

	 CERTIFICATE 2518.08																												
MOTOROLA PENANG ADV. COMM. LABORATORY Motorola Solutions Malaysia SDN BHD, Plot 2A, Medan Bayan Lepas, Mukim 12 S.W.D, 11900 Bayan Lepas, Penang, Malaysia.	FCC / ISED TEST REPORT Report Revision : Rev.A																												
<table><tr><td>Date/s Tested</td><td>: 21-August-2020</td></tr><tr><td>Manufacturer</td><td>: MOTOROLA SOLUTIONS MALAYSIA SDN BHD</td></tr><tr><td>Manufacturer Address</td><td>: PLOT 2A, MEDAN BAYAN LEPAS MUKIM 12, S.W.D 11900 BAYAN LEPAS PENANG, MALAYSIA</td></tr><tr><td>Requestor</td><td>: BALAGANABATHY</td></tr><tr><td>Product Type</td><td>: Portable</td></tr><tr><td>Model Number</td><td>: AC146U502 (AC146U512 (EVX-S24-G6-3(Y)), AC146U012 (EVX-S24-G6-3(Y))</td></tr><tr><td>Frequency Band</td><td>: 403 - 480MHz</td></tr><tr><td>Firmware Version</td><td>: CPU/DSP: 5.04 / 5.03</td></tr><tr><td>Applicant Name</td><td>: Motorola Solutions Inc</td></tr><tr><td>Applicant Address</td><td>: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322.</td></tr><tr><td>ISED Registrations</td><td>: MY0001</td></tr><tr><td>FCC Registrations</td><td>: 461337</td></tr><tr><td>Remark</td><td>: Model Name in brackets are covered by this report due to identical RF design based on manufacturers declaration.</td></tr></table> The equipment was tested accordance to the requirement listed below: <table><tr><td>(LMR) FCC 47 CFR Part 22/ 74/ 90/ 80 ISED RSS-Gen/119/ 182</td><td>PASS</td></tr></table>		Date/s Tested	: 21-August-2020	Manufacturer	: MOTOROLA SOLUTIONS MALAYSIA SDN BHD	Manufacturer Address	: PLOT 2A, MEDAN BAYAN LEPAS MUKIM 12, S.W.D 11900 BAYAN LEPAS PENANG, MALAYSIA	Requestor	: BALAGANABATHY	Product Type	: Portable	Model Number	: AC146U502 (AC146U512 (EVX-S24-G6-3(Y)), AC146U012 (EVX-S24-G6-3(Y))	Frequency Band	: 403 - 480MHz	Firmware Version	: CPU/DSP: 5.04 / 5.03	Applicant Name	: Motorola Solutions Inc	Applicant Address	: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322.	ISED Registrations	: MY0001	FCC Registrations	: 461337	Remark	: Model Name in brackets are covered by this report due to identical RF design based on manufacturers declaration.	(LMR) FCC 47 CFR Part 22/ 74/ 90/ 80 ISED RSS-Gen/119/ 182	PASS
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Prepared By:  Azil Ezzaddin Khalil Technician	Approved Signatory:  Leow Ting Jun Responsible Engineer																												

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REVISION HISTORY

Revision History	Description	Date	Originator
Rev. A	Initial Report	11-September-2020	Azil Ezzaddin Khalil

1.0. General Information

EUT Description:

The EUT contains following accessory devices and data cable:

Item	Brand	Model or P/N
BT100x Motorola battery	Motorola	PMNN4468B

General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, the EUT is to comply with the requirements of the following standards:

ANSI C63.26.2015

ANSI C63.4.2014

2.0. Summary of Test Results

FCC General Rules Part (47CFR)	IC General Rules Part	Test Item	Result
22.359, 74.462, 90.210, 80.211(c)	RSS-Gen, RSS-119, RSS-182	Conducted Spurious Emissions	NA
22.359, 74.462, 90.210, 80.211(c)	RSS-Gen, RSS-119, RSS-182	Radiated Spurious Emission	Pass
15.107	ICES-003 6.1, RSS-Gen	AC Power Conducted Spurious Emissions	NA

NA → Not Applicable

3.0. Measurement Uncertainty

Measurement	Frequency	Expanded Uncertainty (k=1.96) ($\pm$)
AC Power Line Conducted Spurious Emission	150KHz ~ 30MHz	3.43
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	4.25
	200MHz ~ 1000MHz	4.25
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	4.94
	18GHz ~ 25GHz	4.94
Conducted Spurious Emissions	9kHz ~ 12.75GHz	2.82

4.0. Equipment List

Conducted Spur Emission ATE # 1

NA

Radiated Emission Station

EMC Chamber 2

DESCRIPTION	MODEL	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
EMI TEST RECEIVER	ESIB40	100264	17-Jul-19	17-Sept-20
3m Semi-anechoic Chamber	NA	888032	No Cal. Req'd	No Cal. Req'd
TURNTABLE FLUSH MOUNT 2M	T-200-S	N/A	No Cal. Req'd	No Cal. Req'd
Bore sight Antenna mast	MBS-500	N/A	No Cal. Req'd	No Cal. Req'd
PROGRAMMING CONTROLLER	3000	MF780208272	No Cal. Req'd	No Cal. Req'd
POWER SUPPLY (0-60V/0-35A)	6674A	3126A00133	11-Nov-19	11-Nov-21
SIGNAL ANALYZER	FSV40	101432	27-Jul-18	27-Sept-20
DATA LOGGER	SDL500	A.016776	06-May-20	06-May-21
BILOG ANTENNA	CBL6112B	2964	23-Apr-2019	23-Apr-21
DRG HORN FREQ.	SAS-571	1027	22-Apr-19	22-Apr-21
PREAMPLIFIER	PAM-0118	427	13-May-21	13-May-23
MICROWAVE GENERATOR	SMP 04	100127	18-May-20	18-May-21
DRG HORN FREQ.	SAS-571	1143	14-Feb-19	14-Feb-21
BILOG ANTENNA	CBL6112B	2950	08-Jul-19	08-Jul-21
Test Software	EMC_FCC_IC_Bluetooth_RE_Test			
Version	EMC_FCC_RE_v1.6.2			

