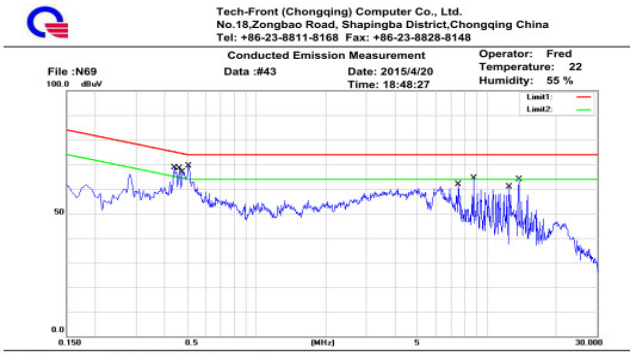
Mk.	No.	Frequency (MHz)	Reading (dBuV)	Detector	Correction factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
X	1	0.4380	59.09	QP	19.34	78.43	75.10	3.33	
X	2	0.4380	52.15	AVG	19.34	71.49	65.10	6.39	
X	3	0.5197	65.76	QP	19.31	85.07	74.00	11.07	
*	4	0.5197	60.12	AVG	19.31	79.43	64.00	15.43	
X	5	0.8363	56.07	QP	19.23	75.30	74.00	1.30	
X	6	0.8363	51.06	AVG	19.23	70.29	64.00	6.29	
	7	1.0947	54.56	QP	19.20	73.76	74.00	-0.24	
X	8	1.0947	49.79	AVG	19.20	68.99	64.00	4.99	
	9	1.4629	54.21	QP	19.25	73.46	74.00	-0.54	
X	10	1.4629	49.54	AVG	19.25	68.79	64.00	4.79	
	11	1.7801	53.47	QP	19.19	72.66	74.00	-1.34	
X	12	1.7801	48.70	AVG	19.19	67.89	64.00	3.89	
	13	2.8098	54.32	QP	19.13	73.45	74.00	-0.55	
X	14	2.8098	49.41	AVG	19.13	68.54	64.00	4.54	
	15	4.7941	51.17	QP	19.16	70.33	74.00	-3.67	
X	16	4.7941	45.78	AVG	19.16	64.94	64.00	0.94	



Site : QCMC EMC CE Shielding Room
Condition : ISN(Voltage)-CLASS B (QP) Phase: L1
EUT : N69 SKU2 Power : AC 230V/50Hz
Model: Adapter:Chicony 45W
Test Mode : ISN-100M
Note : Rework ,PC Only ISN(Adapter:Chicony 45W)

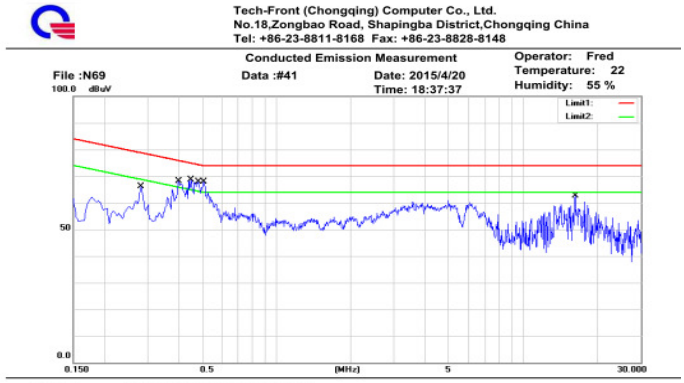
Mk.	No.	Frequency (MHz)	Reading (dBuV)	Detector	Correction factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
X	1	0.5206	66.28	QP	19.31	85.59	74.00	11.59	
*	2	0.5206	59.58	AVG	19.31	78.89	64.00	14.89	
X	3	0.8393	55.90	QP	19.23	75.13	74.00	1.13	
X	4	0.8393	50.47	AVG	19.23	69.70	64.00	5.70	
	5	1.0991	54.10	QP	19.20	73.30	74.00	-0.70	
X	6	1.0991	49.13	AVG	19.20	68.33	64.00	4.33	
	7	1.4781	53.91	QP	19.25	73.16	74.00	-0.84	
X	8	1.4781	49.27	AVG	19.25	68.52	64.00	4.52	
	9	1.8274	53.34	QP	19.18	72.52	74.00	-1.48	
X	10	1.8274	48.73	AVG	19.18	67.91	64.00	3.91	
	11	2.4468	53.84	QP	19.12	72.96	74.00	-1.04	
X	12	2.4468	49.06	AVG	19.12	68.18	64.00	4.18	
	13	3.1431	53.35	QP	19.13	72.48	74.00	-1.52	
X	14	3.1431	48.22	AVG	19.13	67.35	64.00	3.35	

Pass sample:



Site : QCMC EMC CE Shielding Room
Condition : ISN(Voltage)-CLASS B (QP) Phase: L1
EUT : N69 SKU2 Power : AC 230V/50Hz
Model: Adapter:Chicony 45W
Test Mode : ISN-10M
Note : Rework ,PC Only ISN(Adapter: Use SKU3 Chicony A045R00CH 45W)

