



## EMC TEST REPORT

Test Report No. : KES-EM-21T0990  
Date of Issue : Oct. 14, 2021  
Product name : RF Card Reader  
Model/Type No. : T-40  
Variant Model : -  
Applicant : ARVRATECH Co., Ltd  
Applicant Address : Gasan 2nd HouseD The Sky Valley 1142 Beoman-ro,  
Geumcheon-gu, Seoul, South Korea  
Manufacturer : ARVRATECH Co., Ltd  
Manufacturer Address : Gasan 2nd HouseD The Sky Valley 1142 Beoman-ro,  
Geumcheon-gu, Seoul, South Korea  
FCC ID : 2AVVCT40  
Date of Receipt : Sep. 10, 2021  
Test date : Oct. 07, 2021 ~ Oct. 08, 2021  
Test Results : ☒ **In Compliance** ☐ **Not in Compliance**

Tested by

Dae Hyun, Kim  
EMC Test Engineer

Reviewed by

Ju Won, Yun  
EMC Technical Manager



## REPORT REVISION HISTORY

Date	Test Report No.	Revision History
Oct. 14, 2021	KES-EM-21T0990	Issued

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## 1.0 General Product Description

### Main Specifications of EUT are:

Item	Specifications
Operating Frequency	13.56 MHz
Power	DC 12 V (Adapter)
Port	RJ-45
Ethernet(RJ-45) Speed	(10 / 100) Mbps
Size	(157 x 68 x 35) mm



## 1.1 Test Voltage & Frequency

Unless indicated otherwise on the individual data sheet or test results, the test voltage and frequency was as indicated below.

☒ AC 120 V , 60 Hz (Adapter Input power)

## 1.2 Variant Model Differences

Not applicable

## 1.3 Device Modifications

Not applicable

## 1.4 Equipment Under Test

Description	Model Number	Serial Number	Manufacturer	Remarks
RF Card Reader	T-40	-	ARVRATECH Co., Ltd	EUT
Adapter	SW40-05004000-WA1	-	ShenZhen Smart Power Technology Co., Ltd.	EUT

## 1.5 Support Equipments

Description	Model Number	Serial Number	Manufacturer	Remarks
Tag	-	-	-	-
Notebook	P98F004	21599158359	DELL INC.	-
Notebook Adapter	LA240PM190	-	LITE-ON TECHNOLOGY (CHANGZHOU)CO.,LTD.	-
Router	IpTIME N1 plus	-	IpTime	-
Router Adapter	DCP024B121000K	-	ZIONCOM ELECTRONICS (SHENZHEN) LTD.	-

## 1.6 External I/O Cabling

### ■ RFID Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
RF Card Reader (EUT)	DC Jack	Adapter (EUT)	DC Jack	1.5	U
	Wireless	Tag	Wireless	-	-

\* Unshielded = U, Shielded = S

### ■ LAN Mode

Start		END		Cable Spec.	
Description	I/O Port	Description	I/O Port	Length	Shield
RF Card Reader (EUT)	DC Jack	Adapter (EUT)	DC Jack	1.5	U
	RJ-45 (LAN)	Router	RJ-45 (LAN)	3.0	U
Router	RJ-45 (LAN)	Notebook	RJ-45 (LAN)	1.8	U
Router	DC Jack	Router Adapter	DC Jack	1.5	U
Notebook	DC Jack	Notebook Adapter	DC Jack	2.3	S

\* Unshielded = U, Shielded = S

## 1.7 EUT Operating Mode(s)

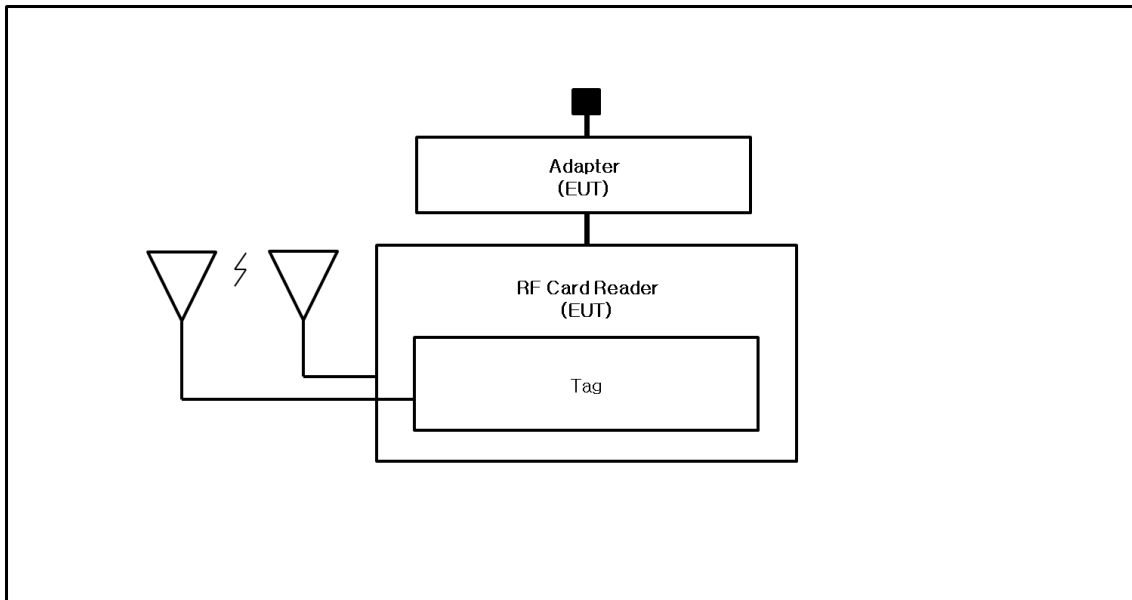
Test mode	operating
RFID	Tested while checking the communication status between EUT and Tag on the LCD screen.
LAN	EUT and Router, Notebook were connected with a LAN cable and Pingtest was continuously performed on EUT with Notebook.