AC Power Line Conducted Spurious Emission

NA

4.1. Test Condition

4.1.1 Transmit Test Conditions

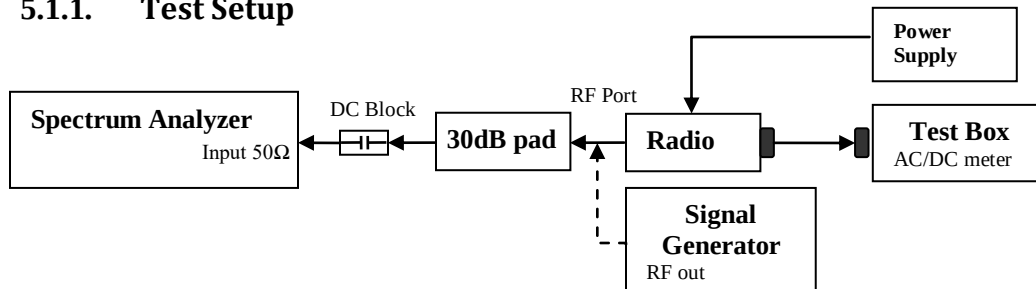
Test Item, (Channel Spacing)	Power (W)	Modulation	Test Frequency (MHz)	Tested By
Conducted Spurious Emissions (12.5kHz / 20kHz / 25kHz)	NA	NA	NA	NA
Radiated Spurious Emission (12.5kHz)	Low / Max	Digital	Tx(MHz) 403.0125, 406.2000 450.0250, 459.1250 467.7750, 479.9875	Faris, Nazirul Amaluddin
AC Power Line Conducted Spurious Emissions (25kHz)	NA	NA	NA	NA

NA → Not Applicable

5.0. Test Parameters

5.1. Conducted Spurious Output Power

5.1.1. Test Setup



- 1) Identify the radio is high side ($LO = F_c + IF$) or low side injection ($LO = F_c - IF$).
- 2) To get the reference point, set sigen to 1st LO frequency with amplitude level 0dBm.
- 3) Set the LO frequency into PSA. Adjust the PSA RBW = 100 kHz and record the Reference level offset.
- 4) Replace the Sigen with the UUT.
- 5) At PSA, set the frequency step size to LO frequency to test from 2LO to 10LO.
- 6) Record or screen captures the data in dBm value.

5.1.2. Test Result

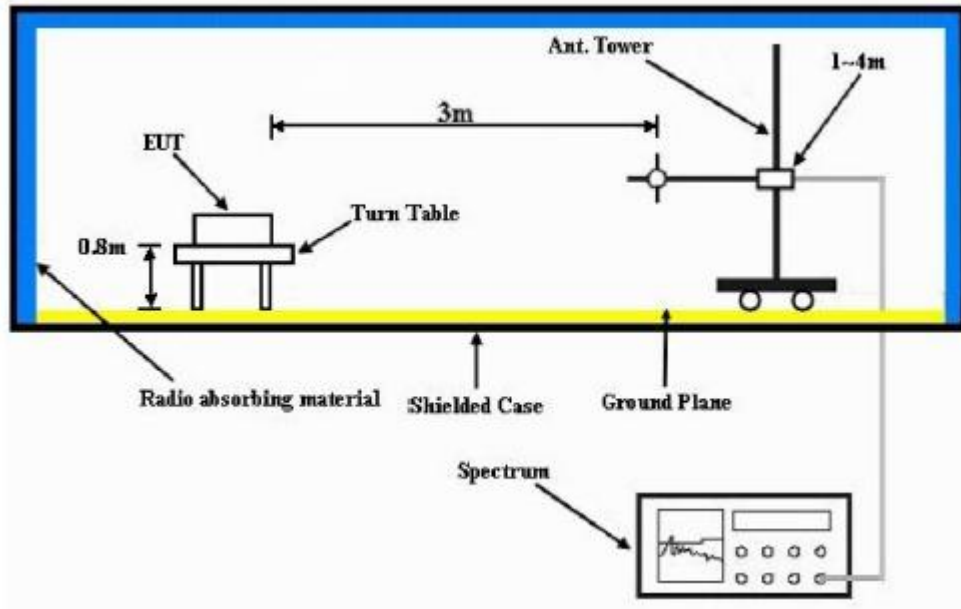
NA

5.1.3. Test Limit

NA

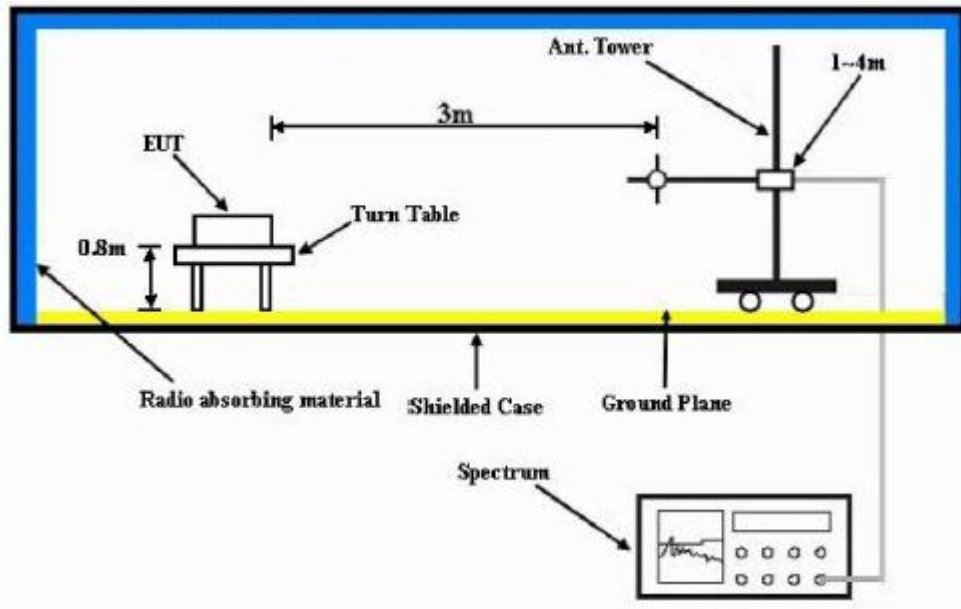
5.2. Radiated Spurious Output Power

5.2.1. Test Setup (ANSI C63.26)



- 1) The Resolution Bandwidth for scanning Radiated Emission below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector mode is positive peak.
- 2) In the semi- anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height (<1Ghz) and 1.5m height (>1Ghz) of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- 3) The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.
- 4) Final Radiated Spurious Emission = “Read Value” + Measured substitution value.