Mk.	No.	Frequency (MHz)	Reading (dBuV)	Detector	Correction factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	1	0.4419	41.58	QP	19.34	60.92	75.03	-14.11	
	2	0.4419	35.70	AVG	19.34	55.04	65.03	-9.99	
	3	0.4658	37.40	QP	19.33	56.73	74.59	-17.86	
	4	0.4658	31.02	AVG	19.33	50.35	64.59	-14.24	
	5	0.4762	45.52	QP	19.33	64.85	74.41	-9.56	
*	6	0.4762	38.75	AVG	19.33	58.08	64.41	-6.33	
	7	0.5080	43.68	QP	19.32	63.00	74.00	-11.00	
	8	0.5080	36.26	AVG	19.32	55.58	64.00	-8.42	
	9	7.5004	41.95	QP	19.18	61.13	74.00	-12.87	
	10	7.5004	35.45	AVG	19.18	54.63	64.00	-9.37	
	11	8.7422	26.21	QP	19.20	45.41	74.00	-28.59	
	12	8.7422	18.64	AVG	19.20	37.84	64.00	-26.16	
	13	12.4986	41.44	QP	19.27	60.71	74.00	-13.29	
	14	12.4986	34.12	AVG	19.27	53.39	64.00	-10.61	
	15	13.7490	36.38	QP	19.29	55.67	74.00	-18.33	
	16	13.7490	29.33	AVG	19.29	48.62	64.00	-15.38	



Site : QCMC EMC CE Shielding Room
Condition : ISN(Voltage)-CLASS B (QP) Phase: L1
EUT : N69 SKU2 Power : AC 230V/50Hz
Model: Adapter:Chicony 45W
Test Mode : ISN-100M
Note : Rework ,PC Only ISN(Adapter: Use SKU3 Chicony A045R00CH 45W)

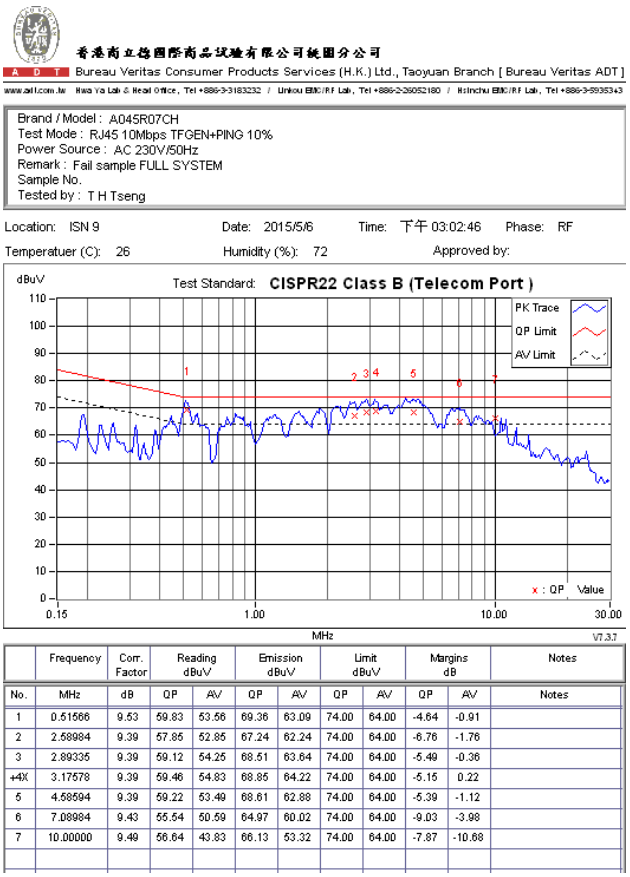
Mk.	No.	Frequency (MHz)	Reading (dBuV)	Detector	Correction factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	1	0.2810	43.90	QP	19.47	63.37	78.79	-15.42	
	2	0.2810	42.11	AVG	19.47	61.58	68.79	-7.21	
	3	0.4028	45.57	QP	19.36	64.93	75.80	-10.87	
	4	0.4028	39.17	AVG	19.36	58.53	65.80	-7.27	
	5	0.4500	44.14	QP	19.34	63.48	74.88	-11.40	
	6	0.4500	33.90	AVG	19.34	53.24	64.88	-11.64	
	7	0.4810	44.62	QP	19.33	63.95	74.32	-10.37	
	8	0.4810	39.04	AVG	19.33	58.37	64.32	-5.95	
	9	0.5080	41.06	QP	19.32	60.38	74.00	-13.62	
	10	0.5080	31.35	AVG	19.32	50.67	64.00	-13.33	
	11	16.2286	42.90	QP	19.36	62.26	74.00	-11.74	
*	12	16.2286	40.57	AVG	19.36	59.93	64.00	-4.07	

D3.)內部或客戶的暫時解決辦法及實施日期:Implement and Verify Containment Action:

(Note: Internal / external containment action effectiveness and date.)

