RETLIF TESTING LABORATORIES

Put Us To The Test sm

Report of Measurements FCC Part 15, Subpart C, Section 15.223 and FCC Part 15, Subpart C, Section 15.205

On

Antenna Pedestal Model Numbers Used for Testing: NP12 PRI/PAB, NP12 SAB

FCC ID: DO4NEO2PS

Customer Name:	Checkpoint Systems, Inc.	
Customer P.O:	1101200342	
Date of Report Rev.:	October 9, 2023	
Test Report No:	R-3728P-2, Rev. C	
Test Start Date:	June 12, 2023	
Test Finish Date:	June 16, 2023	

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Certification and Signatures We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.

Jul 11	Sato Wenter
Richard J. Reitz	Scott Wentworth
Director of Engineering	Branch Manager
iNARTE Electromagnetic Compatibility Engineer EMC-050739-E	

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The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

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Corporate Headquarters: 795 Marconi Avenue Ronkonkoma, NY 11779 USA Tel: (631) 737-1500 Fax: (631) 737-1497 101 New Boston Road Goffstown, NH 03045 USA Tel: (603) 497-4600 Fax: (603) 497-5281

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Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document.

Revision - A	Date August 22, 2023 September 11, 2023	 Pages Affected Original Release Global Changes: Report No. R-3728P-2 changed to R- 3728P-2, Rev. A Removed Models: NP12 PRI/PAB/SAB RF ANT FRAME and LOWER BASE
В	September 25, 2023	from report and test data Global Changes: • Report No. R-3728P-2, Rev. A changed to R-3728P-2, Rev. B 1, 4: • Changed Model Numbers to Model Numbers Tested 5: • Added title <i>Model Variants</i> to the
C	October 9, 2023	 product family Global Changes: Report No. R-3728P-2, Rev. B changed to R-3728P-2, Rev. C FCC Part 15.205 Restricted Band test method, Equipment List and Data added to report Table 1: Added 15.205 Restricted Bands of Operation Part 15.31: Removed "The test sample operates at one discrete frequency under Part 15" from last bullet Part 15.31: Added last bullet Part 15.35: Removed Peak detector
		Retlif Testing Laboratories
		Report No. R-3728P-2, Rev. C

	Technical Information		
Report Number:	R-3728P-2, Rev. C		
Applicant: Checkpoint Systems, Inc.			
Address:	101 Wolf Drive		
Thorofare, New Jersey 08086			
Manufacturer:	Checkpoint Systems, Inc.		
Manufacturer Address:	Checkpoint System (Jiangsu) Co Ltd		
	Haian Economic & Technical Development Zone		
	No. 15 (East) Nan Hai Road		
	Nantong Jiangsu, China		
FRN:	0004326823		
Test Sample:	Antenna Pedestal		
Model Numbers Tested:	NP12 PRI/PAB, NP12 SAB		
FCC ID:	DO4NEO2PS		
Power Requirements:			
Frequency of Operation:			
Equipment Class: FAP			
Equipment Use: Fixed – Theft Deterrent System			
Test Specification: FCC Rules and Regulations Part 15, Subpart C, Section 15.223			
Test Procedure : ANSI C63.4:2014 ANSI C63.10:2013			
Test Facility: Retlif Testing Laboratories 3131 Detwiler Road Harleysville, PA 19438			
FCC Accreditation Designation	Number: US2321		
	Retlif Testing Laboratories		

Tests Performed

The test methods performed on the Antenna Pedestal are shown in Table 1 below:

FCC Part 15, Subpart C	Test Method	Results
15.203	Antenna Requirements	Complied
15.207 (a)	Conducted Emissions	Complied
15.223 (a)	6 dB and 99% Bandwidth	Complied
15.223 (a)	Fundamental Field Strength	Complied
15.223 (b)	Field Strength of Harmonics and Spurious outside of band	Complied
15.205	Restricted Bands of Operation	Complied

Table 1 – Test Methods

Model Variants:

The Antenna Pedestal tested was provided as worst case configuration in accordance with Checkpoint Systems, Inc. The Neo v2.0 PAB/SAB family consists of the following versions:

- NP12 PRI/PAB
- NP12 SAB
- NP22 PRI/PAB
- NP22 SAB
- NG12 PRI/PAB RF PED
- NG12 SAB RF PED



All test methods listed above are included in Retlif Testing Laboratories ANSI National Accreditation Board (ANAB), ISO/IEC 17025 Scope of Accreditation, Certificate Number: L2320.02.



