1GHz—25GHz Radiated emissison Test result											
EUT	: Mobile	printer		M/N:	BM-i02	2B					
Pow	er: DC 9	V from ada _l	oter								
Test	Test date: 2016-04-21 Test site: 3m Chamber Tested by: Peter										
Test mode: 8- DQPSK Tx CH1 2402MHz											
Antenna polarity: Vertical											
No Freq (MHz) Read Level Factor (dBuV/m) Result (dBuV/m) Remark Remark											
1	4804	42.85	33.95	10.18	34.26	52.72	74	21.28	PK		
2	4804	32.24	33.95	10.18	34.26	42.11	54	11.89	AV		
3	7206	/									
4	9608	/									
5	12010	/									
Ante	enna Pola	rity: Horizo	ontal								
1	4804	42.53	33.95	10.18	34.26	52.4	74	21.6	PK		
2	4804	31.9	33.95	10.18	34.26	41.77	54	12.23	AV		
3	7206	/									
4	9608	/									
5	12010	/									

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

1GHz—25GHz Radiate	ed emissison Test result

EUT: Mobile printer M/N: BM-i02B

Power: DC 9V from adapter

Test date: 2016-04-21 Test site: 3m Chamber Tested by: Peter

Test mode: 8- DQPSK Tx CH40 2441MHz

Antenna polarity: Vertical

No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882	42.66	33.93	10.2	34.29	52.5	74	21.5	PK
2	4882	32.33	33.93	10.2	34.29	42.17	54	11.83	AV
3	7323	/							
4	9764	/							
5	12205	/							
Anter	nna Polari	ty: Horizon	ıtal						
1	4882	42.84	33.93	10.2	34.29	52.68	74	21.32	PK
2	4882	32.45	33.93	10.2	34.29	42.29	54	11.71	AV
3	7323	/							
4	9764	/							
5	12205	/							

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

1GHz—25GHz Radiated emissison Test result

EUT: Mobile printer M/N: BM-i02B

Power: DC 9V from adapter

Test date: 2016-04-21 Test site: 3m Chamber Tested by: Peter

Test mode: 8- DQPSK Tx CH79 2480MHz

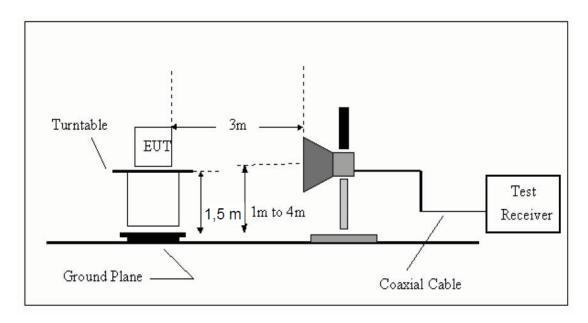
Antenna polarity: Vertical

No	Freq (MHz)	Read Level (dBuV/m)	Antenna Factor (dB/m)	Cable loss(d B)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960	42.64	33.98	10.22	34.25	52.59	74	21.41	PK
2	4960	33.86	33.98	10.22	34.25	43.81	54	10.19	AV
3	7440	/							
4	9920	/							
5	12400	/							
Ant	enna Pola	rity: Horizo	ontal						
1	4960	42.96	33.98	10.22	34.25	52.91	74	21.09	PK
2	4960	32.33	33.98	10.22	34.25	42.28	54	11.72	AV
3	7440	/							
4	9920	/							
5	12400	/							

- 1, Measuring frequency from 1GHz to 25GHz
- 2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

9. Band Edge Compliance

9.1. Block Diagram of Test Setup



9.2. Limit

All the lower and upper band-edges emissions appearing within restricted frequency bands shall not exceed the limits shown in RSS-GEN, all the other emissions outside operation shall be at least 20dB below the fundamental emissions, or comply with RSS-GEN limits.

9.3. Test Procedure

All restriction band and non- restriction band have been tested , only worse case is reported.

