

TEST REPORT

Applicant: NAYAX LTD
Address: 3 Arik Einstein St., Herzliya, 4659071, Israel
Equipment Type: POS Payment Device
Model Name: VPOS M S
Brand Name: Nayax
FCC ID: 2AK6L-VPOSMS
Test Standard: 47 CFR Part 2.1091
KDB 447498 D04 v01
Sample Arrival Date: N/A
Test Date: N/A
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ISSUED BY:

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Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Jul. 07, 2025</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Address	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China

1.2 Test Location

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Location	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1352. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 29671.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	NAYAX LTD
Address	3 Arik Einstein St., Herzliya, 4659071, Israel

2.2 Manufacturer Information

Manufacturer	NAYAX LTD
Address	3 Arik Einstein St., Herzliya, 4659071, Israel

2.3 General Description for Equipment under Test (EUT)

EUT Name	POS Payment Device			
Model Name Under Test	VPOSM S			
Series Model Name	VPOSM S-CLS、VPOSM S-FM			
Description of Model name differentiation	Model name	VPOSM S	VPOSM S-CLS	VPOSM S-FM
	Machine Head	Yellow	Yellow or Black	Yellow
	External charging board	VPOSM-S	VPOSM-S-CUBE	VPOSM-S-CUBE
	Enclosure Structure	Structure1	Structure2	Structure3
	Except for the above differences, all other information is the same (this information provided by the customer).			
Hardware Version	VPOSMSx415223xxxx			
Software Version	6202.30.xxxx.xxx.xxx			
Dimensions (Approx.)	N/A			
Weight (Approx.)	N/A			

2.4 Technical Information

Network and Wireless connectivity	2G Network GPRS/EDGE850/1900MHz 3G Network WCDMA/HSDPA/HSUPA Band2/4/5 4G Network FDD LTE Band 2/4/5/7/12/17 TDD LTE Band38/41 Bluetooth(BR+EDR+BLE+HS3.0) 2.4G WiFi 802.11b,802.11g,802.11n(HT20) 5G WiFi 802.11a,802.11n(HT20/40) GPS, BeiDou, GLONASS, NFC
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	Bluetooth, WIFI, WWAN,NFC		
Frequency Range	NFC	13.56 MHz	
	Bluetooth	2402 ~ 2480 MHz	
	2.4GWIFI	2412 ~ 2462 MHz	
	5GWIFI	U-NII-1: 5150 ~ 5250MHz U-NII-2A: 5250 ~ 5350MHz U-NII-3: 5725 ~ 5850MHz	
	GSM850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA B2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA B4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	WCDMA B5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE B2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE B4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE B5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE B7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE B12	TX: 699 ~ 716 MHz	RX: 729 ~ 746 MHz
	LTE B17	TX: 704 ~ 716 MHz	RX: 734 ~ 746 MHz
	LTE B38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE B41	TX: 2535 ~ 2655 MHz	RX: 2535 ~ 2655 MHz
Antenna Type	Bluetooth	PIFA Antenna	
	WIFI	PIFA Antenna	
	WWAN	PIFA Antenna	
Exposure Category	General Population/Uncontrolled Exposure		
Product Type	Mobile Device		

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1091	Radiofrequency radiation exposure evaluation: mobile devices
2	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01

4 DEVICE CATEGORY AND LEVELS LIMITS

Mobile Devices:

CFR Title 47 §2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons.

FCC KDB 447498 D04 General RF Exposure Guidance v01 Limit

Evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP_{20cm} in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i. e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole.

SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B. 2})$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
300		39	65	88	110	129	148	166	184	201	217
450		22	44	67	89	112	135	158	180	203	226
835		9	25	44	66	90	116	145	175	207	240
1900		3	12	26	44	66	92	122	157	195	236
2450		3	10	22	38	59	83	111	143	179	219
3600		2	8	18	32	49	71	96	125	158	195
5800		1	6	14	25	40	58	80	106	136	169

According with FCC KDB 447498 D04, Appendix A, Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

When maximum available power each individual transmitting antenna within the same time averaging period is ≤ 1 mW, and the nearest parts of the antenna structures of the simultaneously operating transmitters are separated by at least 2 cm.

When the aggregate maximum available power of all transmitting antennas is ≤ 1 mW in the same time-averaging period.

5 ASSESSMENT RESULT

5.1 Output Power

Bluetooth				
Mode	GFSK	$\pi/4$ -DQPSK	8-DPSK	BLE(1Mbps)
Conducted Power (dBm)	8.39	7.67	7.80	8.56
Antenna Gain (dBi)	2.03	2.03	2.03	2.03
EIRP (dBm)	10.42	9.70	9.83	10.59
Note: This report listed the worst case conducted power value, please refer to RF test report No. BL-SH2540355-601 and BL-SH2540355-602 for more details.				