1. 4/23 前往客戶端更換不良品,4/27 RD 收到不良品至 3rd party 驗證，測試結果跟廣達不良品曲線類似，測試結果 Fail.

   不良機 3rd party 測試結果:



香港商立德國際商品試驗有限公司桃園分公司
Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch [Bureau Veritas ADT]

Brand / Model : A045R07CH
Test Mode : RJ45 10Mbps TFGEN+PING 10%
Power Source : AC 230V/50Hz
Remark : Fail sample FULL SYSTEM
Sample No.
Tested by : T H Tseng

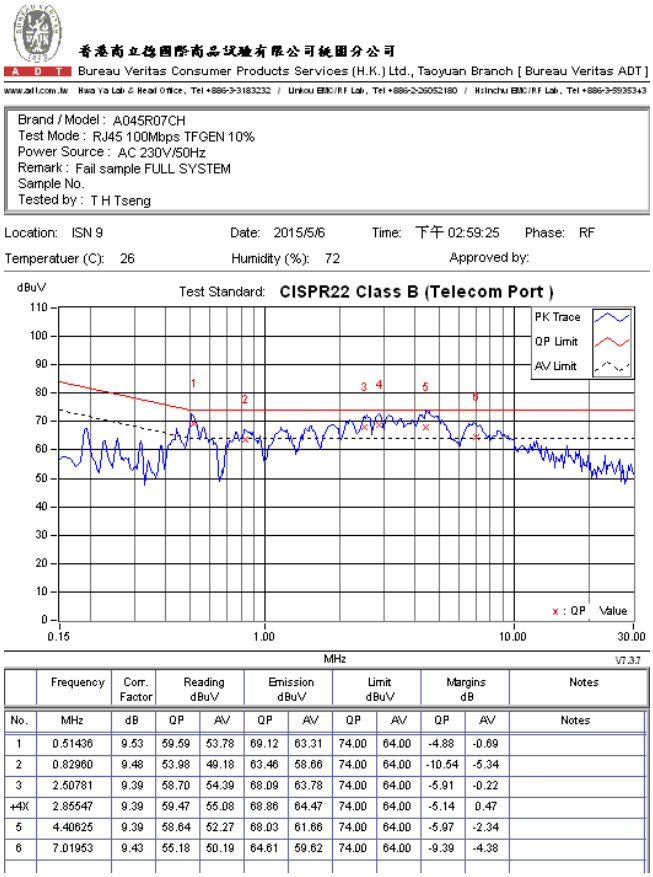
Location: ISN 9 Date: 2015/5/6 Time: 下午 03:02:46 Phase: RF
Temperatuer (C): 26 Humidity (%): 72 Approved by:

Test Standard: CISPR22 Class B (Telecom Port)

PK Trace
QP Limit
AV Limit
x : QP Value

MHz V7.3.7

No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.51666	9.53	59.83	53.56	69.36	63.09	74.00	64.00	-4.64	-0.91	
2	2.58984	9.39	57.85	52.85	67.24	62.24	74.00	64.00	-6.76	-1.76	
3	2.89335	9.39	59.12	54.25	68.51	63.64	74.00	64.00	-5.49	-0.36	
+4X	3.17578	9.39	59.46	54.83	68.85	64.22	74.00	64.00	-5.15	0.22	
5	4.58594	9.39	59.22	53.49	68.61	62.88	74.00	64.00	-5.39	-1.12	
6	7.08984	9.43	55.64	50.59	64.97	60.02	74.00	64.00	-9.03	-3.98	
7	10.00000	9.49	56.64	43.83	66.13	53.32	74.00	64.00	-7.87	-10.68	



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Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch [Bureau Veritas ADT]

Brand / Model : A045R07CH
Test Mode : RJ45 100Mbps TFGEN 10%
Power Source : AC 230V/50Hz
Remark : Fail sample FULL SYSTEM
Sample No.
Tested by : T H Tseng

Location: ISN 9 Date: 2015/5/6 Time: 下午 02:59:25 Phase: RF
Temperatuer (C): 26 Humidity (%): 72 Approved by:

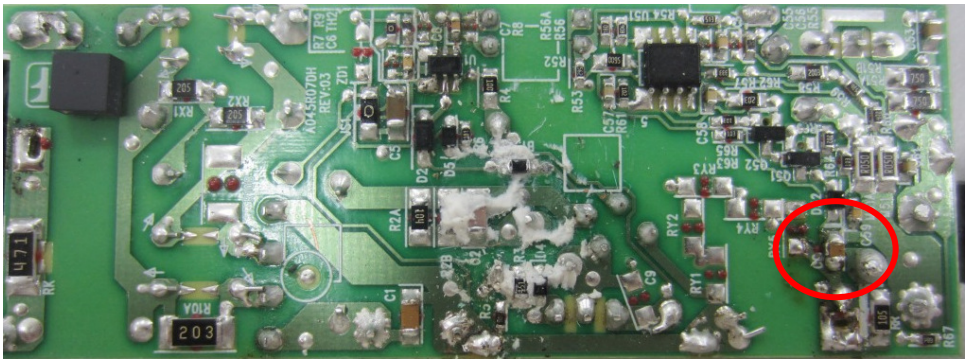
Test Standard: CISPR22 Class B (Telecom Port)