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General Test Information

Part 15.31 Measurement Standards

- Testing was performed using the procedures specified in ANSI C63.10:2013 in accordance with 15.31(a)(3).
- Testing was performed with the transmitter continuously transmitting at the selected frequency in accordance with 15.31(c).
- Field strength measurements were made on an Open Area Test Site in accordance with 15.31(d).
- Field strength measurements were made at a distance closer than specified in the regulations. The results were extrapolated to the specified test distance by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Sample Calculation:

Extrapolation Factor (dB) = 40 Log (D_{Meas} / D_{Spec})

Where:

- D_{Meas} = Distance at which measurements were performed (10 Meters)
- D_{Spec} = Distance at which the limit is specified (30 Meters)

•	Extrapolation Factor (dB)	= 40 Log (10 / 30)
		= 40 Log (0.333)
		= 40 * -0.477
		= - 19.09

- The Device under test was positioned and adjusted to maximize the level of emissions in accordance with 15.31(g).
- All testing outlined herein was performed with the device under test operating at 120 VAC, 60 Hz.
- The test sample operates at 4 discrete frequencies, the lowest being 7.975 MHz and the highest being 8.425 MHz, a range of 450 kHz. In accordance with 15.31(m), for a device with a frequency range over which the device operates of 1 MHz or less, measurements were taken with the device operating at 1 frequency (8.275 MHz), near the middle of the operational range.

Part 15.33 Frequency range of radiated measurements

- The radio frequency spectrum was investigated from 9 kHz to the 10th harmonic of the highest fundamental frequency as specified in 15.33(a)(1). In addition, the digital aspects of the device were evaluated under 15.109, over the frequency range of 30 MHz to 1 GHz. These results are contained with Retlif Testing Laboratories Report R-3728P-1.

Part 15.35 Measurement detector function and bandwidths

- On frequencies below or equal to 1000 MHz, measurements were made utilizing a quasi-peak detector and associated bandwidths with the exception of measurements in the frequency bands of 9 to 90 kHz and 110 to 490 kHz in which an average detector was utilized.



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General Requirements FCC

Spectrum Analyzer Desensitization Considerations

Due to the nature of the emissions being measured, a pulse desensitization calculation was utilized in order to provide accurate peak measurements. The following formula was utilized:

 τ_{eff} = Minimum Pulse Width = 4.08 µS

K = 1.5

B = Bandwidth utilized for measurement = 10 kHz

Pulse Desensitization Factor $(dB) = 20 \log_{10} \tau_{eff} \times K \times B$ Pulse Desensitization Factor $(dB) = 20 \log_{10} 4.08 \mu S \times 1.5 \times 10 kHz$ Pulse Desensitization Factor (dB) = 24.437

Duty Cycle Correction for Average Reading

In accordance with ANSI C63.10 Paragraph 7.5, the below equation was utilized in order to determine the Average value of a pulsed emission:

Transmitter On Time =0.261milliseconds (maximum per cycle)Transmitter Cycle Time =9.46milliseconds (100 ms maximum)Transmitter Duty Cycle =2.76%

CALCULATION

64 pulses of 4.08 μ s = <u>261</u> μ s Duty Cycle (0.261/9.46) = <u>2.76</u> % Correction Factor =20 log (0.0276) = <u>-31.18</u> dB



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Requirements and Test Results

FCC Part 15.203, Antenna Requirements

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

• Results:

In accordance with Checkpoint Systems, Inc the antenna is permanently installed.



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Requirements and Test Results

FCC Part 15.207(a), Conducted Emissions

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits shown in Table 2, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of the paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency of Emission (MHz)	Conducted Limit (dBµV)		
	Quasi-Peak	Average	
0.15 to 0.5	66 to 56*	56 to 46*	
0.5 to 5	56	46	
5 to 30	60	50	
*Decreases due to logarithm of the frequency			

Table 2 Conducted Emission Limite

Results:

The conducted emissions observed did not exceed the limits specified in Table 2.