5.2.2. Test Setup (ANSI C63.4)



- 1) The spectrum setting for scanning Radiated Emission below 1 GHz is RBW = 100 kHz, VBW = 300 kHz and above 1 GHz is RBW = 1MHz, VBW = 3MHz. Detector mode is positive peak. For exploratory testing.
- 2) Final is done using QP Detector (<1Ghz) and Peak and Average Detector (>1Ghz).
- 3) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the 0.8m height of Turn table. For each radiated spurious emissions component detected, rotate the turn table around 360 degrees to search the maximum radiated spurious emissions and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiated spurious emissions. The “Read Value” is the spectrum reading the maximum radiated spurious emissions.
- 4) Final Radiated Spurious Emission (dBuV/m) = “Read Value (dBuV)” + Cable Loss (dB) + Antenna Gain (dB/m)- Pre-amp Gain (dB)

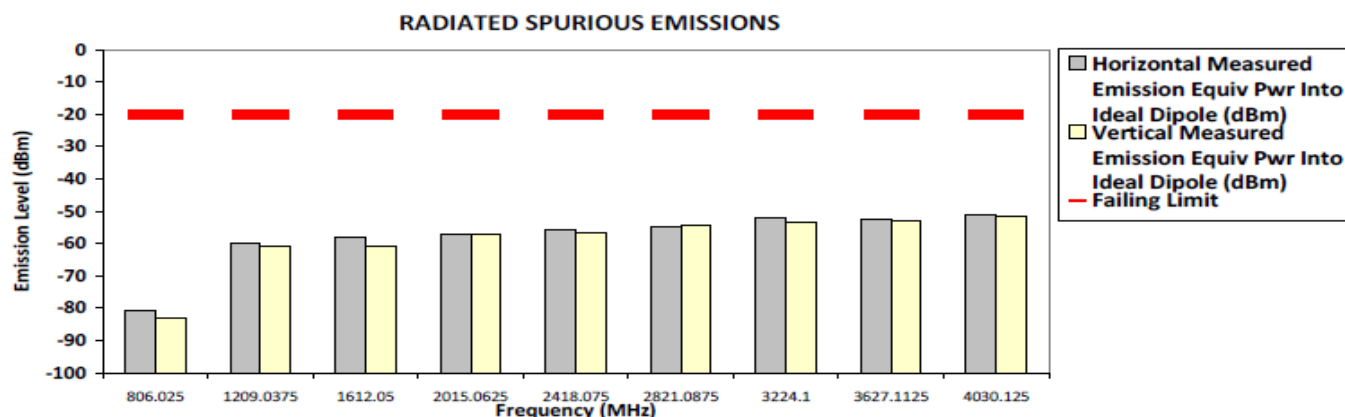
5.2.3. Test Result

Motorola Solutions.

FCC ID: AXI11464620
IC ID: 109U-89FT4935

SAC Transmitter Radiated Emission:
Model Number: AC146U502 S/N: 2D0I850000 SR:10875-EMC-00010
Battery Part No: PMNN4468B Accy Part No: NA
Test Mode: TX Digital
403.012500 MHz 12.5 kHz 0.500 Watt(s) /Low Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
806.0250	-20.0000	-80.8177 **	-83.0352 **
1209.0375	-20.0000	-60.0372 **	-60.6217 **
1612.0500	-20.0000	-57.8580 **	-60.7157 **
2015.0625	-20.0000	-57.0883 **	-56.8923 **
2418.0750	-20.0000	-55.6761 **	-56.7129 **
2821.0875	-20.0000	-54.8623 **	-54.2142 **
3224.1000	-20.0000	-51.8250 **	-53.1940 **
3627.1125	-20.0000	-52.3383 **	-52.7673 **
4030.1250	-20.0000	-51.0221 **	-51.4733 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris, Nazirul, Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

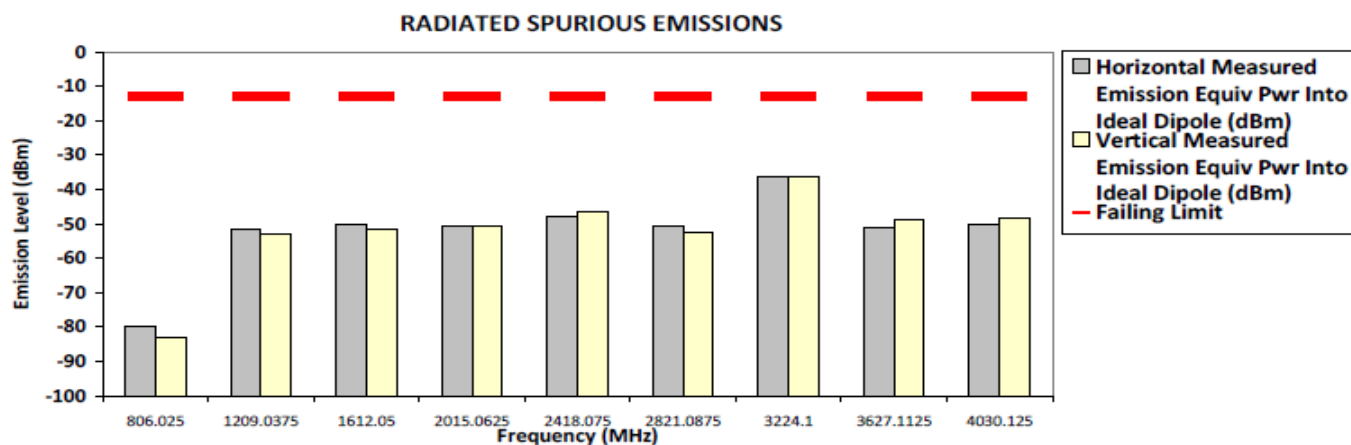
Passed Results	Marginal Results	Failed Results
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Motorola Solutions.

FCC ID: AXI11464620
IC ID: 109U-89FT4935

SAC Transmitter Radiated Emission:
Model Number: AC146U502 **S/N:** 2D0I850000 **SR:**10875-EMC-00010
Battery Part No: PMNN4468B **Accy Part No:** NA
Test Mode: TX Digital
403.012500 MHz **12.5 kHz** **3.200 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
806.0250	-13.0000	-79.9714 **	-83.2104 **
1209.0375	-13.0000	-51.6900 *	-53.0100 *
1612.0500	-13.0000	-50.1700 *	-51.4000 *
2015.0625	-13.0000	-50.5100 *	-50.5400 *
2418.0750	-13.0000	-47.7500 *	-46.5600 *
2821.0875	-13.0000	-50.4045 **	-52.5594 **
3224.1000	-13.0000	-36.0900 *	-36.1500 *
3627.1125	-13.0000	-51.1123 **	-48.7153 **
4030.1250	-13.0000	-50.0335 **	-48.2360 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