9.4. Test Result

PASS. (See below detailed test data)

Radiated Method

GFSK (CH Low)

			Band Ed	dge Test	result							
EUT: Mobile	printer		M/N:	BM-i02	2B							
Power: DC 9	V from ada _l	oter										
Test date: 201	16-04-21	Test site	: 3m Cł	namber	Tested by	: Peter						
Test mode: T	x CH Low 2	2402MHz	Z									
Antenna pola	rity: Vertica	al										
Freq (MHz)	(MHz) (dBuV/m) (dB/m) B) (dB) (dBuV/m) (dBuV/m) (dB)											
2390	44.57	27.62	3.92	34.97	41.14	74	32.86	PK				
2390		27.62	3.92	34.97		54		AV				
Antenna Pola	 rity: Horizo	ontal										
2390	44.06	27.62	3.92	34.97	40.63	74	33.37	PK				
2390		27.62	3.92	34.97		54		AV				
Note:												

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

GFSK (CH High)

			Band Ed	dge Test	result							
EUT: Mobile	printer		M/N:	BM-i02	2B							
Power: DC 9	V from ada _l	oter										
Test date: 20	16-04-21	Test site	: 3m Cł	namber	Tested by	: Peter						
Test mode: T	x CH High	2480MH:	Z									
Antenna pola	rity: Vertica	al										
Freq (MHz)	(dBiiV/m)(dBiiV/m)(dBi)											
2483.5	43.9	27.89	4	34.97	40.82	74	33.18	PK				
2483.5			-			54		AV				
Antenna Pola	rity: Horizo	ontal										
2483.5	44.09	27.89	4	34.97	41.01	74	32.99	PK				
2483.5						54		AV				

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

GFSK (Hopping Low)

			Band Ed	dge Test	result						
EUT: Mobile	printer		M/N:	BM-i02	2B						
Power: DC 9	V from ada	pter									
Test date: 20	16-04-21	Test site	: 3m Cł	namber	Tested by	: Peter					
Test mode: T	Ϋ́X										
Antenna pola	rity: Vertica	al									
Freq (MHz)	$\frac{1}{2}$										
2390	42.9	27.62	3.92	34.97	39.47	74	34.53	PK			
2390		27.62	3.92	34.97		54		AV			
Antenna Pola	arity: Horizo	ontal									
2390	43.85	27.62	3.92	34.97	40.42	74	33.58	PK			
2390		27.62	3.92	34.97		54		AV			
_	· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·					

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

GFSK (Hopping High)

			Band Ed	dge Test	result						
EUT: Mobile	printer		M/N:	BM-i02	2B						
Power: DC 9	V from ada	pter									
Test date: 20	16-04-21	Test site	: 3m Cl	namber	Tested by	: Peter					
Test mode: T	`X										
Antenna pola	rity: Vertica	al									
Freq (MHz)	$\frac{1}{2}$										
2483.5	43.37	27.89	4	34.97	40.29	74	33.71	PK			
2483.5						54		AV			
D 1		. 1									
Antenna Pola	1		ı	ı	T		1				
2483.5	43.59	27.89	4	34.97	40.51	74	33.49	PK			
2483.5						54		AV			
L _											

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

$\pi/4$ DQPSK (CH Low)

			Band Ed	dge Test	result						
EUT: Mobile	EUT: Mobile printer M/N: BM-i02B										
Power: DC 9	V from ada _l	oter									
Test date: 201	16-04-21	Test site	: 3m Cl	namber	Tested by	: Peter					
Test mode: T	x CH Low 2	2402MHz	Z								
Antenna pola	rity: Vertica	al									
Freq Level Factor loss(d Hz) (dBuV/m) (dB/m) B) (dB) Result (dBuV/m) (dBuV/m) (dB) Remark											
2390	43.67	27.62	3.92	34.97	40.24	74	33.76	PK			
2390		27.62	3.92	34.97		54		AV			
Antenna Pola	rity: Horizo	ntal									
2390	43.99	27.62	3.92	34.97	40.56	74	33.44	PK			
2390		27.62	3.92	34.97		54		AV			
N T. 4											