EUT Test operating S/W		
Name	Version	Manufacture Company
-	-	-

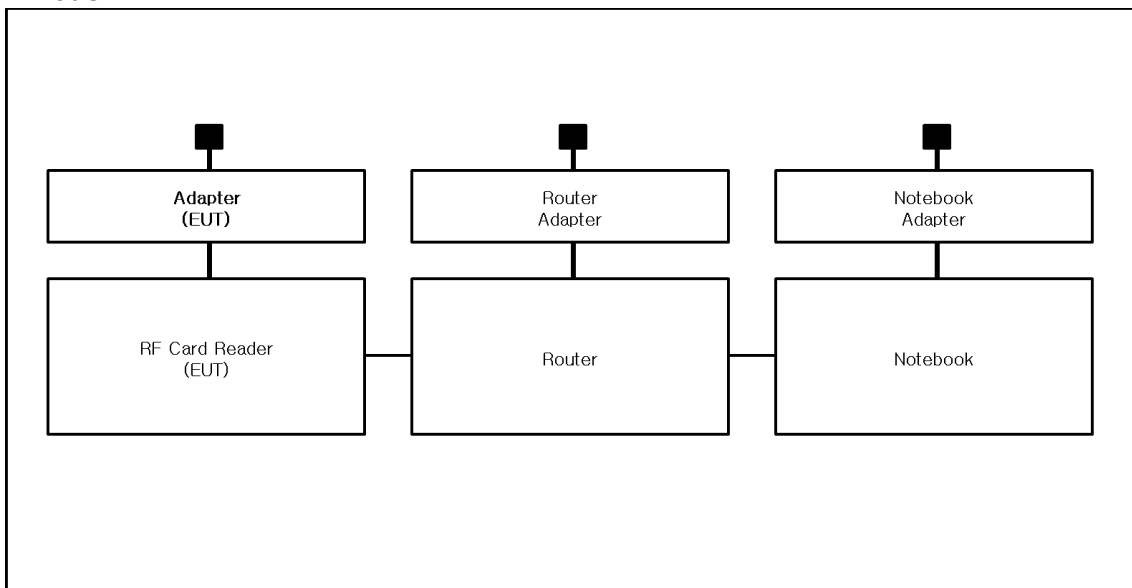
## 1.8 Configuration

■ AC Main  
 □ DC Main

### ■ RFID Mode



### ■ LAN Mode



## **1.9 Remarks when standards applied**

N/A

## **1.10 Calibration Details of Equipment Used for Measurement**

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less.

## **1.11 Test Facility**

The measurement facility is located at 473-21 Gayeo-ro, Yeosu-si, Gyeonggi-do, 12658, Korea. The sites are constructed in conformance with the requirements of ANSI C63.4:2014 and CISPR 16-1-4:2019

## **1.12 Measurement Procedure**

### **- Conducted Emissions**

The conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable). The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. If the conducted emission exceed the average limit with the instrument set to the quasi-peak mode, the measurements are made in the average mode. The emission spectrum was scanned from 150 kHz to 30 MHz. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded. Quasi-peak readings are distinguished with a "QP".







### **- Radiated Electric Field Emissions**

The test was done at a SEMI ANECHOIC CHAMBER with quasi-peak detector. The final test data was measured using a Quasi-Peak detector below 1 GHz at 10 m or 3 m distance and a Peak and Average detector above 1 GHz at 3 m distance. Test was proceeded worst case test mode and cable configuration. Measurements were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna height was varied from 1 m to 4 m and the EUT was rotated 360° to find the maximum emitting point for each frequency.

Measurement procedures was In accordance with ANSI C63.4-2014 7.3.3, 7.3.4, 8.3.1.1, 8.3.1.2, 8.3.2.1, 8.3.2.2



## 1.13 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Logo
KOREA	<b>RRA</b>	EMI (3 m & 10 m Semi-Aechoic Chamber ,10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KR0100
International	<b>KOLAS</b>	EMI (3 m & 10 m Semi-Aechoic Chamber , and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 KT489
USA	<b>FCC</b>	3 m & 10 m Semi-Aechoic Chamber, 10 m Open Area and Conducted test site to perform FCC Part 15/18 measurements.	 KR0100
Canada	<b>ISED</b>	3 m & 10 m Semi-Aechoic Chamber and Conducted test site	 23298-1
JAPAN	<b>VCCI</b>	Mains Ports Conducted Interference Measurement, Telecommunication Ports Conducted Disturbance Measurement and Radiation 10 meter site, Facility for measuring radiated disturbance above 1 GHz	 R-20056, C-20036 T-20040, G-20057
Europe	<b>TÜV SÜD</b>	EMI (3 m & 10 m Semi-Aechoic Chamber , 10 m Open Area and conducted test site) EMS (ESD, RS, EFT/Burst, Surge, CS, Magnetic, Dips and interruptions)	 CARAT 001633 0004

## 2.0 Test Regulations

The emissions tests were performed according to following regulations:

☐ **EMC – Directive 2014/30/EU**

☐ EN 61000-6-3:2011

☐ EN 61000-6-1:2007

☐ EN 61000-6-4:2007 +A1:2011

☐ EN 61000-6-2:2005

☐ EN 55011:2007 +A1:2010

☐ Group 1  
☐ Class A

☐ Group 2  
☐ Class B

☐ EN 55014-1:2006 +A2:2011

☐ EN 55014-2:1997 +A2:2008

☐ EN 55015:2013

☐ EN 55032:2015

☐ Class A

☐ Class B

☐ EN 55024:2010

☐ EN 50130-4:2011 +A1:2014

☐ EN 61000-3-2:2014

☐ EN 61000-3-3:2013

☐ EN 61326-1:2013



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- |  |                                  |   |
|--|----------------------------------|---|
| <input type="checkbox"/> <b>VCCI V-3 / 2015.04</b>                   | <input type="checkbox"/> Class A | <input type="checkbox"/> Class B            |
| <input type="checkbox"/> <b>AS/NZS:2013</b>                          | <input type="checkbox"/> Class A | <input type="checkbox"/> Class B            |
| <input checked="" type="checkbox"/> <b>47 CFR Part 15, Subpart B</b> |                                  |   |
| <input type="checkbox"/> CISPR 22:2009 +A1:2010                      | <input type="checkbox"/> Class A | <input type="checkbox"/> Class B            |
| <input checked="" type="checkbox"/> ANSI C63.4-2014                  | <input type="checkbox"/> Class A | <input checked="" type="checkbox"/> Class B |
| <input type="checkbox"/> <b>IC Regulation ICES-003 : 2016</b>        |                                  |   |
| <input type="checkbox"/> CAN/CSA CISPR 22-10                         | <input type="checkbox"/> Class A | <input type="checkbox"/> Class B            |
| <input type="checkbox"/> ANSI C63.4-2014                             | <input type="checkbox"/> Class A | <input type="checkbox"/> Class B            |
| <input type="checkbox"/> <b>RE- Directive 2014/53/EU</b>             |                                  |   |
| <input type="checkbox"/> EN 301 489-1 V1.9.2                         |                                  |   |
| <input type="checkbox"/> Equipment for fixed use                     |                                  |   |
| <input type="checkbox"/> Equipment for vehicular use                 |                                  |   |
| <input type="checkbox"/> Equipment for portable use                  |                                  |   |
| <input type="checkbox"/> EN 301 489-3 V1.6.1                         |                                  |   |
| <input type="checkbox"/> EN 301 489-17 V2.2.1                        |                                  |   |
| <input type="checkbox"/> EN 60945:2002                               |                                  |   |

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## 2.1 Conducted Emissions at Mains Power Ports

### Test Date

Oct. 07, 2021

### Test Location

Electro wave Shieldroom #6

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due	calibration interval
<input checked="" type="checkbox"/>	EMI Test S/W	EMC32	R & S	9.12.00	-	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESR3	R & S	101783	01, 15, 2022	1 Year
<input checked="" type="checkbox"/>	LISN	ENV216	R & S	101787	12, 29, 2021	1 Year
<input checked="" type="checkbox"/>	LISN	ESH2-Z5	R & S	100450	12, 29, 2021	1 Year
<input checked="" type="checkbox"/>	PULSE LIMITER	ESH3-Z2	R & S	101915	12, 29, 2021	1 Year

### Test Conditions

Temperature: (23,8 ± 0,1) °C

Relative Humidity: (50,1 ± 0,1) % R.H.

### Frequency Range of Measurement

150 kHz to 30 MHz

### Instrument Settings

IF Band Width: 9 kHz

### Test Results

The requirements are:

- ☒ PASS  
☐ NOT PASS  
☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.



## 2.2 Radiated Electric Field Emissions(Below 1 GHz)

### Test Date

Oct. 08, 2021

### Test Location

☐ OPEN AREA TEST SITE #2

☒ SEMI ANECHOIC CHAMBER #5

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due	calibration interval
<input checked="" type="checkbox"/>	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.120	-	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	04, 01, 2022	1 Year
<input checked="" type="checkbox"/>	BILOG ANTENNA	VULB 9168	SCHWARZBECK	9168-461	12, 22, 2022	2 Year
<input checked="" type="checkbox"/>	AMPLIFIER	310N	SONOMA INSTRUMENT	401123	06, 07, 2022	1 Year
<input checked="" type="checkbox"/>	ATTENUATOR	6806.17.A	HUBER+SUHNER	-	11, 03, 2021	1 Year

### Test Conditions

Temperature: (23,3 ± 0,2) °C

Relative Humidity: (48,2 ± 0,1) % R.H.

### Frequency Range of Measurement

30 MHz to 1 GHz

### Instrument Settings

IF Band Width: 120 kHz

### Test Results

The requirements are:

- ☒ PASS  
☐ NOT PASS  
☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.



## 2.3 Radiated Electric Field Emissions(Above 1 GHz)

### Test Date

Oct. 08, 2021

### Test Location

SEMI ANECHOIC CHAMBER #5

### Test Equipment

Used	Description	Model Number	Manufacturer	Serial Number	Cal. Due	calibration interval
<input checked="" type="checkbox"/>	EMI Test S/W	EP5/RE	TOYO Corporation	6.0.120	-	-
<input checked="" type="checkbox"/>	EMI TEST RECEIVER	ESU26	Rohde & Schwarz	100552	04, 01, 2022	1 Year
<input checked="" type="checkbox"/>	HORN ANTENNA	BBHA 9120D	SCHWARZBECK	9120D-1802	12, 14, 2021	1 Year
<input checked="" type="checkbox"/>	PREAMPLIFIER	8449B	HP	3008A00538	06, 21, 2022	1 Year

### Test Conditions

Temperature: (23,3 ± 0,1) °C

Relative Humidity: (48,2 ± 0,2) % R.H.

### Frequency Range of Measurement

1 GHz to 5 GHz

### Instrument Settings

IF Band Width: 1 MHz

### Test Results

The requirements are:

- ☒ PASS  
☐ NOT PASS  
☐ NOT APPLICABLE

### Remarks

See Appendix A for test data.