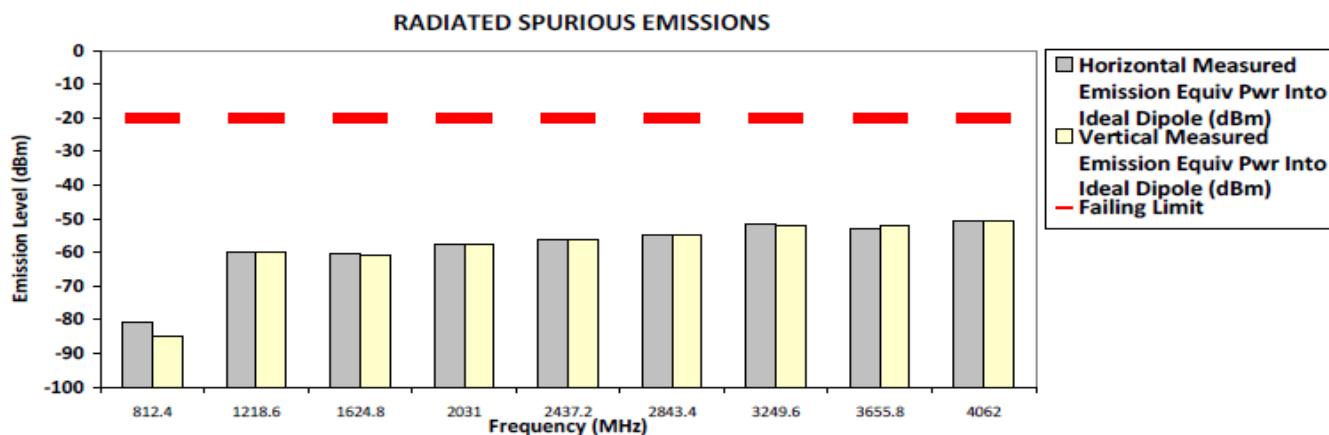
Remarks:

Passed Results	Marginal Results	Failed Results
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Motorola Solutions.

SAC Transmitter Radiated Emission:
 Model Number: AC146U502 S/N: 2D0I850000 SR:10875-EMC-00010
 Battery Part No: PMNN4468B Accy Part No: NA
 Test Mode: TX Digital
 406.2 MHz 12.5 kHz 0.500 Watt(s) /Low Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
812.4000	-20.0000	-80.9183 **	-84.6174 **
1218.6000	-20.0000	-59.7879 **	-59.8208 **
1624.8000	-20.0000	-60.3959 **	-60.6190 **
2031.0000	-20.0000	-57.6086 **	-57.6888 **
2437.2000	-20.0000	-56.2190 **	-56.1829 **
2843.4000	-20.0000	-54.9314 **	-54.8520 **
3249.6000	-20.0000	-51.7089 **	-52.1073 **
3655.8000	-20.0000	-53.0977 **	-52.2192 **
4062.0000	-20.0000	-50.6172 **	-50.8313 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
 Faris, Nazirul, Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
 Temp(Deg): 22.0 Hum(%RH): 70.0

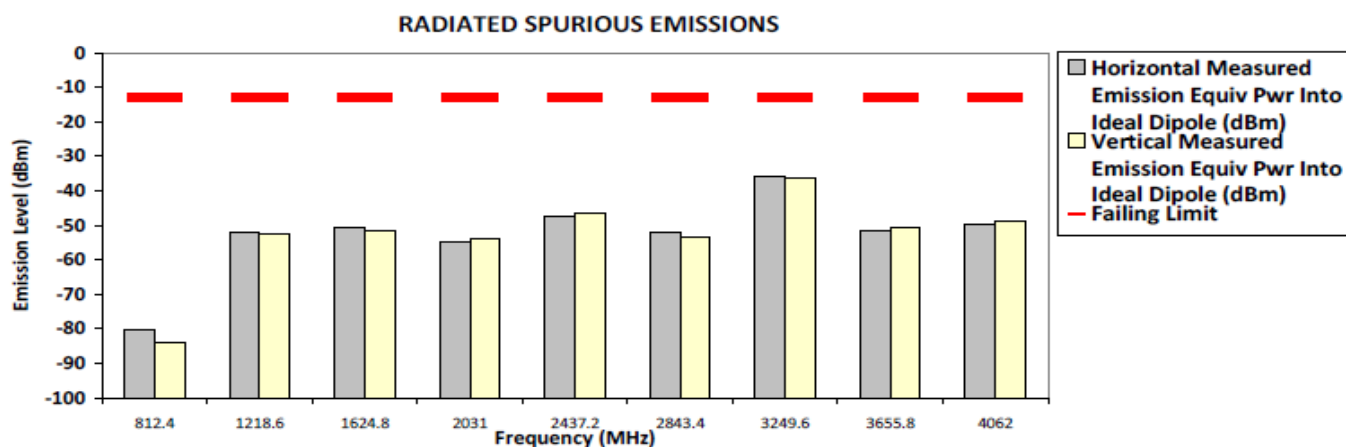
System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

Motorola Solutions.

SAC Transmitter Radiated Emission:
Model Number: AC146U502 S/N: 2D01850000 SR:10875-EMC-00010
Battery Part No: PMNN4468B Accy Part No: NA
Test Mode: TX Digital
406.200000 MHz 12.5 kHz 3.200 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
812.4000	-13.0000	-80.0285 **	-84.0944 **
1218.6000	-13.0000	-51.8900 *	-52.5600 *
1624.8000	-13.0000	-50.4600 *	-51.5700 *
2031.0000	-13.0000	-54.7944 **	-54.0896 **
2437.2000	-13.0000	-47.5200 *	-46.4700 *
2843.4000	-13.0000	-52.1742 **	-53.5767 **
3249.6000	-13.0000	-35.7600 *	-36.1700 *
3655.8000	-13.0000	-51.5126 **	-50.6352 **
4062.0000	-13.0000	-49.8318 **	-48.8509 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results	Marginal Results	Failed Results
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Motorola Solutions.