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

π /4 DQPSK (CH High)

Band Edge Test result											
EUT: Mobile	EUT: Mobile printer M/N: BM-i02B										
Power: DC 9	V from ada _l	oter									
Test date: 201	16-04-21	Test site	: 3m Cł	namber	Tested by	: Peter					
Test mode: T	x CH High	2480MHz	Z								
Antenna pola	rity: Vertica	al									
Freq (MHz)	$\frac{1}{2}$ $\frac{1}$										
2483.5 43.08 27.89 4 34.97 40							34	PK			
2483.5						54		AV			
Antenna Pola	rity: Horizo	ntal		•	•						
2483.5	43.52	27.89	4	34.97	40.44	74	33.56	PK			
2483.5						54		AV			
Note:											

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

π /4 DQPSK (Hopping Low)

			Band Ed	dge Test	result						
EUT: Mobile	printer		M/N:	BM-i02	2B						
Power: DC 9	V from ada _l	oter									
Test date: 201	16-04-21	Test site	: 3m Cł	namber	Tested by	: Peter					
Test mode:											
Antenna pola	rity: Vertica	al									
Freq (MHz)	$\frac{1}{2}$										
2390 43.67 27.62 3.92 34.97 40.24 74								PK			
2390		27.62	3.92	34.97		54		AV			
Antenna Pola	rity: Horizo	ntal									
2390	43.63	27.62	3.92	34.97	40.2	74	33.8	PK			
2390		27.62	3.92	34.97		54		AV			
Mata											

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

 π /4 DQPSK (Hopping High)

Band Edge Test result											
EUT: Mobile printer M/N: BM-i02B											
Power: DC 9	V from adap	oter									
Test date: 201	6-04-21	Test site	: 3m Cł	namber	Tested by	: Peter					
Test mode: T	X										
Antenna pola	rity: Vertica	al									
Freq Level Factor (dBuV/m) (dB/m) B) Result (dBuV/m) Result (dBuV/m) Remark											
2483.5	42.92	27.89	4	34.97	39.84	74	34.16	PK			
2483.5						54		AV			
Antenna Pola	rity: Horizo	ntal		_	_						
2483.5	44.17	27.89	4	34.97	41.09	74	32.91	PK			
2483.5						54		AV			

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8- DPSK (CH Low)

			Band Ed	dge Test	result				
EUT: Mobile	printer		M/N:	BM-i02	2B				
Power: DC 9	V from adaj	oter							
Test date: 20	16-04-21	Test site	: 3m Cl	namber	Tested by	: Peter			
Test mode: T	x CH Low	2402MHz	Z						
Antenna pola	rity: Vertica	al							
Freq Level Factor loss(d Factor (dBuV/m) (dB/m) B) Result (dBuV/m) Result (dBuV/m) Remark									
2390	43.85	27.62	3.92	34.97	40.42	74	33.58	PK	
2390		27.62	3.92	34.97		54		AV	
Antenna Pola	rity: Horizo	ntal							
2390	44.06	27.62	3.92	34.97	40.63	74	33.37	PK	
2390		27.62	3.92	34.97		54		AV	
Mata								1	

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8- DPSK (CH High)

			Band Ed	dge Test	result			
EUT: Mobile printer M/N: BM-i02B								
Power: DC 9	V from ada	pter						
Test date: 20	16-04-21	Test site	: 3m Cł	namber	Tested by	: Peter		
Test mode: T	x CH High	2480MH	Z					
Antenna pola	rity: Vertica	al						
Read Antenna Cable Amp Result Limit Margin								Remark
2483.5	42.9	27.89	4	34.97	39.82	74	34.18	PK
2483.5						54		AV
Antenna Pola	rity: Horizo	ontal						
2483.5	44.25	27.89	4	34.97	41.17	74	32.83	PK
2483.5						54		AV
NT-4	·				·			

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

8- DPSK (Hopping Low)