PK Trace
QP Limit
AV Limit
x : QP Value

MHz V7.3.7

No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.51436	9.53	59.59	53.78	69.12	63.31	74.00	64.00	-4.88	-0.69	
2	0.82960	9.48	53.98	49.18	63.46	58.66	74.00	64.00	-10.54	-5.34	
3	2.50781	9.39	58.70	54.39	68.09	63.78	74.00	64.00	-5.91	-0.22	
+4X	2.85547	9.39	59.47	55.08	68.86	64.47	74.00	64.00	-5.14	0.47	
5	4.40625	9.39	58.64	52.27	68.03	61.66	74.00	64.00	-5.97	-2.34	
6	7.01953	9.43	55.18	50.19	64.61	59.62	74.00	64.00	-9.39	-4.38	

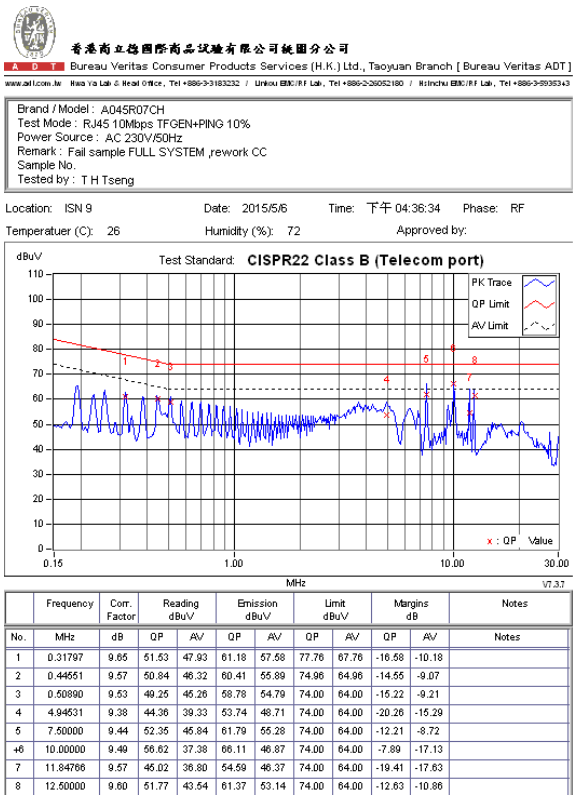
2. 拆開樣機確認,發現產品 CC 位置有補焊痕跡,且表面有微小裂痕，量測 CC 電容單體阻抗為 11kohm，阻抗偏低(正常樣品 CC 電容阻抗為開路)。



CC 零件表面有微小裂痕

3. 更換 CC 零件後,重新測試 ISN 結果如下，不良現象可改善，測試結果 Pass。

不良機更換 CC 後之測試結果:



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Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch [Bureau Veritas ADT]

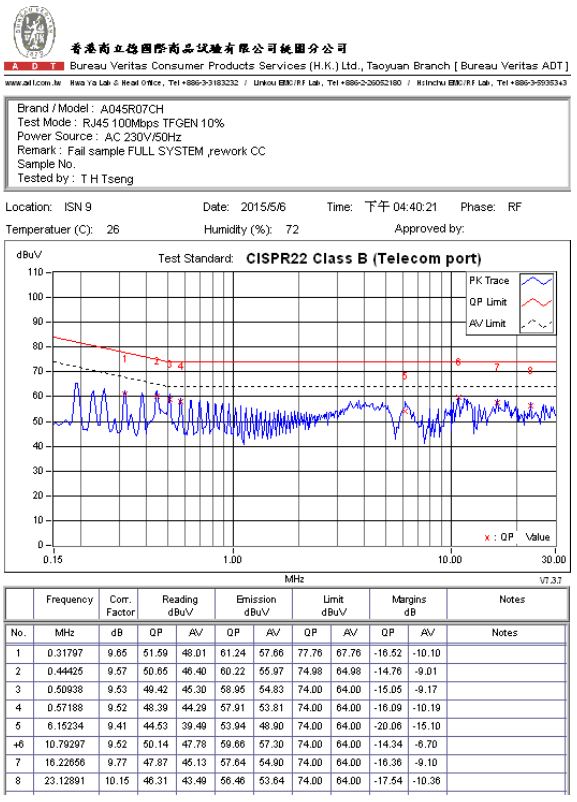
Brand / Model : A045R07CH
Test Mode : RJ45 10Mbps TFGEN+PING 10%
Power Source : AC 230V/50Hz
Remark : Fail sample FULL SYSTEM ,rework CC
Sample No.
Tested by : T H Tseng