## APPENDIX A – TEST DATA

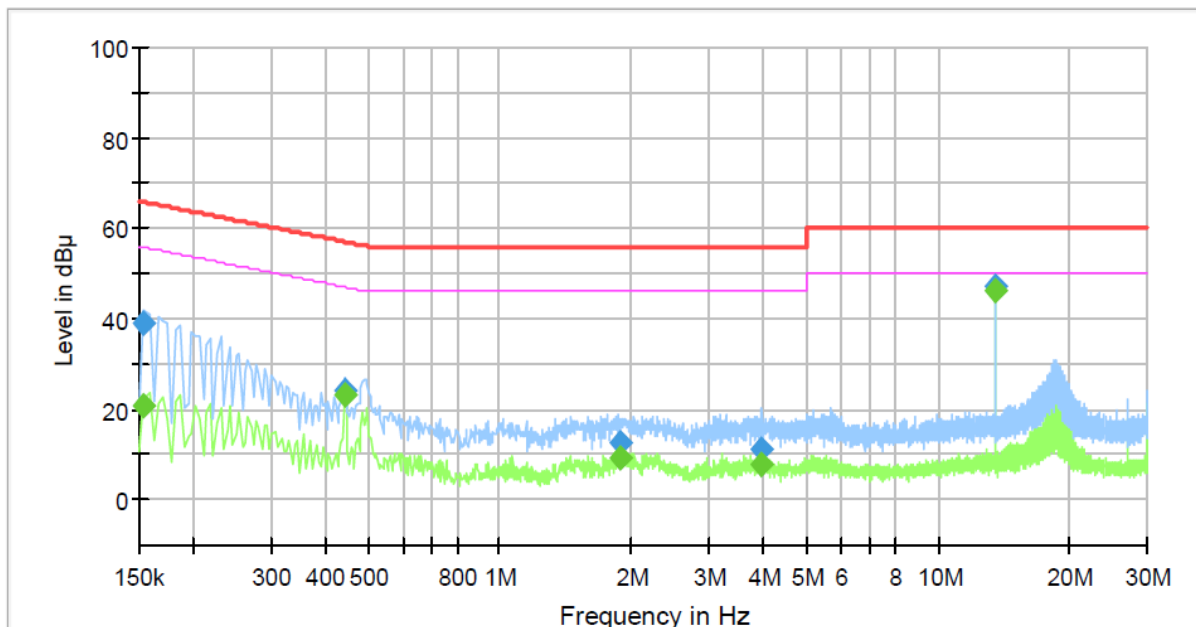
### Conducted Emissions at Mains Power Ports

■ RFID Mode

HOT LINE

#### Common Information

Test Description:	Conducted Emission
Model No.:	T-40
Phase:	
Mode:	RFID
Operator Name:	KES



### Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.154000	---	20.73	55.78	35.05	1000.0	9.000	L1	19.5
0.154000	38.90	---	65.78	26.88	1000.0	9.000	L1	19.5
0.442000	---	22.94	47.02	24.08	1000.0	9.000	L1	19.7
0.442000	24.24	---	57.02	32.78	1000.0	9.000	L1	19.7
1.886000	---	9.19	46.00	36.81	1000.0	9.000	L1	20.3
1.886000	12.71	---	56.00	43.29	1000.0	9.000	L1	20.3
3.966000	---	7.75	46.00	38.25	1000.0	9.000	L1	19.9
3.966000	11.10	---	56.00	44.90	1000.0	9.000	L1	19.9
13.562000	---	46.09	50.00	3.91	1000.0	9.000	L1	20.0
13.562000	47.06	---	60.00	12.94	1000.0	9.000	L1	20.0

\* Operating Frequency

- Fundamental Frequency Band : 13.56 MHz

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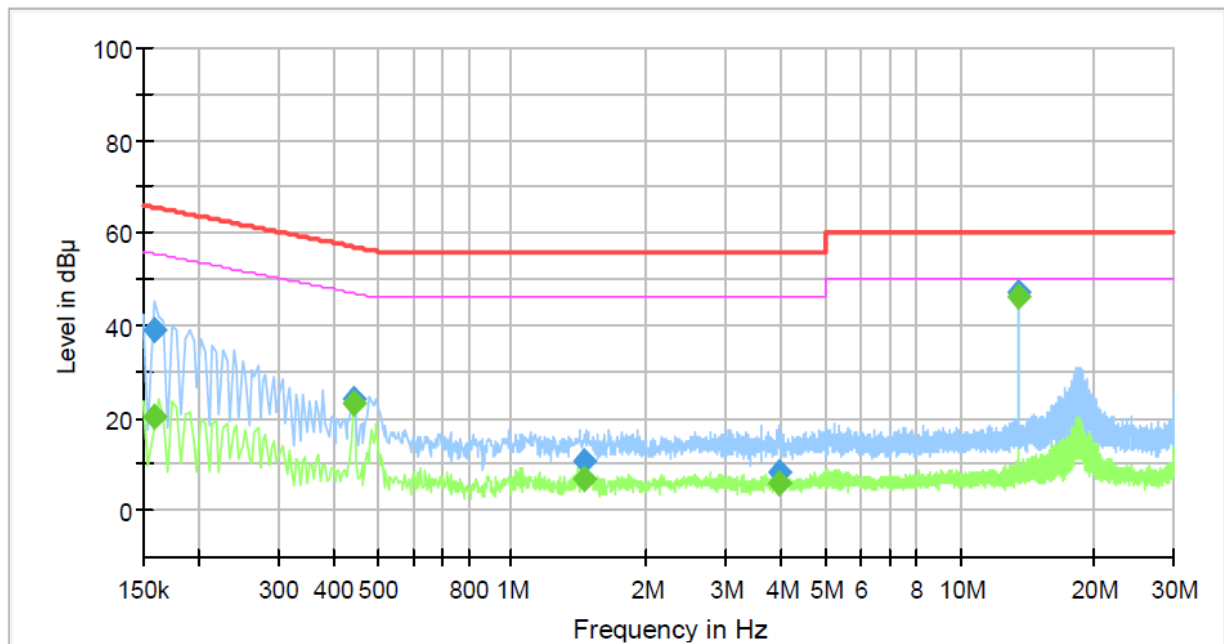
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### NEUTRAL LINE