Equipment List:

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
8079	ROHDE &	ESH3	RECEIVER, EMI, 9 kHz - 30 MHz	861742/012	6/30/2023
8366A	RETLIF	20' BNC	CABLE, COAXIAL, 10 KHz - 1 GHz	n/a	5/31/2024
8496	NARDA MICROWAVE	768-10	ATTENUATOR, COAXIAL, 10 dB, DC - 11 GHz, 20 W	04105	6/30/2023
8633	SOLAR ELECTRONICS	21106-50-BP- 25-BNC	LISN, 50 uH, 150 kHz - 30 MHz	21106141201	9/30/2023
8634	SOLAR ELECTRONICS	21106-50-BP- 25-BNC	LISN, 50 uH, 150 kHz - 30 MHz	21106141202	9/30/2023
8662	DIGI-SENSE	20250-30	HYGROMETER, 0 - 50 deg. c, 10 - 90 % RH	151210305	10/31/2023
8749	RIGOL	DSA832E	ANALYZER, SPECTRUM, 9 kHz - 3.2 GHz	DSA8G201800 133	5/31/2024



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EMISSIONS TEST DATA SHEET		
FCC Part 15, Subpart C, Section 15.207		
ANSI C63.10, Section 6.2, AC power-line conducted emission measurements		
R- 3728P-2 / Checkpoint Systems, Inc		
Antenna Pedestal		
el Number: NP12 PRI/PAB, NP12 SAB		
Serial Number: 1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)		
Operating Mode: TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's		
Technician: K. Stroman		
6/13/2023		
22.5℃		
50%		
Lead Tested: 120 VAC, 60 Hz, Hot		
The frequency range was scanned from 0.15 MHz to 30 MHz.		

The six highest emissions relative to the limit are presented. The emissions observed from the EUT do not exceed the specified limits.

Frequency	Detector	Meter Reading	Total Correction Factor	Corrected Reading	Limit	Margin
MHz	_	dBµV	dB	dBµV	dBµV	dB
0.2419	Peak	34.3	10.2	44.5*		_
0.2419	Quasi-Peak	23.5	10.2	33.7	62.0	28.3
0.2419	Average	14.4	10.2	24.6	52.0	27.4
0.3947	Peak	31.2	10.2	41.4*	_	_
0.3947	Quasi-Peak	18.1	10.2	28.3	58.0	29.7
0.3947	Average	-7.6	10.2	2.6	48.0	45.4
7.9080	Peak	31.6	10.4	42.0*	_	_
7.9080	Quasi-Peak	25.2	10.4	35.6	60.0	24.4
7.9080	Average	16.2	10.4	26.6	50.0	23.4
8.4520	Peak	34.7	10.4	45.1*	_	_
8.4520	Quasi-Peak	28.1	10.4	38.5	60.0	21.5
8.4520	Average	20.5	10.4	30.9	50.0	19.1
22.5840	Peak	24.6	10.6	35.2*	_	_
22.5840	Quasi-Peak	11.5	10.6	22.1	60.0	37.9
22.5840	Average	1.0	10.6	11.6	50.0	38.4
24.4300	Peak	25.1	10.6	35.7*	_	_
24.4300	Quasi-Peak	16.2	10.6	26.8	60.0	33.2
24.4300	Average	3.3	10.6	13.9	50.0	36.1

* Peak measurements are recorded for informational purposes only.



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EMISSIONS TEST DATA SHEET		
Test Specification:	FCC Part 15, Subpart C, Section 15.207	
Method:	ANSI C63.10, Section 6.2, AC power-line conducted emission measurements	
Job Number/Customer:	R- 3728P-2 / Checkpoint Systems, Inc	
Test Sample:	Antenna Pedestal	
Model Number:	NP12 PRI/PAB, NP12 SAB	
Serial Number:	: 1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)	
Operating Mode: TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's		
Technician:	K. Stroman	
Date(s):	6/13/2023	
Temperature:	22.5℃	
Relative Humidity:	: 50%	
Lead Tested: 120 VAC, 60 Hz, Neutral		
The frequency range was scanned from 0.15 MHz to 30 MHz.		
The six highest emissions relative to the limit are presented.		

The emissions observed from the EUT do not exceed the specified limits.