Location: ISN 9 Date: 2015/5/6 Time: 下午 04:36:34 Phase: RF
Temperatuer (C): 26 Humidity (%): 72 Approved by:

Test Standard: CISPR22 Class B (Telecom port)

PK Trace
QP Limit
AV Limit
x : QP Value

No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.31797	9.65	51.53	47.93	61.18	57.58	77.76	67.76	-16.58	-10.18	
2	0.44551	9.57	50.84	46.32	60.41	55.89	74.96	64.96	-14.55	-9.07	
3	0.50890	9.53	49.25	45.26	58.78	54.79	74.00	64.00	-15.22	-9.21	
4	4.94531	9.38	44.36	39.33	53.74	48.71	74.00	64.00	-20.26	-15.29	
5	7.50000	9.44	52.35	45.84	61.79	55.28	74.00	64.00	-12.21	-8.72	
+6	10.00000	9.49	56.62	37.38	66.11	46.87	74.00	64.00	-7.89	-17.13	
7	11.84766	9.57	45.02	36.80	54.59	46.37	74.00	64.00	-19.41	-17.63	
8	12.50000	9.60	51.77	43.54	61.37	53.14	74.00	64.00	-12.63	-10.86	



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Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch [Bureau Veritas ADT]

Brand / Model : A045R07CH
Test Mode : RJ45 100Mbps TFGEN 10%
Power Source : AC 230V/50Hz
Remark : Fail sample FULL SYSTEM ,rework CC
Sample No.
Tested by : T H Tseng

Location: ISN 9 Date: 2015/5/6 Time: 下午 04:40:21 Phase: RF
Temperatuer (C): 26 Humidity (%): 72 Approved by:

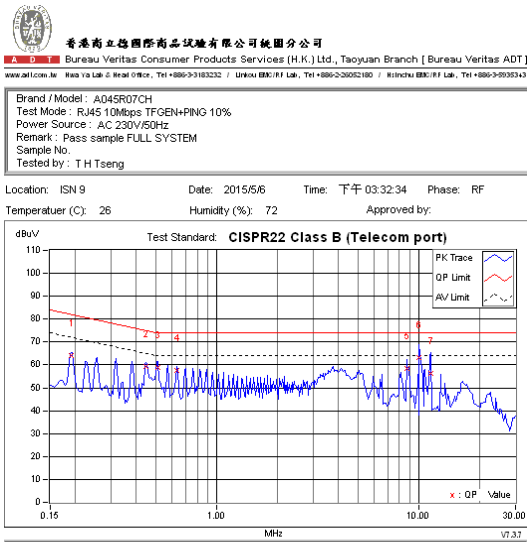
Test Standard: CISPR22 Class B (Telecom port)

PK Trace
QP Limit
AV Limit
x : QP Value

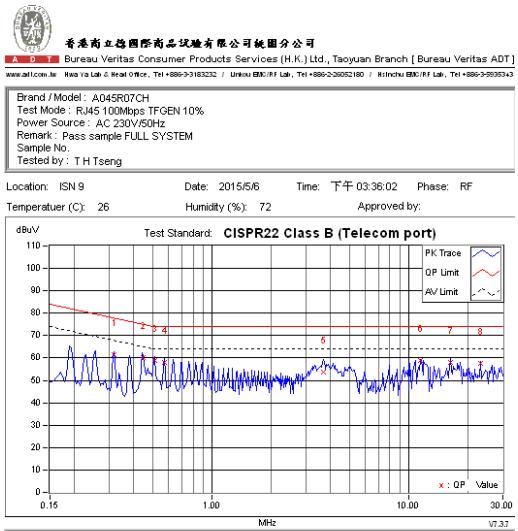
No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.31797	9.65	51.59	48.01	61.24	57.66	77.76	67.76	-16.52	-10.10	
2	0.44425	9.57	50.65	46.40	60.22	55.97	74.98	64.98	-14.76	-9.01	
3	0.50938	9.53	49.42	45.30	58.95	54.83	74.00	64.00	-15.05	-9.17	
4	0.57188	9.52	48.39	44.29	57.91	53.81	74.00	64.00	-16.09	-10.19	
5	6.15234	9.41	44.53	39.49	53.94	48.90	74.00	64.00	-20.06	-15.10	
+6	10.79297	9.52	50.14	47.78	59.66	57.30	74.00	64.00	-14.34	-6.70	
7	16.22656	9.77	47.87	45.13	57.64	54.90	74.00	64.00	-16.36	-9.10	
8	23.12891	10.15	46.31	43.49	56.46	53.64	74.00	64.00	-17.54	-10.36	

4. 額外驗證 2pcs 樣機，測試結果與修復後之不良機曲線近似，可確認不良樣機測試失效原因為 CC 零件。

Sample 2:

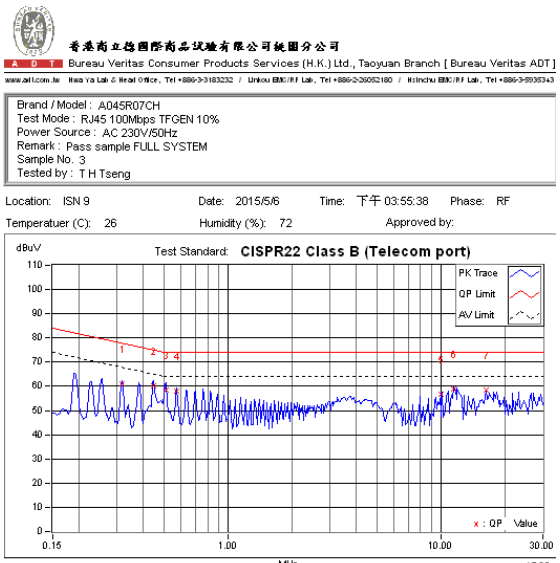


No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.19119	9.73	54.56	51.19	64.29	60.92	81.98	71.98	-17.69	-11.06	
2	0.44425	9.57	49.95	46.06	59.52	55.63	74.98	64.98	-15.46	-9.35	
+3	0.50890	9.53	49.46	45.36	58.99	54.89	74.00	64.00	-15.01	-9.11	
4	0.63438	9.51	48.02	43.93	57.53	53.44	74.00	64.00	-16.47	-10.56	
5	8.75000	9.46	48.83	42.24	58.29	51.70	74.00	64.00	-15.71	-12.30	
6	10.00000	9.49	53.77	37.14	63.26	46.63	74.00	64.00	-10.74	-17.37	
7	11.41406	9.55	46.79	38.77	56.34	48.32	74.00	64.00	-17.66	-15.68	

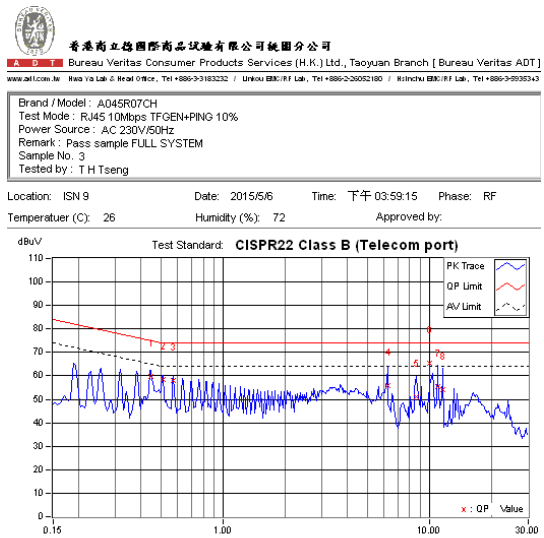


No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.31797	9.65	51.73	48.13	61.38	57.78	77.76	67.76	-16.38	-9.98	
2	0.44560	9.57	50.59	46.08	60.16	55.65	74.96	64.96	-14.80	-9.31	
3	0.50801	9.53	49.39	45.34	58.92	54.87	74.00	64.00	-15.08	-9.13	
4	0.57188	9.52	48.45	44.45	57.97	53.97	74.00	64.00	-16.03	-10.03	
5	3.68750	9.40	44.23	38.71	53.63	48.11	74.00	64.00	-20.37	-15.89	
+6	11.46484	9.55	49.25	47.74	58.80	57.29	74.00	64.00	-15.20	-6.71	
7	16.22922	9.77	48.46	45.53	58.23	55.30	74.00	64.00	-15.77	-8.70	
8	23.12891	10.15	47.40	45.12	57.55	55.27	74.00	64.00	-16.45	-8.73	

Sample 3:



No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.31797	9.65	51.61	48.05	61.26	57.70	77.76	67.76	-16.50	-10.06	
2	0.44433	9.57	50.53	46.26	60.10	55.83	74.98	64.98	-14.88	-9.15	
3	0.50889	9.53	49.07	45.20	58.60	54.73	74.00	64.00	-15.40	-9.27	
4	0.57188	9.52	48.41	44.35	57.93	53.87	74.00	64.00	-16.07	-10.13	
5	9.93928	9.49	47.12	44.07	56.61	53.56	74.00	64.00	-17.39	-10.44	
+6	11.46484	9.55	49.37	47.88	58.92	57.43	74.00	64.00	-15.08	-6.57	
7	16.22910	9.77	48.74	45.96	58.51	55.73	74.00	64.00	-15.49	-8.27	