## Common Information

Test Description: Conducted Emission  
Model No.: T-40  
Phase:  
Mode: RFID  
Operator Name: KES



## Final\_Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.158000	---	20.30	55.57	35.27	1000.0	9.000	N	19.4
0.158000	38.86	---	65.57	26.71	1000.0	9.000	N	19.4
0.442000	---	22.91	47.02	24.11	1000.0	9.000	N	19.7
0.442000	23.99	---	57.02	33.03	1000.0	9.000	N	19.7
1.442000	---	6.88	46.00	39.12	1000.0	9.000	N	20.2
1.442000	10.76	---	56.00	45.24	1000.0	9.000	N	20.2
3.954000	---	5.94	46.00	40.06	1000.0	9.000	N	19.9
3.954000	8.47	---	56.00	47.53	1000.0	9.000	N	19.9
13.562000	---	46.08	50.00	3.92	1000.0	9.000	N	20.0
13.562000	47.04	---	60.00	12.96	1000.0	9.000	N	20.0

\* Operating Frequency

- Fundamental Frequency Band : 13.56 MHz

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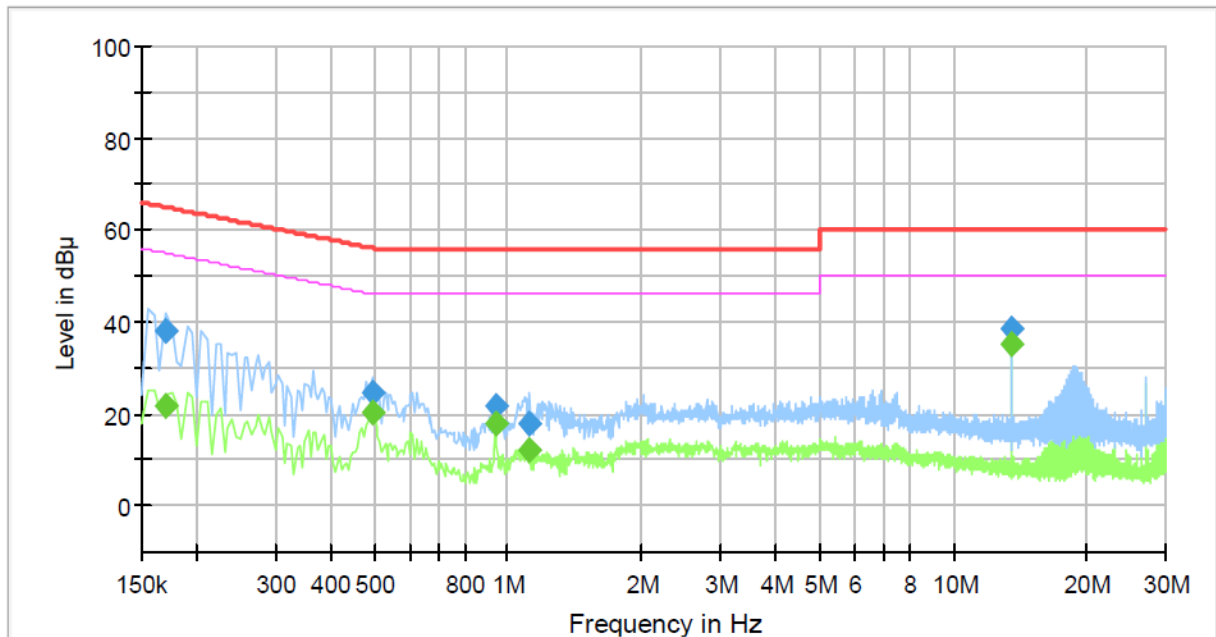
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### ■ LAN Mode

### HOT LINE

## Common Information

Test Description: Conducted Emission  
Model No.: T-40  
Phase:  
Mode: LAN  
Operator Name: KES



## Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.170000	---	21.81	54.96	33.15	1000.0	9.000	L1	19.5
0.170000	38.01	---	64.96	26.95	1000.0	9.000	L1	19.5
0.495000	---	20.27	46.08	25.81	1000.0	9.000	L1	19.8
0.495000	24.42	---	56.08	31.66	1000.0	9.000	L1	19.8
0.935000	---	17.94	46.00	28.06	1000.0	9.000	L1	20.1
0.935000	21.48	---	56.00	34.52	1000.0	9.000	L1	20.1
1.120000	---	12.31	46.00	33.69	1000.0	9.000	L1	20.1
1.120000	17.74	---	56.00	38.26	1000.0	9.000	L1	20.1
13.560000	---	34.96	50.00	15.04	1000.0	9.000	L1	20.0
13.560000	38.35	---	60.00	21.65	1000.0	9.000	L1	20.0