FCC ID: AXI11464620
IC ID: 109U-89FT4935

SAC Transmitter Radiated Emission:

Model Number: AC146U502

S/N: 2D0I850000

SR:10875-EMC-00010

Battery Part No: PMNN4468B

Accy Part No: NA

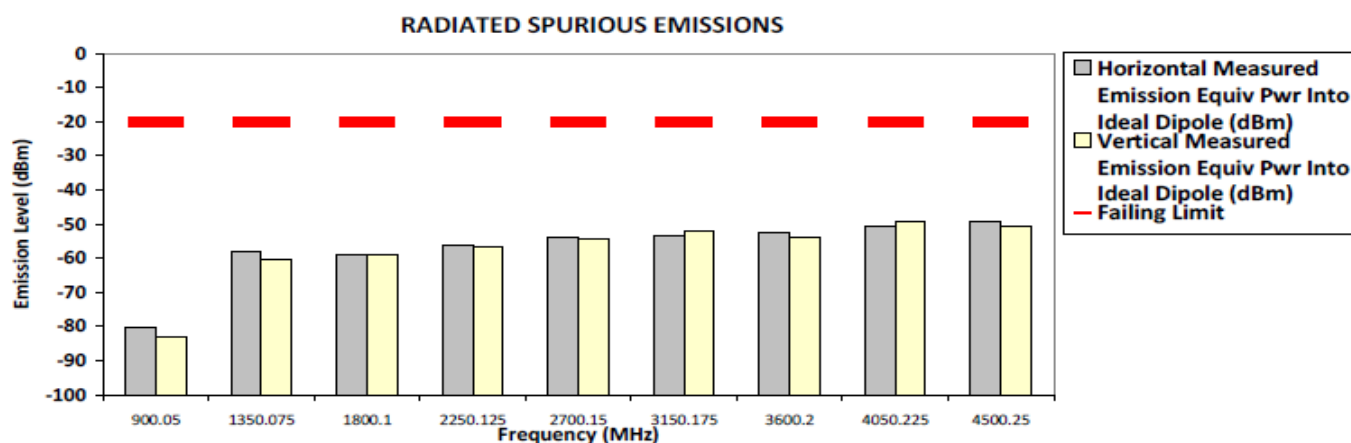
Test Mode: TX Digital

450.025 MHz

12.5 kHz

0.500 Watt(s) /Low Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
900.0500	-20.0000	-80.1524 **	-83.2095 **
1350.0750	-20.0000	-58.1723 **	-60.5080 **
1800.1000	-20.0000	-58.7668 **	-58.7541 **
2250.1250	-20.0000	-55.9542 **	-56.7190 **
2700.1500	-20.0000	-54.1159 **	-54.4403 **
3150.1750	-20.0000	-53.2086 **	-52.0190 **
3600.2000	-20.0000	-52.6109 **	-53.8954 **
4050.2250	-20.0000	-50.4973 **	-49.3499 **
4500.2500	-20.0000	-49.1105 **	-50.4541 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

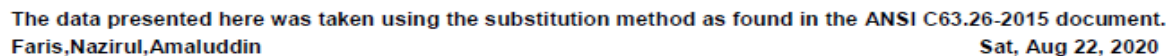
Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results	Marginal Results	Failed Results
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[illegible]

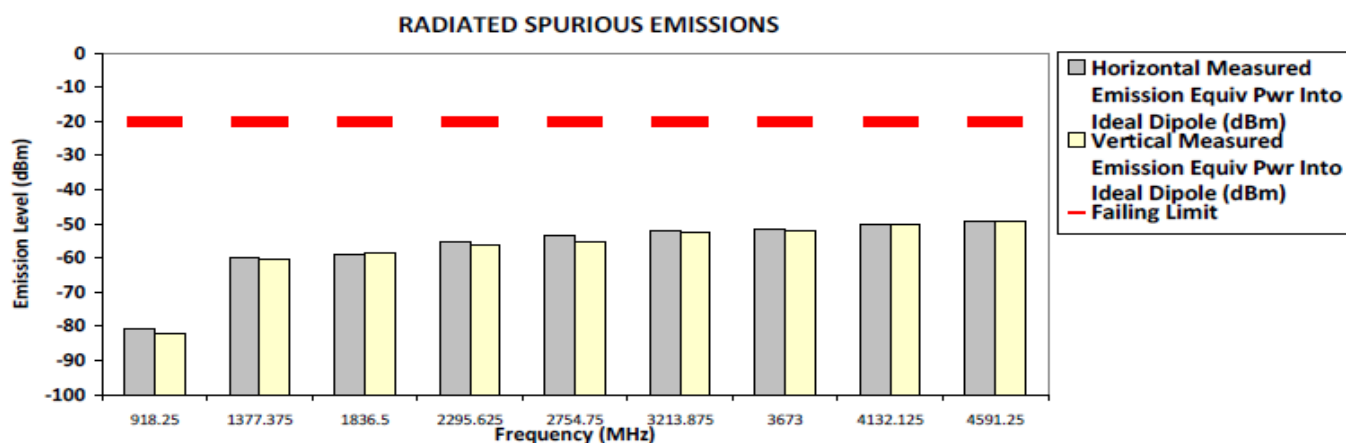
System MU: 4.03 dB

Failed Results

Motorola Solutions.

SAC Transmitter Radiated Emission:
Model Number: AC146U502 **S/N:** 2D0I850000 **SR:** 10875-EMC-00010
Battery Part No: PMNN4468B **Accy Part No:** NA
Test Mode: TX Digital
459.125 MHz **12.5 kHz** **0.500 Watt(s) /Low Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
918.2500	-20.0000	-80.9199 **	-81.9299 **
1377.3750	-20.0000	-59.9573 **	-60.3764 **
1836.5000	-20.0000	-59.0933 **	-58.6892 **
2295.6250	-20.0000	-55.0767 **	-56.1910 **
2754.7500	-20.0000	-53.5213 **	-55.1960 **
3213.8750	-20.0000	-52.0778 **	-52.3180 **
3673.0000	-20.0000	-51.6248 **	-51.9265 **
4132.1250	-20.0000	-50.2826 **	-50.1559 **
4591.2500	-20.0000	-49.3795 **	-49.2691 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
 Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
 Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

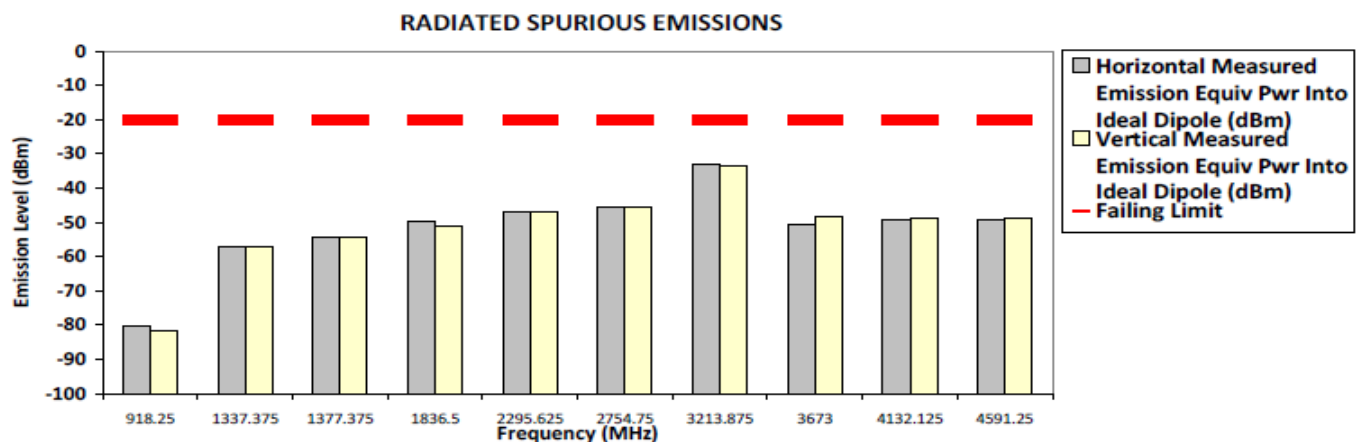
Passed Results	Marginal Results	Failed Results
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Motorola Solutions.