No.	Frequency MHz	Corr. Factor dB	Reading dBuV QP	Reading dBuV AV	Emission dBuV QP	Emission dBuV AV	Limit dBuV QP	Limit dBuV AV	Margins dB QP	Margins dB AV	Notes
1	0.44552	9.57	50.29	46.24	59.86	55.81	74.96	64.96	-15.10	-9.15	
2	0.50890	9.53	49.09	45.28	58.62	54.81	74.00	64.00	-15.38	-9.19	
3	0.57188	9.52	48.41	44.35	57.93	53.87	74.00	64.00	-16.07	-10.13	
4	6.25000	9.41	46.61	40.77	56.02	50.18	74.00	64.00	-17.98	-13.82	
5	8.58594	9.46	41.80	35.29	51.26	44.75	74.00	64.00	-22.74	-19.25	
+6	10.00000	9.49	55.70	37.20	65.19	46.69	74.00	64.00	-8.81	-17.31	
7	10.92578	9.53	46.11	38.93	55.64	48.46	74.00	64.00	-18.36	-15.54	
8	11.57813	9.56	44.66	36.62	54.22	46.18	74.00	64.00	-19.78	-17.82	

D4.)不良原因確認: Define and Verify Root Causes:

(Note: Identify and verify all suspect causes, which needs explain why the problem occurred.)

1. 生產記錄：

根據退回產品 S/N，查詢廠內 SFCS 記錄，確認不良品當時有 RRCC 不良并有 repair 記錄.

Travel | Repair | Quality Control | KeyParts | Rework | Work Order | Current | Burn In |

Stage Name	Process Name	Terminal Name	Assign Process	Current Status	Work Flag	In Process Time	Out Process Time	In PDLir
PACKING	HIPOT/GROUN	HIPOT/GROUN		Normal	Normal	2014/9/9 上午 11:34:5	2014/9/9 上午 11:36:2	2014/9/E
PACKING	FINAL-ATE1	FINAL-ATE101		Normal	Normal	2014/9/9 上午 11:36:2	2014/9/9 上午 11:36:4	2014/9/E
PACKING	FINAL-ATE2	FINAL-ATE201		Normal	Normal	2014/9/9 上午 11:36:4	2014/9/9 上午 11:37:3	2014/9/E
PACKING	RRCC	RRCC01		Fail	Normal	2014/9/9 上午 11:37:3	2014/9/9 上午 11:37:4	2014/9/E
REPAIR	REPAIR	REPAIR01	PRE-ATE	Normal	Normal	2014/9/9 上午 11:37:4	2014/9/9 下午 03:17:2	2014/9/E
FINAL ASSEM	PRE-ATE	PRE-ATE02		Normal	Normal	2014/9/9 下午 03:17:2	2014/9/9 下午 08:17:1	2014/9/E
PACKING	SN CHECK	SN CHECK02		Normal	Normal	2014/9/9 下午 08:17:1	2014/9/10 上午 03:21	2014/9/E
PACKING	HIPOT/GROUN	HIPOT/GROUN		Normal	Normal	2014/9/10 上午 03:21	2014/9/10 上午 03:22	2014/9/E
PACKING	FINAL-ATE1	FINAL-ATE101		Normal	Normal	2014/9/10 上午 03:22	2014/9/10 上午 03:23	2014/9/E
PACKING	FINAL-ATE2	FINAL-ATE201		Normal	Normal	2014/9/10 上午 03:23	2014/9/10 上午 03:23	2014/9/E
PACKING	RRCC	RRCC01		Fail	Normal	2014/9/10 上午 03:23	2014/9/10 上午 03:23	2014/9/E
REPAIR	REPAIR	REPAIR01	ASSY	Normal	Normal	2014/9/10 上午 03:23	2014/9/10 下午 02:51	2014/9/E
FINAL ASSEM	ASSY	ASSY01		Normal	Normal	2014/9/10 下午 02:51	2014/9/12 上午 08:58	2014/9/E
FINAL ASSEM	ACT	ACT01		Normal	Normal	2014/9/12 上午 08:58	2014/9/12 下午 08:16	2014/9/E

WIP Process	ASSY	Carton No	N/A
Assign Process	ASSY	Box No	N/A

Travel | Repair | Quality Control | KeyParts | Rework | Work Order | Current | Burn In

Stage Name	Process Name	Defect Time	Defect Cd	Defect D	Reason Code	Reason DESC	DUTY	DUTY DESC
PACKING	RRCC	2014/09/09 11:37:46	RRCC		0X01	重測OK	1.0	測試設備誤測(CND)
PACKING	RRCC	2014/09/10 03:23:56	RRCC		SX05	元件偏移	3.0	作業不良(workmansh

2. 綜上所述：CC 零件破損造成 CC 阻抗偏低，導致客戶端 ISN 測試異常。CC 破損發生原因，從實物機台觀察，應為維修員補焊作業時不熟練，補焊 CC 時間較久，造成零件受損微裂，從而因間歇性接觸，而流入客戶導致不良發生。