Frequency	Detector	Meter Reading	Total Correction Factor	Corrected Reading	Limit	Margin
MHz	_	dBµV	dB	dBµV	dBµV	dB
0.4480	Peak	29.1	10.2	39.3*	_	_
0.4480	Quasi-Peak	17.2	10.2	27.4	56.9	29.5
0.4480	Average	-7.6	10.2	2.6	46.9	53.4
2.5800	Peak	29.4	10.2	39.6*	_	_
2.5800	Quasi-Peak	24.4	10.2	34.6	56.0	21.4
2.5800	Average	20.9	10.2	31.1	46.0	14.9
8.2590	Peak	28.5	10.4	38.9*	_	_
8.2590	Quasi-Peak	24.6	10.4	35.0	60.0	25.0
8.2590	Average	18.0	10.4	28.4	50.0	21.6
12.5300	Peak	27.8	10.4	38.2*	_	_
12.5300	Quasi-Peak	23.8	10.4	34.2	60.0	25.8
12.5300	Average	18.3	10.4	28.7	50.0	21.3
21.9400	Peak	29.7	10.6	40.3*	_	_
21.9400	Quasi-Peak	22.4	10.6	33.0	60.0	27.0
21.9400	Average	13.5	10.6	24.1	50.0	25.9
24.6200	Peak	26.7	10.6	37.3*		_
24.6200	Quasi-Peak	17.0	10.6	27.6	60.0	32.4
24.6200	Average	4.1	10.6	14.7	50.0	35.3

* Peak measurements are recorded for informational purposes only.



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Requirements and Test Results

FCC Part 15.223 (a), 6 dB and 99% Occupied Bandwidth

If the bandwidth of the emission is less than 10% of the center frequency, the field strength shall not exceed 15 microvolts/meter or (the bandwidth of the device in kHz) divided by (the center frequency of the device in MHz) microvolts/meter at a distance of 30 meters, whichever is the higher level. For the purposes of this section, bandwidth is determined at the points 6 dB down from the modulated carrier.

• Results:

The 6dB bandwidth of the device was 746.3 kHz.

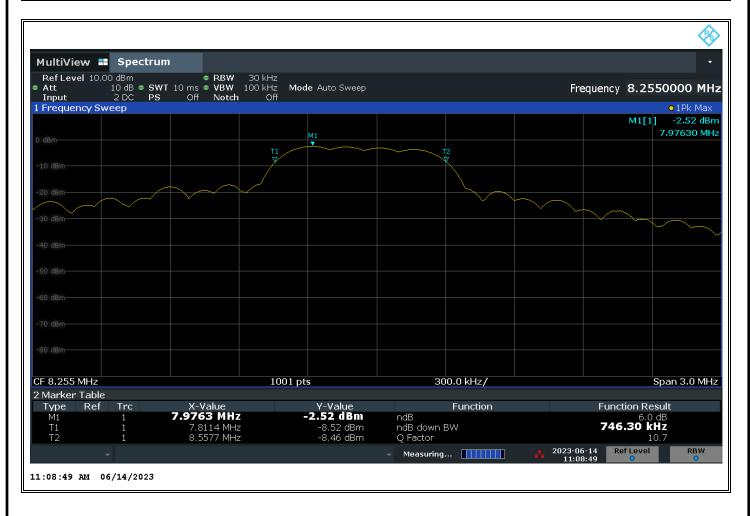
Equipment List:

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
3207	ETS / EMCO	6502	ANTENNA, ACTIVE LOOP, 9 kHz - 30 MHz	1033	5/31/2024
8816	ROHDE &	ESW26	RECEIVER, EMI, 1 Hz - 26 GHz	103087	8/31/2023
8820	AMPHENOL	CO- 058BNCX200-010	CABLE, COAXIAL, DC - 1 GHz	NSN	12/31/2023



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	EMISSIONS TEST DATA SHEET							
Test Specification:	FCC Part 15, Subpart B, Section 15.223(a), Occupied Bandwidth							
Method:	Occupied Bandwidth, 6dB							
Job Number/Customer:	R- 3728P-2 / Checkpoint Systems, Inc							
Test Sample:	Antenna Pedestal							
Model Number:	NP12 PRI/PAB, NP12 SAB							
Serial Number:	1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)							
Operating Mode:	TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's							
Technician:	M. Nowak							
Date:	6/14/2023							
6 dB Occupied Bandwidth:	746.3 kHz							





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EMISSIONS TEST DATA SHEET							
Test Specification:	FCC Part 15, Subpart B, Section 15.223(a), Occupied Bandwidth						
Method:	Occupied Bandwidth, 99%						
Job Number/Customer:	R- 3728P-2 / Checkpoint Systems, Inc						
Test Sample:	Antenna Pedestal						
Model Number:	NP12 PRI/PAB, NP12 SAB						
Serial Number:	1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)						
Operating Mode:	TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's						
Technician:	M. Nowak						
Date:	6/14/2023						
99% Occupied Bandwidth:							
Bandwidth:							



Retlif Testing Laboratories

Report No. R-3728P-2, Rev. C

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Requirements and Test Results

FCC Part 15.223 (a), Fundamental Field Strength and Duty Cycle

The field strength of any emission within the band 1.705-10.0 MHz shall not exceed 100 microvolts/meter at a distance of 30 meters. The emission limits in this paragraph are based on measurement instrumentation employing an average detector. The provisions in §15.35(b) for limiting peak emissions apply.