Band Edge Test result								
EUT: Mobile printer M/N: BM-i02B								
Power: DC 9V from adapter								
Test date: 2016-04-21 Test site: 3m Chamber Tested by: Peter								
Test mode: Tx								
Antenna pola	rity: Vertica	al						
Freq (MHz) Read Level (dBuV/m) (dB/m) Result (dBuV/m) Result (dBuV/m) Remains (dBuV/m) Rema								Remark
2390	43.57	27.62	3.92	34.97	40.14	74	33.86	PK
2390		27.62	3.92	34.97		54		AV
Antenna Pola	rity: Horizo	ntal						
2390	44.1	27.62	3.92	34.97	40.67	74	33.33	PK
2390	-	27.62	3.92	34.97		54		AV
N.T	•		,	,		•		

- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

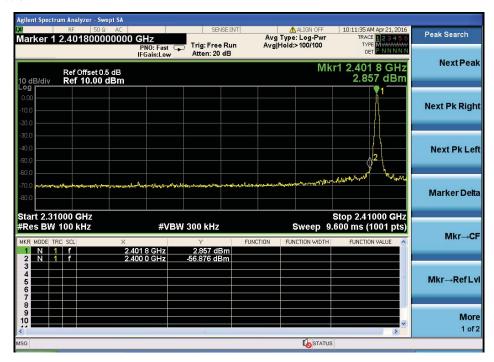
8- DPSK (Hopping High)

			Band Ed	dge Test	result			
EUT: Mobile	printer		M/N:	BM-i02	2B			
Power: DC 9	V from ada _l	oter						
Test date: 20	16-04-21	Test site	: 3m Cł	namber	Tested by	: Peter		
Test mode: T	X							
Antenna pola	rity: Vertica	al						
Freq Level Factor loss(d Factor (dBuV/m) (dB/m) B) Result (dBuV/m) Limit (dBuV/m) Hargin (dBuV/m) Result (dBuV/m) (dB)							Remark	
2483.5	42.99	27.89	4	34.97	39.91	74	34.09	PK
2483.5						54		AV
Antenna Pola	rity: Horizo	ntal						
2483.5	43.7	27.89	4	34.97	40.62	74	33.38	PK
2483.5						54		AV

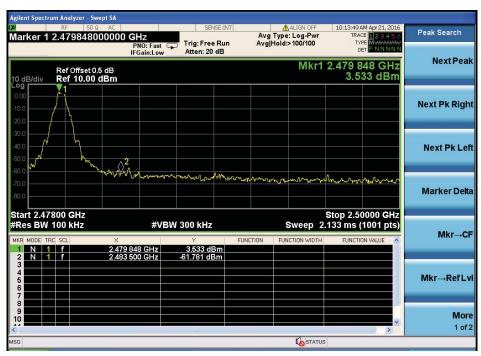
- 1, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK
- 2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK
- 3, Result = Read level + Antenna factor + cable loss-Amp factor
- 4, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

Conducted Method GFSK

CH LOW:

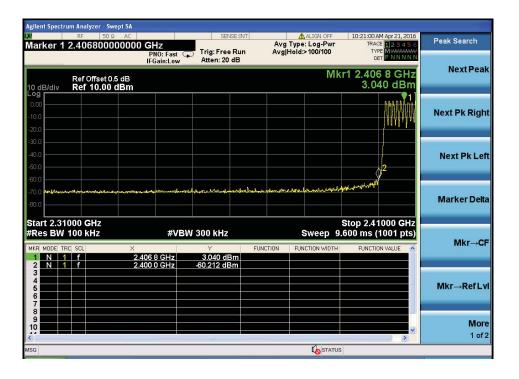


CH High:

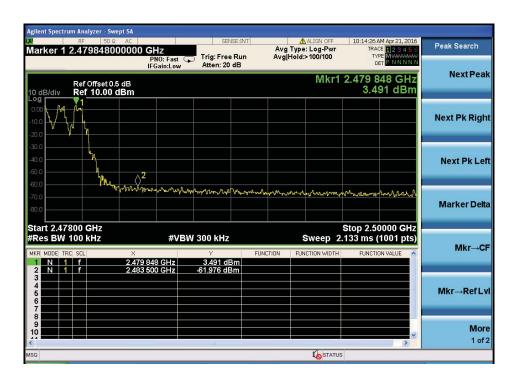


Hopping

Low

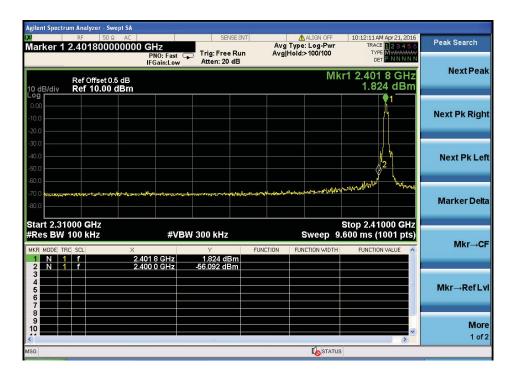


High

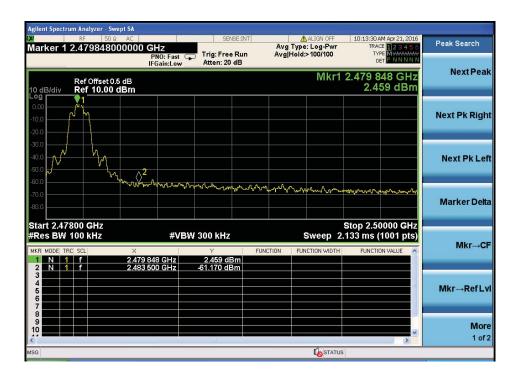


π /4 DQPSK

Low



High



Hopping Low

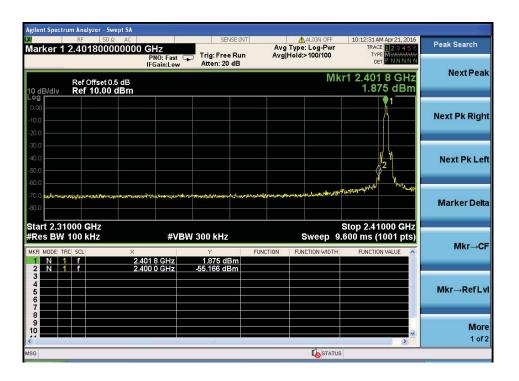


High

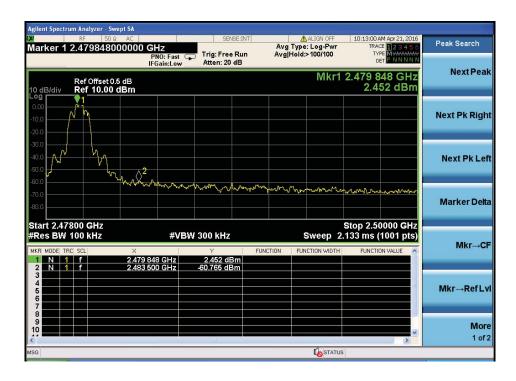


8- DPSK:

Low



High



Hopping Low

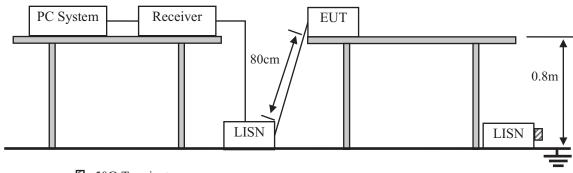


High



10. Power Line Conducted Emissions

10.1.Block Diagram of Test Setup



☑ :50Ω Terminator

10.2.Limit

	Maximum RF Line Voltage				
Frequency	Quasi-Peak Level	Average Level			
	$dB(\mu V)$	$dB(\mu V)$			
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*			
500kHz ~ 5MHz	56	46			
5MHz ~ 30MHz	60	50			

Notes: 1. * Decreasing linearly with logarithm of frequency.