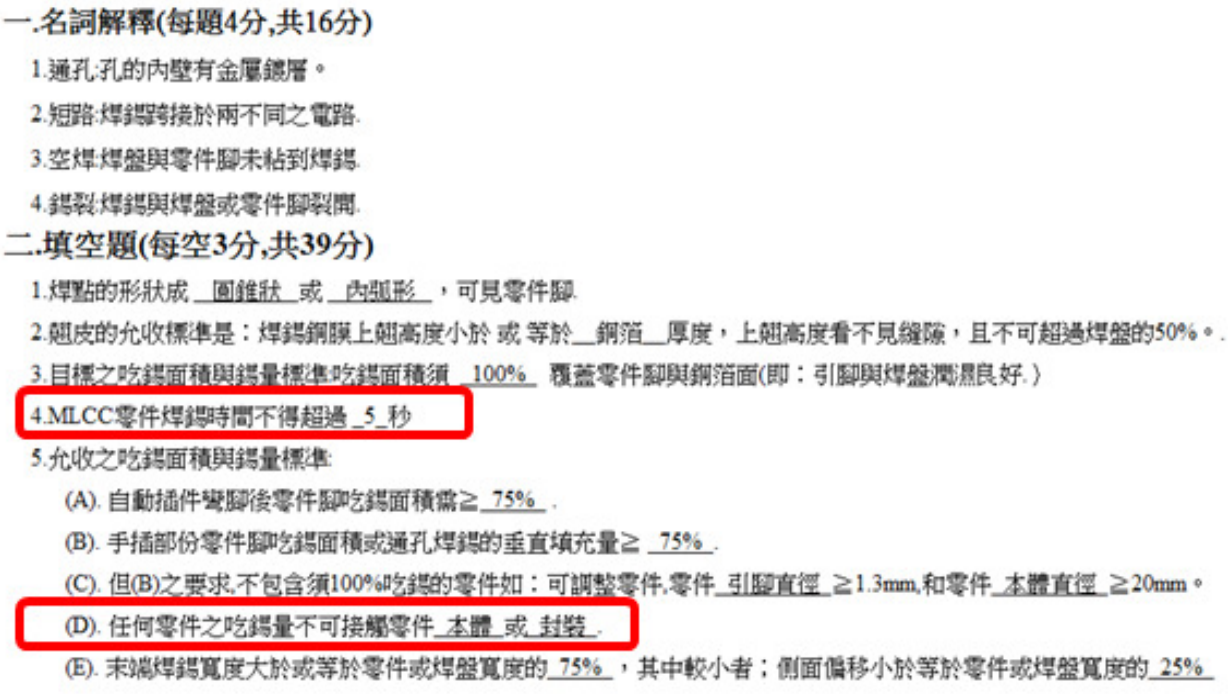
D5.)改善措施: improvement measure:

(Note: Be make sure the corrective actions is effective in process as well as able to fix the customer complaint problem)

改善對策

1. 針對新近維修人員必須接受焊錫培訓,人員都需焊錫理論和實際操作考核,並由 IPQC 發證后上崗.

2. 針對焊錫時間重點教育，對於 MLCC 零件必須焊錫時間不得超過 5 秒，且不得碰觸到 MLCC 本體



一.名詞解釋(每題4分,共16分)

1.通孔:孔的內壁有金屬鍍層。

2.短路:焊錫跨接於兩不同之電路.

3.空焊:焊盤與零件腳未粘到焊錫.

4.錫裂:焊錫與焊盤或零件腳裂開.

二.填空題(每空3分,共39分)

1.焊點的形狀成 圓錐狀 或 內弧形 ，可見零件腳.

2.翹皮的允收標準是：焊錫鋼膜上翹高度小於 或 等於 鋼箔 厚度，上翹高度看不見縫隙，且不可超過焊盤的50%。.

3.目標之吃錫面積與錫量標準:吃錫面積須 100% 覆蓋零件腳與銅箔面(即：引腳與焊盤潤濕良好.)

4.MLCC零件焊錫時間不得超過 5 秒

5.允收之吃錫面積與錫量標準:

(A). 自動插件彎腳後零件腳吃錫面積需≧ 75% .

(B). 手插部份零件腳吃錫面積或通孔焊錫的垂直填充量≧ 75% .

(C). 但(B)之要求,不包含須100%吃錫的零件如：可調整零件,零件 引腳直徑 ≧1.3mm,和零件 本體直徑 ≧20mm。

(D). 任何零件之吃錫量不可接觸零件 本體 或 封裝 .

(E). 末端焊錫寬度大於或等於零件或焊盤寬度的 75% ，其中較小者；側面偏移小於等於零件或焊盤寬度的 25%

D6.)改善措施實施日期:Implement Permanent Corrective Actions:

(Note: Be provide the phase-in date or lot# of corrective actions implementation in process)

Due date: 2015.5.14

D7.)預防再發生措施:Prevent Recurrence:

(Note: Modified the management, operating systems, practices, and procedures to prevent recurrence for the problems as well as lessons learned cases.)

QIT members and IPQC will continue trace this issue day by day.

D8.)確認並感謝問題解決成員:Check and Congratulate the Team:

(Note: Recognize the collective efforts of the team.)

Thanks to all QIT members.

Signature Team Leader: Henry_Zhang

Name – Title

Signature by Approver: Wade_Lo

Name-Title