FCC ID: AXI11464620
IC ID: 109U-89FT4935

SAC Transmitter Radiated Emission:
Model Number: AC146U502 **S/N: 2D0I850000** **SR:10875-EMC-00010**
Battery Part No: PMNN4468B **Accy Part No: NA**
Test Mode: TX Digital
459.125000 MHz **12.5 kHz** **3.200 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
918.2500	-20.0000	-80.0745 **	-81.6695 **
1337.3750	-20.0000	-57.2600 *	-57.1300 *
1377.3750	-20.0000	-54.1868 **	-54.3044 **
1836.5000	-20.0000	-49.7900 *	-50.9800 *
2295.6250	-20.0000	-47.1400 *	-46.8700 *
2754.7500	-20.0000	-45.7100 *	-45.5800 *
3213.8750	-20.0000	-33.1500	-33.7200
3673.0000	-20.0000	-50.8022 **	-48.3634 **
4132.1250	-20.0000	-49.1900 **	-48.6859 **
4591.2500	-20.0000	-49.2872 **	-48.7980 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

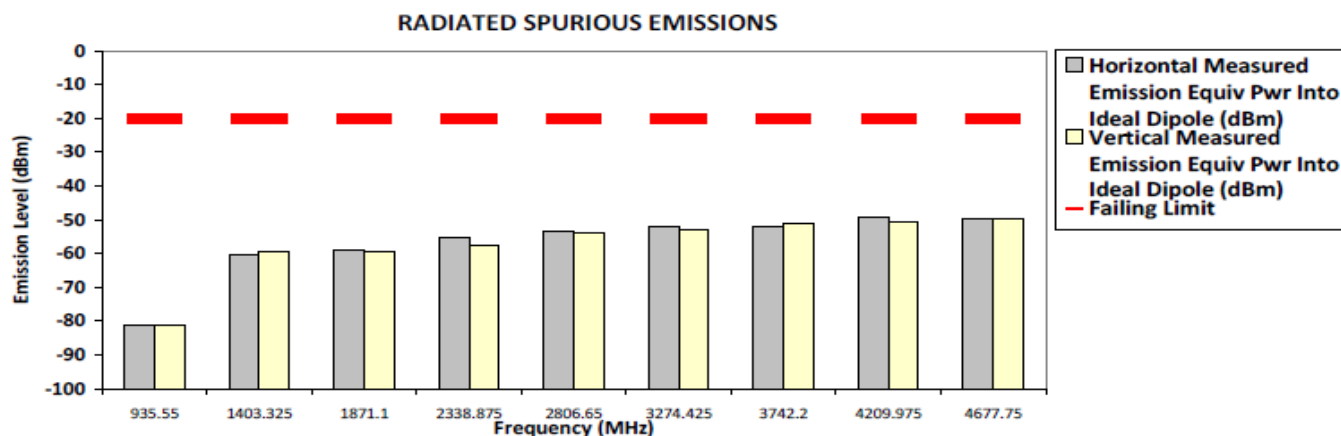
Remarks:

Passed Results	Marginal Results	Failed Results
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Motorola Solutions.

SAC Transmitter Radiated Emission:
Model Number: AC146U502 **S/N:** 2D0I850000 **SR:** 10875-EMC-00010
Battery Part No: PMNN4468B **Accy Part No:** NA
Test Mode: TX Digital
467.775 MHz **12.5 kHz** **0.500 Watt(s) /Low Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
935.5500	-20.0000	-81.2608 **	-81.3006 **
1403.3250	-20.0000	-60.2909 **	-59.4864 **
1871.1000	-20.0000	-58.9709 **	-59.3498 **
2338.8750	-20.0000	-55.1669 **	-57.4835 **
2806.6500	-20.0000	-53.2875 **	-53.6989 **
3274.4250	-20.0000	-52.0320 **	-52.9357 **
3742.2000	-20.0000	-51.8179 **	-51.2509 **
4209.9750	-20.0000	-49.4427 **	-50.6182 **
4677.7500	-20.0000	-49.7785 **	-49.7290 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
 Faris, Nazirul, Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
 *Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
 Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

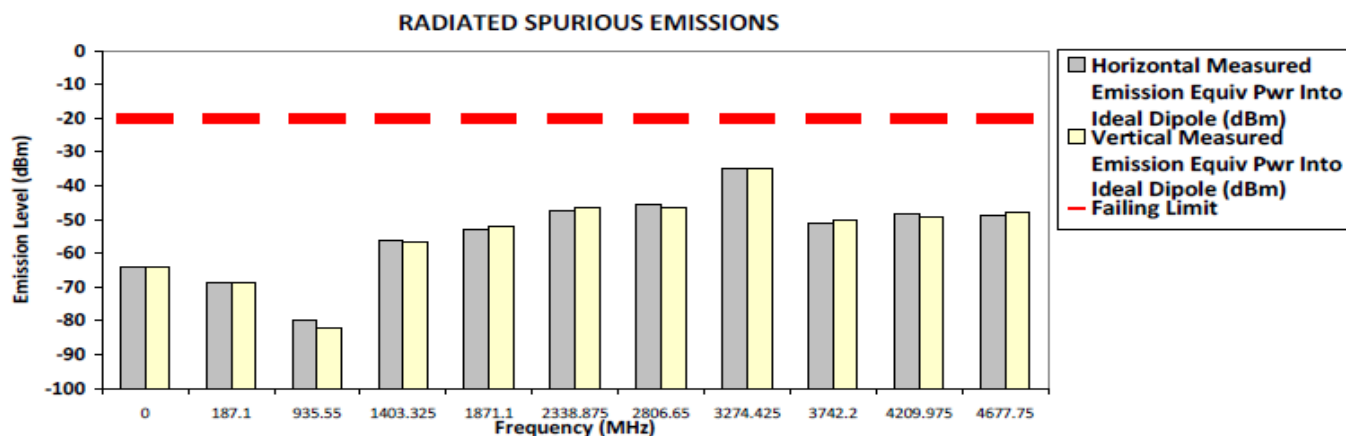
Passed Results	Marginal Results	Failed Results
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Motorola Solutions.