• Results:

The device was operated at a frequency of 8.255 MHz. The maximum Peak reading was 687.86 μ V/m. The maximum average reading was 18.99 μ V/m.

Table 3 - Field Strength of Emissions Limits							
Fundamental Frequency Peak Field Strength Limit Average Field Strength Limit							
8.255 MHz	904 μV/m	90.4 μV/m					

Equipment List:

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
3207	ETS / EMCO	6502	ANTENNA, ACTIVE LOOP, 9 kHz - 30 MHz	1033	5/31/2024
5272	ROHDE &	ESPC	RECEIVER, EMI, 150 kHz - 1 GHz	843820/023	4/30/2024
8300C	UNKNOWN	3 METER CABLE	CABLE, COAXIAL, 3/10 METER	N/A	8/31/2023
8644	AGILENT / HP	85662A	ANALYZER, SPECTRUM, 100 Hz - 22 GHz	2848A18175	9/30/2023
8644A	AGILENT / HP	8566B	ANALYZER, SPECTRUM, 100 Hz - 22.5 GHz	2937A06124	9/30/2023
8668	DIGI-SENSE	20250-31	HYGROMETER, 0 - 50 deg. c, 10 - 90 % RH	140908984	10/31/2023



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15.223(a) Fundamental Field Strength Test Data



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	EMISSIONS TEST DATA SHEET						
	Test Specification: FCC						
	Method: ANS						
	Job Number/Customer: R- 3						
	Test Sample: Ante						
	Model Number: NP1						
3 lower base)	Serial Number: 1003						
	Operating Mode: TX=3						
	Technician: M. N						
	Date(s): 6/15						
	Temperature: 23.7						
	Relative Humidity: 43 %						
	Detector: Peak						
	Test Distance: 10m						
	Notes:						
	Detector: Peal Test Distance: 10m						

Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Pulse Desensitization Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB		dB	dBuV/m	uV/m	uV/m
8.255	Perpendicular / 1.00	180.0	39.4	12.0	24.44	-19.09	56.75	687.86	904
8.255	Parallel / 1.00	270.0	37.2	12.0	24.44	-19.09	54.55	533.95	904
8.255	Parallel to Ground / 1.00	270.0	27.9	12.0	24.44	-19.09	45.25	183.02	904



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EMISSIONS TEST DATA SHEET						
Test Specification:	FCC Part 15, Subpart B, Section 15.223(a), Fundamental Field Strength					
Method:	ANSI C63.10, Section 6.4, Radiated Emission From Unlicensed <30 MHz					
Job Number/Customer:	R- 3728P-2 / Checkpoint Systems, Inc					
Test Sample:	Antenna Pedestal					
Model Number:	del Number: NP12 PRI/PAB, NP12 SAB					
Serial Number:	1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)					
Operating Mode:	TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's					
Technician:	M. Nowak					
Date(s):	6/15/2023					
Temperature:	23.7 °C					
Relative Humidity:	Relative Humidity: 43 %					
Detector:	Peak (converted to average via Duty Cycle correction)					
Test Distance:	10m					
Notes:						
Duty Cycle = 2.76%, -31.18	dB					

Frequency	Antenna Orientation / Height	EUT Orientation	Corrected Peak Meter Reading	Duty Cycle Correction Factor	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dBuV/m	uV/m	uV/m
8.255	Perpendicular / 1.00	250.0	56.75	-31.18	25.57	18.99	90.4
8.255	Parallel / 1.00	190.0	54.55	-31.18	23.37	14.74	90.4
8.255	Parallel to Ground / 1.00	320.0	45.25	-31.18	14.07	5.05	90.4