2.4GWIFI			
Mode	802.11b	802.11g	802.11n-HT20
Conducted Power (dBm)	20.36	22.48	22.01
Antenna Gain (dBi)	2.03	2.03	2.03
EIRP (dBm)	22.39	24.51	24.04
Note: This report listed the worst case conducted power value, please refer to RF test report No. BL-SH2540355-603 for more details.			

5GWIFI(U-NII-1: 5150-5250MHz)			
Mode	11a	11n (HT20)	11n (HT40)
Conducted Power (dBm)	13.60	13.74	13.70
Antenna Gain (dBi)	0.35	0.35	0.35
EIRP (dBm)	13.95	14.09	14.05
Note: This report listed the worst case conducted power value, please refer to RF test report No. BL-SH2540355-604 for more details.			

5GWIFI(U-NII-2A: 5250 MHz to 5350 MHz)			
Mode	11a	11n (HT20)	11n (HT40)
Conducted Power (dBm)	13.13	13.21	13.33
Antenna Gain (dBi)	0.74	0.74	0.74
EIRP (dBm)	13.87	13.95	14.07
Note: This report listed the worst case conducted power value, please refer to RF test report No. BL-SH2540355-604 for more details.			

5GWIFI(U-NII-3: 5725 MHz to 5850 MHz)			
Mode	11a	11n (HT20)	11n (HT40)
Conducted Power (dBm)	13.83	13.78	13.63
Antenna Gain (dBi)	2.22	2.22	2.22
EIRP (dBm)	16.05	16.00	15.85
Note: This report listed the worst case conducted power value, please refer to RF test report No. BL-SH2540355-604 for more details.			

GSM					
Mode	Burst Average Power(dBm)		Division	Frame-Averaged power (dBm)	
	GSM 850	GSM 1900	Factors	GSM 850	GSM 1900
GSM	34.05	31.91	9.19	24.86	22.72
GPRS (GMSK, 1-Slot)	32.65	31.06	9.19	23.46	21.87
GPRS (GMSK, 2-Slots)	31.77	30.24	6.13	25.64	24.11
GPRS (GMSK, 3-Slots)	29.89	28.51	4.42	25.47	24.09
GPRS (GMSK, 4-Slots)	28.79	27.43	3.18	25.61	24.25
EGPRS (8PSK, 1-Slot)	24.89	26.70	9.19	15.70	17.51
EGPRS (8PSK, 2-Slots)	23.28	25.08	6.13	17.15	18.95
EGPRS (8PSK, 3-Slots)	20.69	23.08	4.42	16.27	18.66
EGPRS (8PSK, 4-Slots)	20.01	21.04	3.18	16.83	17.86
Antenna Gain (dB)	-1.07	-0.25	N/A	-1.07	-0.25
MAX ERP/EIRP (dBm)	30.83	31.66	N/A	22.42	24.00
Note: This report listed the worst case conducted power value, please refer to RF test report No.SH2540355-501 for more details.					

WCDMA			
Mode	Band 2	Band 4	Band 5
Conducted Power (dBm)	23.02	23.73	25.31
Antenna Gain (dBi)	0.26	-1.8	-1.07
MAX ERP/EIRP (dBm)	23.28	21.93	22.09
Note: This report listed the worst case conducted power value, please refer to RF test report No.BL-SH2540355-501 for more details.			

LTE								
Mode	Band 2	Band 4	Band 5	Band 7	Band 12	Band 17	Band 38	Band 41
Conducted Power (dBm)	24.13	25.49	26.53	22.01	27.45	27.39	21.91	22.19
Antenna Gain (dBi)	-0.26	-1.80	-1.07	1.87	-1.87	-1.87	2.56	2.59
MAX ERP/EIRP (dBm)	23.87	23.69	23.31	23.88	23.43	23.37	24.47	24.78
Note: This report listed the worst case conducted power value, please refer to RF test report No.BL-SH2540355-501 for more details.								

Mode	Calculation Frequency (MHz)	E (dB μ V/m)	EIRP (dBm)
ASK	13.56	64.20	-25.00
Note: This report listed the worst case EIRP, please refer to RF test report No.BL-SH2540355-402 for more details.			