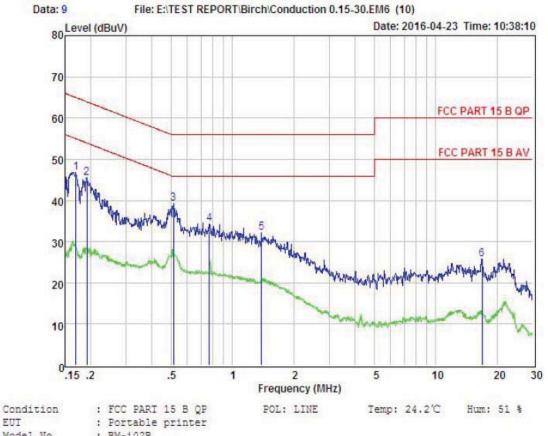
2. The lower limit shall apply at the transition frequencies.

10.3.Test Procedure

- (1) The EUT was placed on a non-metallic table, 80cm above the ground plane.
- (2) Setup the EUT and simulator as shown in 10.1
- (3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4 2014 on conducted Emission test.
- (4) The bandwidth of test receiver is set at 10KHz.
- (5) The frequency range from 150 KHz to 30MHz is checked.

10.4. Test Result

PASS. (See below detailed test data)



Model No : BM-102B

Test Mode

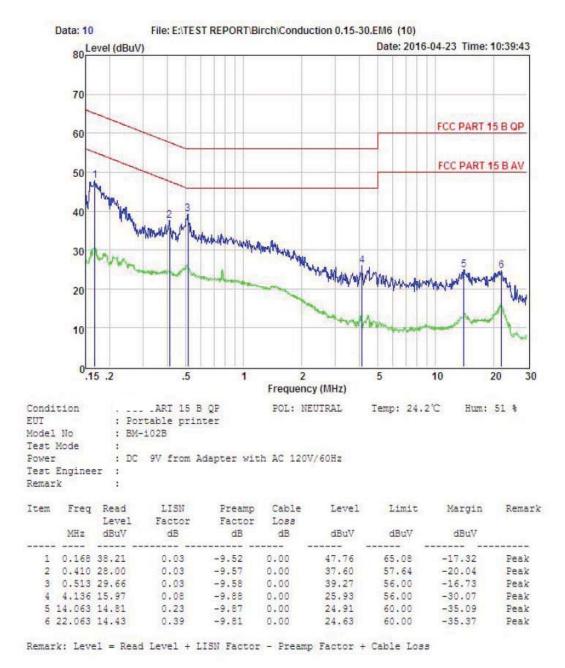
: DC 9V from Adapter with AC 120V/60Hz Power

Test Engineer :

Remark

Item	Freq	Read Level	LISN Factor	Preamy		Level	Limit	Margin	n Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.169	37.30	0.03	-9.52	0.00	46.85	64.99	-18.14	Peak
2	0.192	35.93	0.03	-9.52	0.00	45.48	63.93	-18.45	Peak
3	0.513	29.68	0.03	-9.58	0.00	39.29	56.00	-16.71	Peak
4	0.771	24.60	0.04	-9.60	0.00	34.24	56.00	-21.76	Peak
5	1.388	22.38	0.05	-9.66	0.00	32.09	56.00	-23.91	Peak
6	16.928	15.67	0.27	-9.83	0.00	25.77	60.00	-34.23	Peak

Remark: Level = Read Level + LISN Factor - Preamp Factor + Cable Loss



Note1: If QP Result comply with AV limit, AV Result is deemed to comply with AV limit

11. Antenna Requirements

11.1.Limit

For intentional device, according to RSS-GEN, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to RSS-GEN, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2.Result

The antennas used for this product are PCB Antenna for Bluetooth, no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0dBi.