\* Operating Frequency

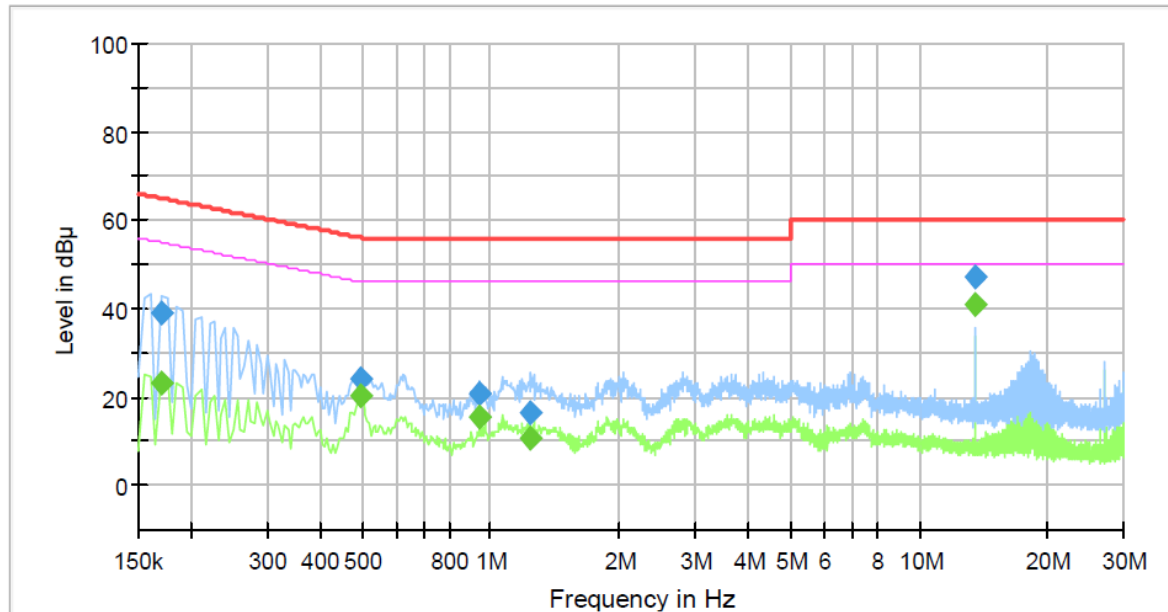
- Fundamental Frequency Band : 13.56 MHz

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## NEUTRAL LINE

### Common Information

Test Description: Conducted Emission  
 Model No.: T-40  
 Phase:  
 Mode: LAN  
 Operator Name: KES



### Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.170000	---	23.08	54.96	31.88	1000.0	9.000	N	19.4
0.170000	39.10	---	64.96	25.86	1000.0	9.000	N	19.4
0.495000	---	20.43	46.08	25.65	1000.0	9.000	N	19.7
0.495000	23.97	---	56.08	32.11	1000.0	9.000	N	19.7
0.940000	---	15.29	46.00	30.71	1000.0	9.000	N	20.1
0.940000	20.77	---	56.00	35.23	1000.0	9.000	N	20.1
1.240000	---	10.76	46.00	35.24	1000.0	9.000	N	20.2
1.240000	16.21	---	56.00	39.79	1000.0	9.000	N	20.2
13.560000	---	41.15	50.00	8.85	1000.0	9.000	N	20.0
13.560000	47.21	---	60.00	12.79	1000.0	9.000	N	20.0

\* Operating Frequency

- Fundamental Frequency Band : 13.56 MHz

#### ◆ Calculation

QuasiPeak [dBuV] / CAverage [dBuV] = Reading Value [dBuV] + Corr. [dB]

QuasiPeak / CAverage : The Final Value

Reading Value : Not shown in the table.

Corr. : Correction values (LISN FACTOR + (Cable Loss + Pulse Limiter FACTOR))

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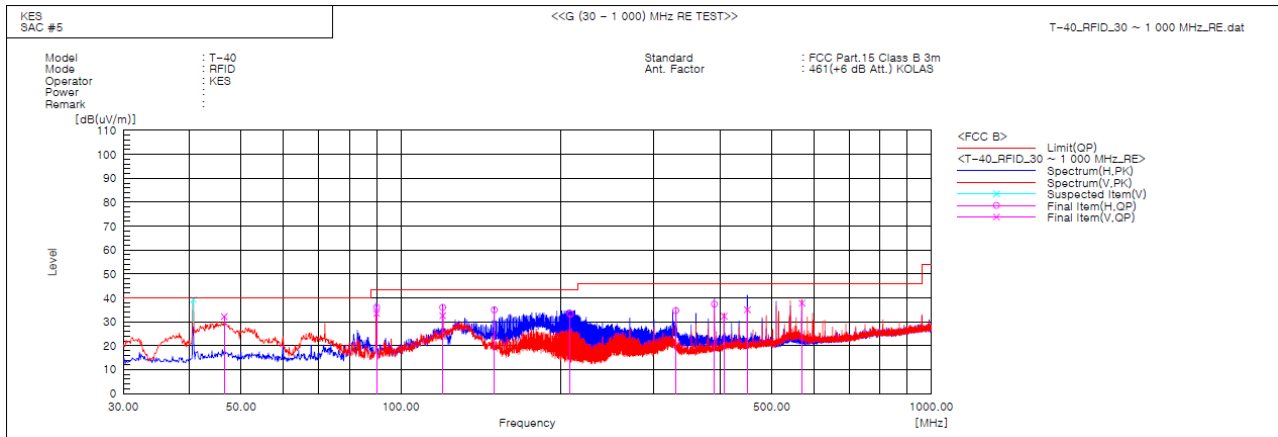
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## Radiated Electric Field Emissions(Below 1 GHz)

### RFID Mode



### Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Height [cm]	Angle [deg]	Remark
1	46.490	V	44.9	-12.7	32.2	40.0	7.8	113.0	117.8	
2	90.023	V	51.7	-18.2	33.5	43.5	10.0	139.0	52.8	
3	90.053	H	54.3	-18.2	36.1	43.5	7.4	187.0	142.3	
4	119.936	H	51.3	-15.3	36.0	43.5	7.5	400.0	111.4	
5	119.964	V	47.9	-15.3	32.6	43.5	10.9	108.0	158.8	
6	150.037	H	47.4	-12.4	35.0	43.5	8.5	178.0	76.2	
7	208.639	H	48.7	-15.4	33.3	43.5	10.2	282.0	294.7	
8	329.938	H	46.1	-11.4	34.7	46.0	11.3	100.0	111.7	
9	389.974	H	47.2	-9.8	37.4	46.0	8.6	100.0	114.1	
10	406.844	V	41.7	-9.3	32.4	46.0	13.6	143.0	223.1	
11	450.019	V	43.2	-8.1	35.1	46.0	10.9	100.0	169.7	
12	570.043	V	43.8	-6.0	37.8	46.0	8.2	100.0	185.6	
13	40.670	V	-----	-13.1	-----	40.0	-----	99.7	253.6	