5.2 Tune-up power

Mode		Conducted Power Range (dBm)	EIRP Range (dBm)	ERP Range (dBm)
GSM	GSM 850	【24.50,26.50】	/	【21.28,23.28】
	GSM 1900	【23.50,25.50】	【23.25,25.25】	【21.10,23.10】
WCDMA	Band 2	【22.00,24.00】	【22.26,24.26】	【20.11,22.11】
	Band 4	【22.50,24.50】	【20.70,22.70】	【18.55,20.55】
	Band 5	【24.00,26.00】	/	【20.78,22.78】
LTE	Band 2	【23.00,25.00】	【22.74,24.74】	【20.59,22.59】
	Band 4	【24.00,26.00】	【22.20,24.20】	【20.05,22.05】
	Band 5	【26.00,28.00】	/	【22.78,24.78】
	Band 7	【21.00,23.00】	【22.87,24.87】	【20.72,22.72】
	Band 12	【26.00,28.00】	/	【21.98,23.98】
	Band 17	【26.00,28.00】	/	【21.98,23.98】
	Band 38	【21.00,23.00】	【23.56,25.56】	【21.41,23.41】
	Band 41	【21.00,23.00】	【23.59,25.59】	【21.44,23.44】
Bluetooth		【7.00,9.00】	【9.03,11.03】	【6.88,8.88】
2.4GWIFI		【21.00,23.00】	【23.03,25.03】	【20.88,22.88】
5GWIFI (U-NII-1: 5150-5250MHz)		【12.50,14.50】	【12.85,14.85】	【10.70,12.70】
5GWIFI (U-NII-2A: 5250-5350MHz)		【12.00,14.00】	【12.74,14.74】	【10.59,12.59】
5GWIFI (U-NII-3: 5725-5850MHz)		【12.50,14.50】	【14.72,16.72】	【12.57,14.57】
NFC	ASK	/	【-27.00, -25.00】	【-29.15, -27.15】
Note1: ERP= EIRP -2.15dB.				
Note2: According KDB 447498 D04, used the greater of maximum conducted power and ERP to compare with the threshold value Pth.				

5.3 RF Exposure Evaluation Result

Evolution mode		f(MHz)	Distance (cm)	Maximum power (dBm)	Threshold Power (mW)	Plimit(mW)	P/Plimit	Verdict
GSM	GSM 850	824	20	26.50	446.68	1680.96	0.2657	Pass
	GSM 1900	1850	20	25.50	354.81	3060.00	0.1160	Pass
WCDMA	Band 2	1850	20	24.00	251.19	3060.00	0.0821	Pass
	Band 4	1710	20	24.00	251.19	3060.00	0.0821	Pass
	Band 5	824	20	26.00	398.11	1680.96	0.2368	Pass
LTE	Band 2	1850	20	25.00	316.23	3060.00	0.1033	Pass
	Band 4	1710	20	26.00	398.11	3060.00	0.1301	Pass
	Band 5	824	20	28.00	630.96	1680.96	0.3754	Pass
	Band 7	2500	20	23.00	199.53	3060.00	0.0652	Pass
	Band 12	699	20	28.00	630.96	1425.96	0.4425	Pass
	Band 17	704	20	28.00	630.96	1436.16	0.4393	Pass
	Band 38	2570	20	23.41	219.28	3060.00	0.0717	Pass
	Band 41	2535	20	23.44	220.80	3060.00	0.0722	Pass
Bluetooth		2402	20	9.00	7.94	3060.00	0.0026	Pass
2.4G WIFI		2412	20	23.00	199.53	3060.00	0.0652	Pass
5GWIFI(U-NII-1: 5150-5250MHz)		5150	20	14.50	28.18	3060.00	0.0092	Pass
5GWIFI(U-NII-2A: 5250-5350MHz)		5250	20	14.00	25.12	3060.00	0.0082	Pass
5GWIFI(U-NII-3: 5725-5850MHz)		5725	20	14.57	28.64	3060.00	0.0094	Pass

Mode	Calculation Frequency (MHz)	Tune-up limit power (dBm)	Tune-up limit power (mW)	Threshold Value(mW)	Verdict
ASK	13.56	-27.15	0.001928	1	Pass

Note: The available maximum time-averaged power is no more than 1 mW, a single RF source is exempt.

5.4 Collocated Power Calculation

Evolution mode	Frequency(MHz)	Power /Limit	$\Sigma(\text{Power/ Limit})$ of GSM850 + WLAN + Bluetooth	Verdict
LTE Band12	699 MHz~ 716 MHz	0.4425	0.5197	Pass
2.4G WIFI	2412 MHz ~ 2462 MHz	0.0652		
5G WIFI	5725 MHz ~ 5850 MHz	0.0094		
Bluetooth	2402 MHz ~ 2480 MHz	0.0026		

Note:

1. $\Sigma(\text{Power / Limit})$: This is a summation of [(power for each transmitter/ antenna included in the simultaneous transmission)/ (corresponding Power limit)], for Bluetooth+ WLAN 2.4GHz+WLAN 5GHz+WWAN.
2. Both of the 850MHz/2.4GHz/2.5GHz/5GHz/ can transmit simultaneously, the formula of calculated the Power is

$$\text{CP1} / \text{LP1} + \text{CP2} / \text{LP2} + \dots \text{etc.} < 1$$

CP = Calculation power
LP = Limit of power
3. The worst-case situation is 0.5197, which is less than “1”. This confirmed that the device comply with FCC KDB 447498 D04 Power limit.
4. More power list please refer to RF test report.

5.5 Conclusion

This EUT is deemed to comply with the reference level limits, therefore the basic restrictions are compliant with human exposure limits.

Statement

1. The Testing Center guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. For the report with Accreditation Symbol, the items marked with "☆" are not within the accredited scope.
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6. Any objection shall be raised to the Testing Center within 30 days after receiving the report.

--END OF REPORT--