FCC ID: AXI11464620
IC ID: 109U-89FT4935

SAC Transmitter Radiated Emission:
Model Number: AC146U502 S/N: 2D01850000 SR:10875-EMC-00010
Battery Part No: PMNN4468B Accy Part No: NA
Test Mode: TX Digital
467.775000 MHz 12.5 kHz 3.200 Watt(s) /Max Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
0.0000	-20.0000	-64.0200 *	-64.1900 *
187.1000	-20.0000	-68.7500 *	-68.8200 *
935.5500	-20.0000	-79.9511 **	-81.9995 **
1403.3250	-20.0000	-56.1857 **	-56.6103 **
1871.1000	-20.0000	-52.9800 **	-52.1232 **
2338.8750	-20.0000	-47.5600 *	-46.6300 *
2806.6500	-20.0000	-45.5400 *	-46.6000 *
3274.4250	-20.0000	-34.9700	-35.0700
3742.2000	-20.0000	-51.3082 **	-50.3330 **
4209.9750	-20.0000	-48.1076 **	-49.3819 **
4677.7500	-20.0000	-48.9243 **	-47.8982 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

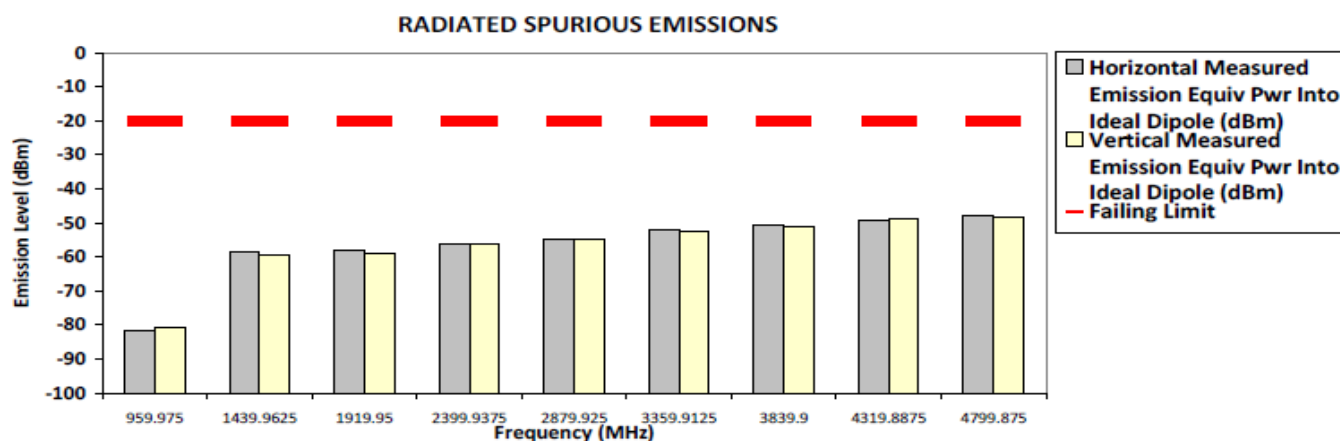
Passed Results	Marginal Results	Failed Results
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Motorola Solutions.

FCC ID: AXI11464620
IC ID: 109U-89FT4935

SAC Transmitter Radiated Emission:
Model Number: AC146U502 S/N: 2D0I850000 SR:10875-EMC-00010
Battery Part No: PMNN4468B Accy Part No: NA
Test Mode: TX Digital
479.9875 MHz 12.5 kHz 0.500 Watt(s) /Low Power

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
959.9750	-20.0000	-81.5199 **	-80.4409 **
1439.9625	-20.0000	-58.3500 **	-59.3650 **
1919.9500	-20.0000	-57.8134 **	-59.1766 **
2399.9375	-20.0000	-56.1121 **	-56.0031 **
2879.9250	-20.0000	-54.6597 **	-54.8906 **
3359.9125	-20.0000	-51.9288 **	-52.2951 **
3839.9000	-20.0000	-50.8805 **	-51.1998 **
4319.8875	-20.0000	-49.3009 **	-48.7976 **
4799.8750	-20.0000	-47.6664 **	-48.1951 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

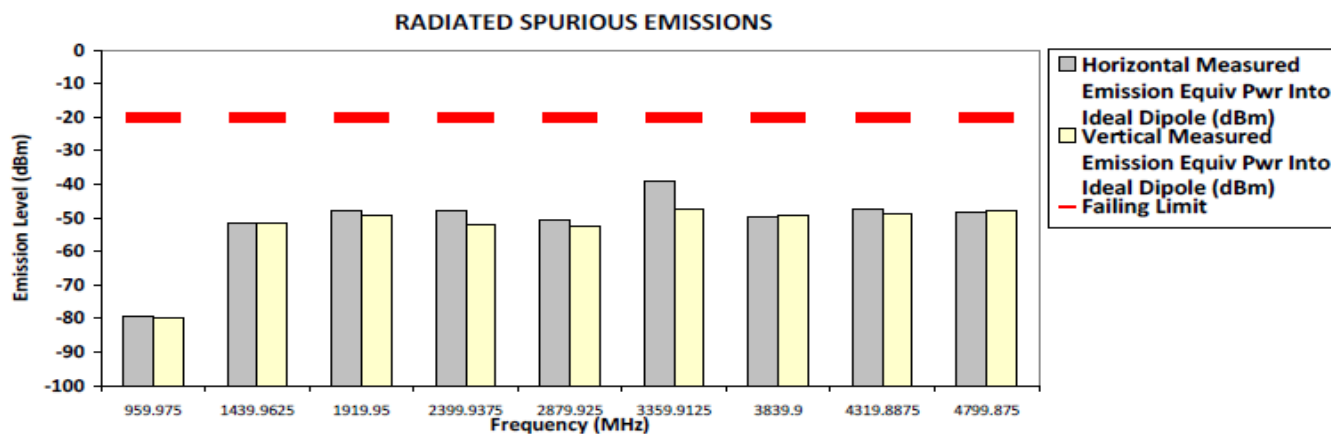
System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

Motorola Solutions.