12. Test setup photo

5.1 Photos of Radiated emission



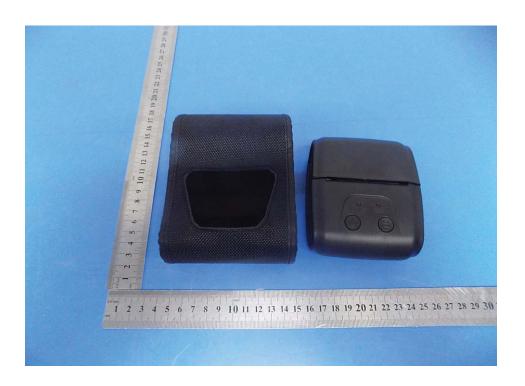


5.2 Photos of Conducted Emission test



12 Photographs of EUT











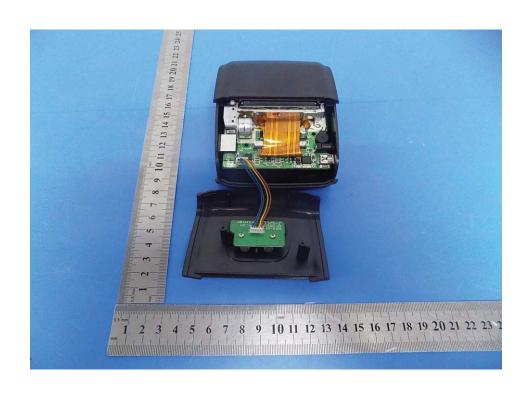




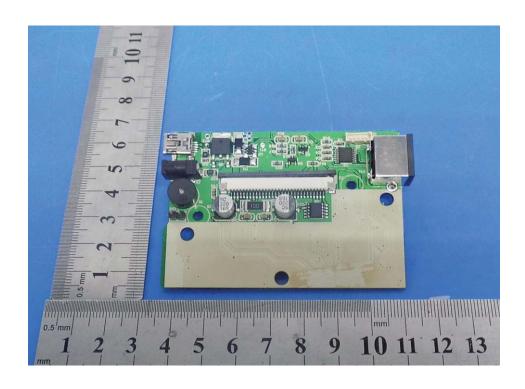




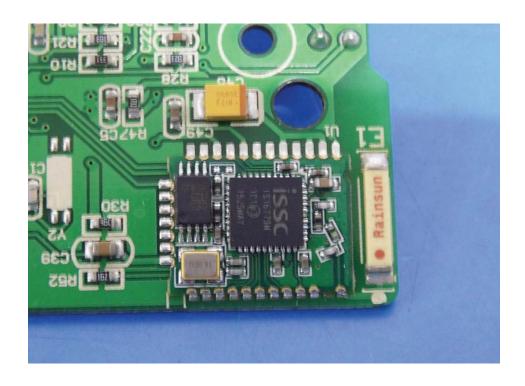


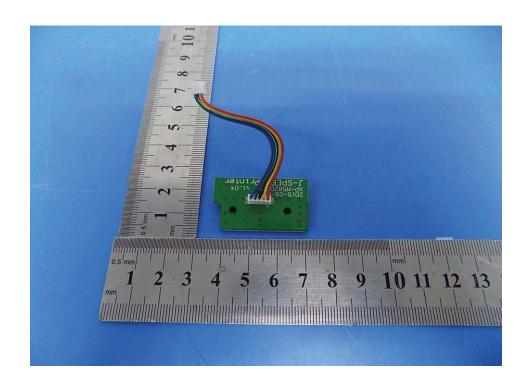


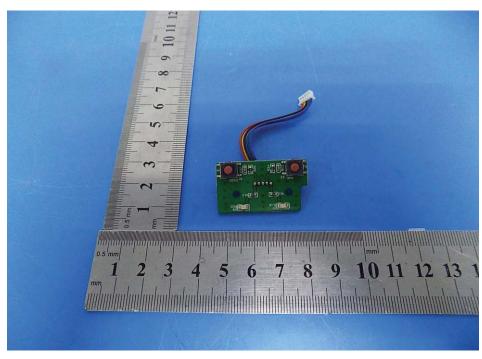












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