\* Operating Frequency

- Harmonic Frequency Band : 40 MHz

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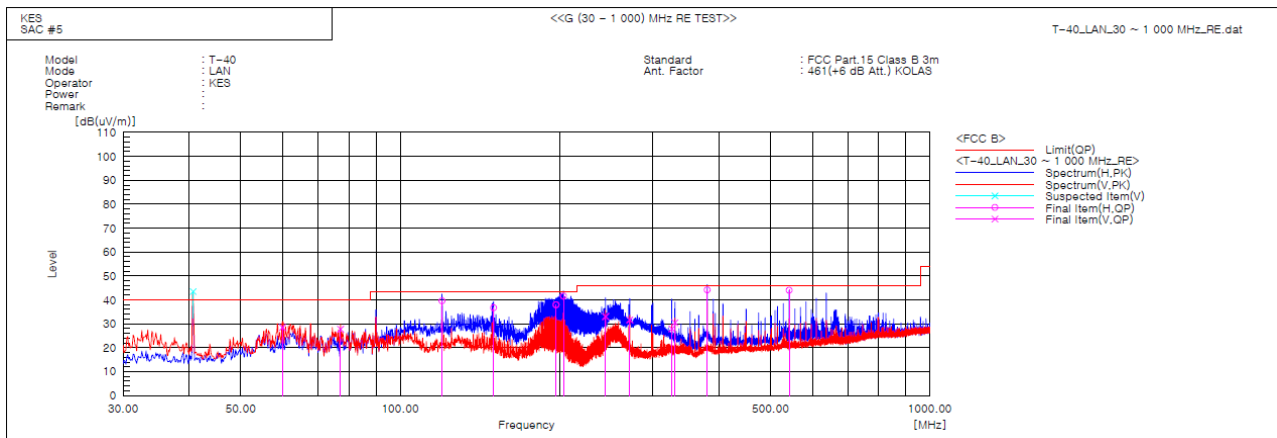


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### LAN Mode



### Final Result

No.	Frequency (P)	Reading	c.f	Result	Limit	Margin	Height	Angle	Remark
	[MHz]	[dB(uV)]	[dB(1/m)]	[dB(uV/m)]	[dB(uV/m)]	[dB]	[cm]	[deg]	
1	59.949	V 41.4	-12.9	28.5	40.0	11.5	100.0	310.0	
2	77.166	V 44.2	-16.4	27.8	40.0	12.2	106.0	354.4	
3	119.968	H 54.9	-15.3	39.6	43.5	3.9	387.0	89.0	
4	150.038	H 49.1	-12.4	36.7	43.5	6.8	400.0	287.9	
5	196.840	H 53.4	-15.4	38.0	43.5	5.5	338.0	357.7	
6	203.388	H 57.1	-15.5	41.6	43.5	1.9	319.0	338.4	
7	244.128	V 47.1	-14.0	33.1	46.0	12.9	100.0	113.7	
8	271.166	V 44.6	-12.9	31.7	46.0	14.3	166.0	228.7	
9	325.486	V 39.4	-11.5	27.9	46.0	18.1	142.0	120.5	
10	329.973	V 41.9	-11.4	30.5	46.0	15.5	117.0	116.1	
11	379.685	H 54.3	-10.1	44.2	46.0	1.8	377.0	38.5	
12	542.524	H 50.6	-6.6	44.0	46.0	2.0	400.0	206.7	
13	40.670	V -----	-13.1	-----	40.0	-----	370.2	113.0	

### \* Operating Frequency

- Harmonic Frequency Band : 40 MHz

### ◆ Calculation - SAC #4(10 m)

Result(QP) [dB(μV/m)] = (Reading(QP)[dB(μV)] + c.f[dB(1/m)])

Margin(QP)[dB] = Limit[dB(μV/m)] - Result(QP) [dB(μV/m)]

Reading(QP) : Reading value, Result(QP) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Margin value



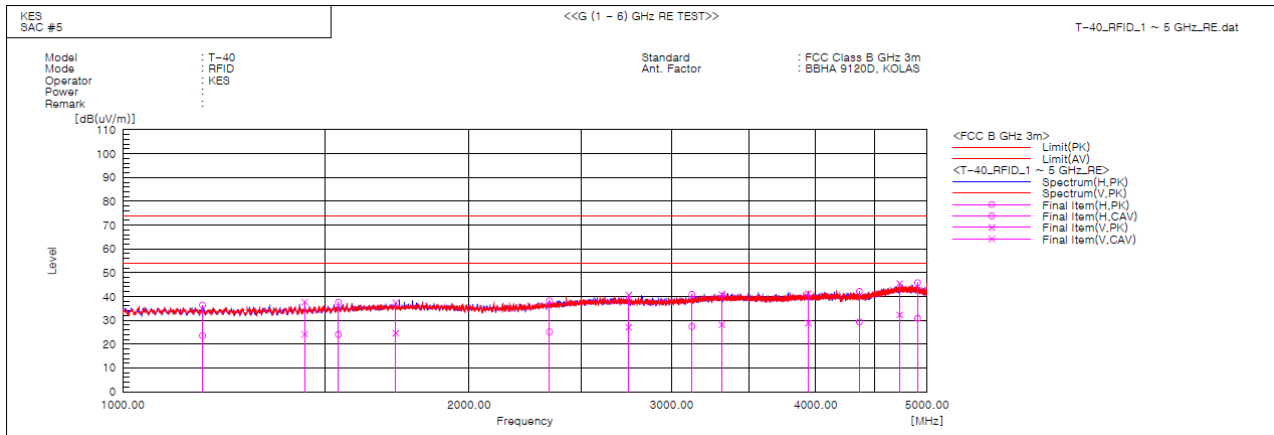
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## Radiated Electric Field Emissions(Above 1 GHz)