SAC Transmitter Radiated Emission:
Model Number: AC146U502 **S/N: 2D0I850000** **SR:10875-EMC-00010**
Battery Part No: PMNN4468B **Accy Part No: NA**
Test Mode: TX Digital
479.987500 MHz **12.5 kHz** **3.200 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
959.9750	-20.0000	-79.3774 **	-80.0030 **
1439.9625	-20.0000	-51.6800 *	-51.5700 *
1919.9500	-20.0000	-48.0100 *	-49.1100 *
2399.9375	-20.0000	-47.7300 *	-52.0500 *
2879.9250	-20.0000	-50.4809 **	-52.5301 **
3359.9125	-20.0000	-38.9600	-47.2600 *
3839.9000	-20.0000	-49.5662 **	-49.0498 **
4319.8875	-20.0000	-47.4691 **	-48.9837 **
4799.8750	-20.0000	-48.5012 **	-48.0842 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Faris,Nazirul,Amaluddin Sat, Aug 22, 2020

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported
Temp(Deg): 22.0 Hum(%RH): 70.0

System MU: 4.03 dB

Remarks:

Passed Results	Marginal Results	Failed Results
----------------	------------------	----------------

5.2.4. Test Limit

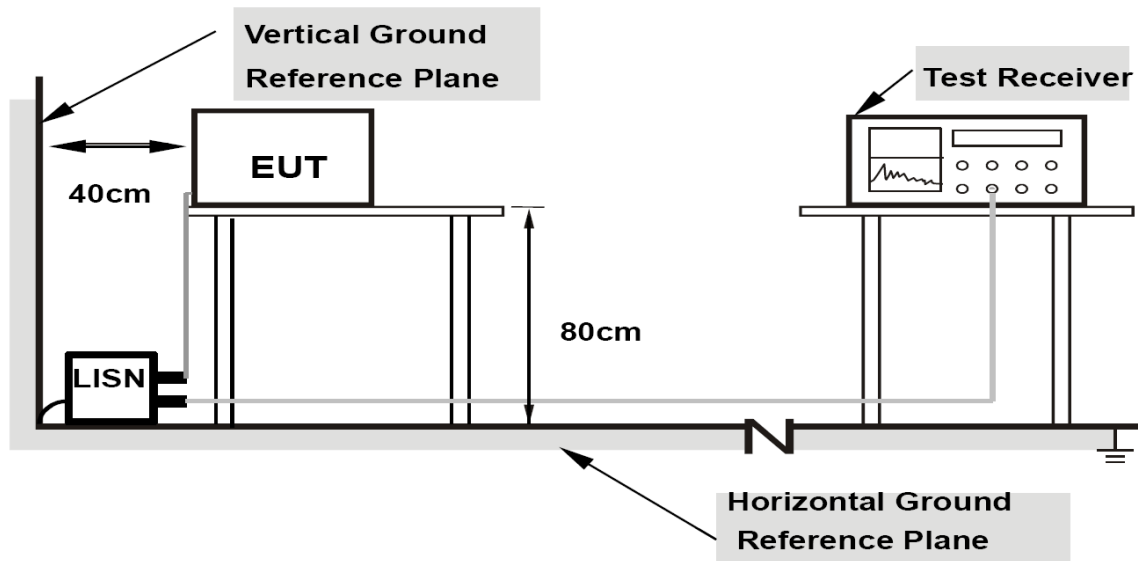
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

Channel Spacing	Part 22	Part 24D	Part 74	Part 80	Part 90 (UHF, VHF, 800, 900)	Part 90 (700)
12.5kHz	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	Not Applicable	50 + log ₁₀ (P) (-20 dBm)	43 + log ₁₀ (P) (-13 dBm)
25kHz		Not Applicable		43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)

Channel Spacing	RSS 134	RSS 182	RSS 119 (UHF, VHF, 800, 900)	RSS 119 (700)
12.5kHz	43 + log ₁₀ (P) (-13 dBm)	Not Applicable	50 + log ₁₀ (P) (-20 dBm)	43 + log ₁₀ (P) (-13 dBm)
25kHz	Not Applicable	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)	43 + log ₁₀ (P) (-13 dBm)

5.3. AC Power Line Conducted Spur Emissions

5.3.1. Test Setup



- 1) Tests were conducted for both Receive and Transmit Mode of the EUT.
- 2) The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50uH of coupling impedance for the measuring instrument.
- 3) Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- 4) The frequency range from 150 kHz to 30MHz was measured.

5.3.2. Test Result

NA

5.3.3. Test Limits

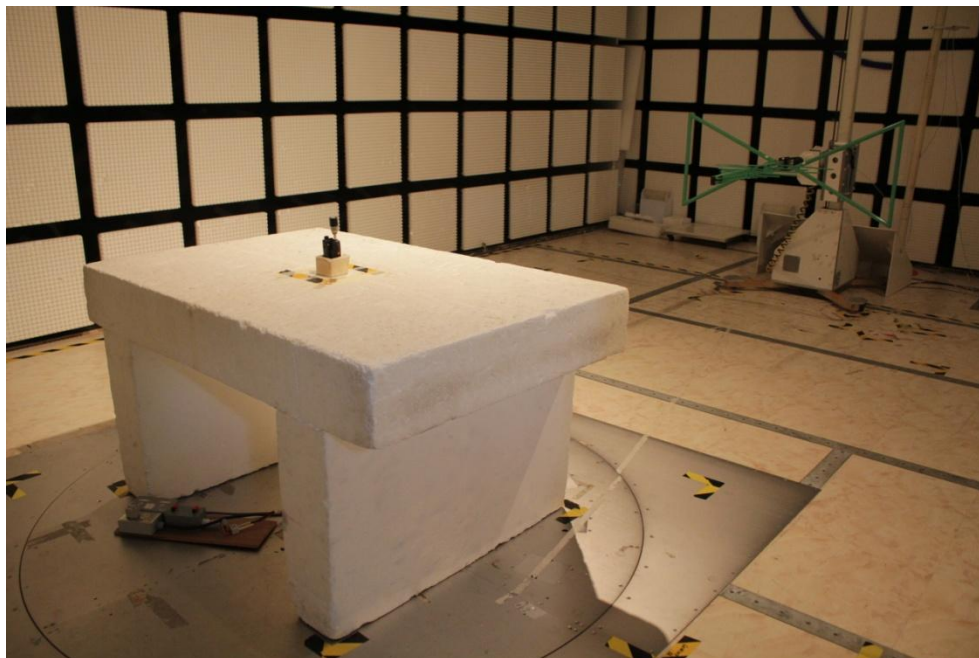
NA

6.0. Appendix: Test Setup Photo

6.1. Conducted Spur Emission ATE Station Setup

NA

6.2. Radiated Spur Emission Station Setup



6.3. AC Power Line Conducted Emission Station Setup

NA

6.4. Photographs - EUT



Radio + Battery

~ End of Test Report ~