### RFID Mode



### Final Result

No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1172.922	H	43.4	30.6	-7.0	36.4	23.6	74.0	54.0	37.6	30.4	385.0	1.2	
2	1439.362	V	43.3	29.8	-5.6	37.7	24.2	74.0	54.0	36.3	29.8	127.0	257.6	
3	1539.662	H	42.8	29.2	-5.2	37.6	24.0	74.0	54.0	36.4	30.0	371.0	205.8	
4	1726.249	V	41.8	29.0	-4.4	37.4	24.6	74.0	54.0	36.6	29.4	198.0	261.3	
5	2348.769	H	40.6	27.5	-2.3	38.3	25.2	74.0	54.0	35.7	28.8	400.0	249.1	
6	2751.899	V	41.1	27.6	-0.5	40.6	27.1	74.0	54.0	33.4	26.9	138.0	223.4	
7	3122.516	H	40.4	26.9	0.5	40.9	27.4	74.0	54.0	33.1	26.6	400.0	247.2	
8	3316.213	V	40.2	27.5	0.7	40.9	28.2	74.0	54.0	33.1	25.8	119.0	329.3	
9	3941.804	V	39.3	27.0	1.9	41.2	28.9	74.0	54.0	32.8	25.1	124.0	93.6	
10	4366.298	H	38.6	25.7	3.6	42.2	29.3	74.0	54.0	31.8	24.7	360.0	33.3	
11	4733.766	V	40.5	27.3	5.0	45.5	32.3	74.0	54.0	28.5	21.7	142.0	149.5	
12	4906.885	H	40.0	25.0	5.8	45.8	30.8	74.0	54.0	28.2	23.2	394.0	49.7	

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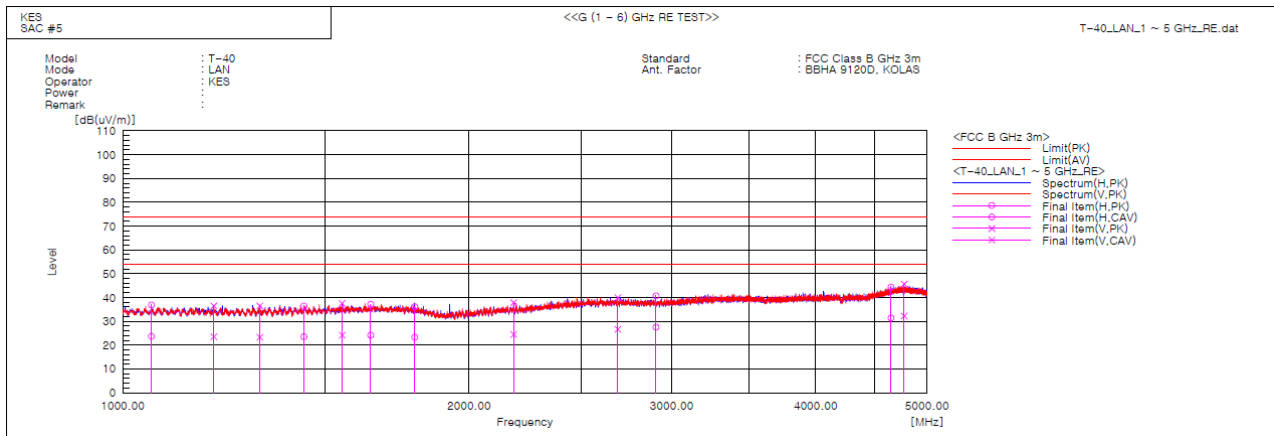


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### LAN Mode



No.	Frequency [MHz]	(P)	Reading PK [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB(1/m)]	Result PK [dB(uV/m)]	Result CAV [dB(uV/m)]	Limit PK [dB(uV/m)]	Limit AV [dB(uV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [deg]	Remark
1	1059.133	H	44.5	31.3	-7.6	36.9	23.7	74.0	54.0	37.1	30.3	395.0	73.5	
2	1199.522	V	43.4	30.5	-6.9	36.5	23.6	74.0	54.0	37.5	30.4	136.0	130.0	
3	1315.625	V	42.8	29.6	-6.3	36.5	23.3	74.0	54.0	37.5	30.7	112.0	161.6	
4	1436.893	H	42.1	29.3	-5.7	36.4	23.6	74.0	54.0	37.6	30.4	129.0	162.8	
5	1550.709	V	42.7	29.3	-5.1	37.6	24.2	74.0	54.0	36.4	29.8	122.0	85.3	
6	1642.573	H	41.9	28.9	-4.7	37.2	24.2	74.0	54.0	36.8	29.8	400.0	143.9	
7	1793.722	H	40.3	27.4	-4.1	36.2	23.3	74.0	54.0	37.8	30.7	400.0	117.0	
8	2186.269	V	40.7	27.3	-2.8	37.9	24.5	74.0	54.0	36.1	29.5	145.0	81.5	
9	2692.505	V	40.8	27.5	-0.8	40.0	26.7	74.0	54.0	34.0	27.3	100.0	310.8	
10	2906.354	H	40.7	27.5	0.0	40.7	27.5	74.0	54.0	33.3	26.5	400.0	12.8	
11	4652.591	H	39.7	26.7	4.7	44.4	31.4	74.0	54.0	29.6	22.6	377.0	230.3	
12	4775.062	V	40.5	27.1	5.2	45.7	32.3	74.0	54.0	28.3	21.7	124.0	218.2	

### Calculation

Result(PK/CAV) [dB(uV/m)] = (Reading(PK/CAV)[dB(uV)] + c.f[dB(1/m)])

Margin(PK/CAV)[dB] = Limit[dB(uV/m)] - Result(PK/CAV) [dB(uV/m)]

Reading(PK/CAV) : Reading value, Result(PK/CAV) : Reading value + Factor value

Limit(QP) : Limit value, c.f : (ANT Factor + Cable Loss - Preamp Factor), Margin: Marjin value

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