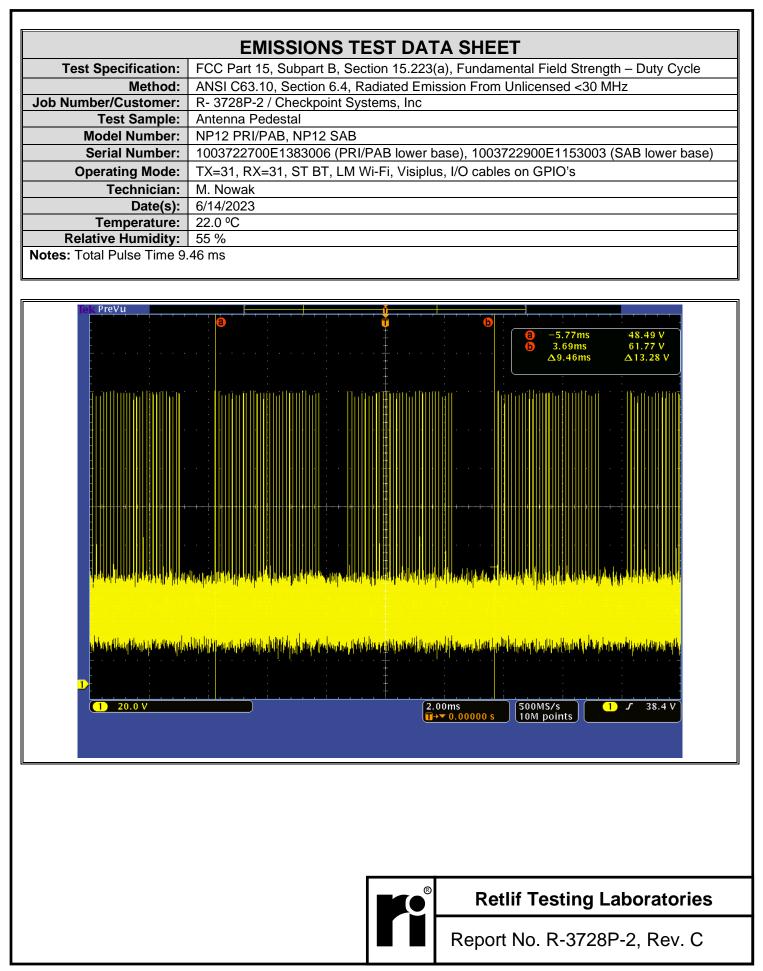


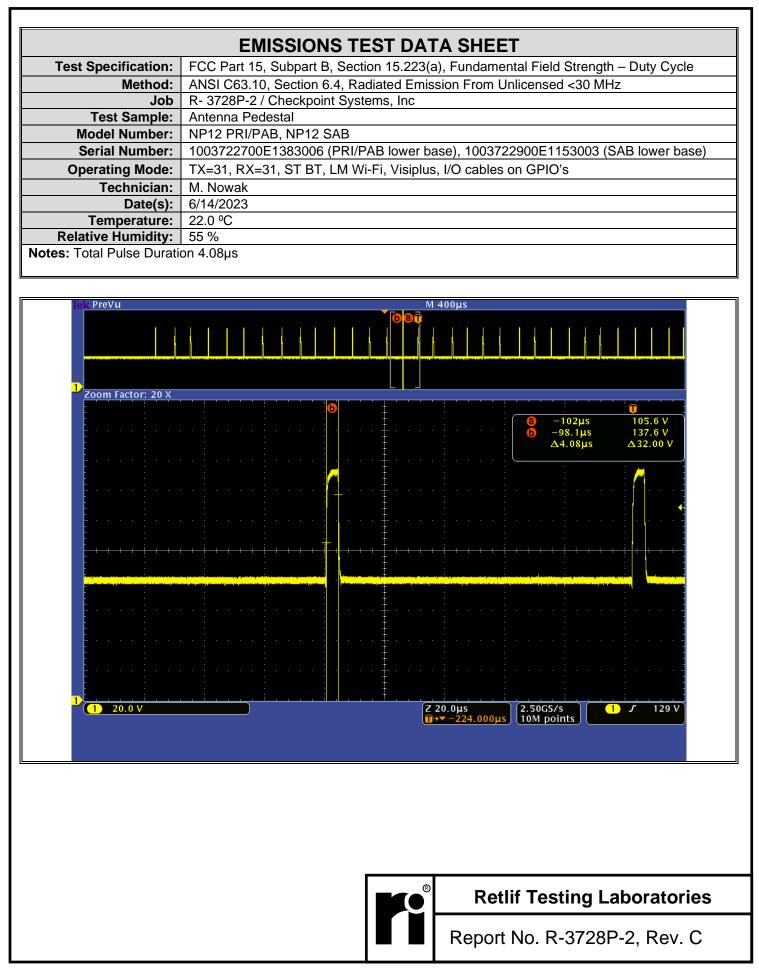
Retlif Testing Laboratories

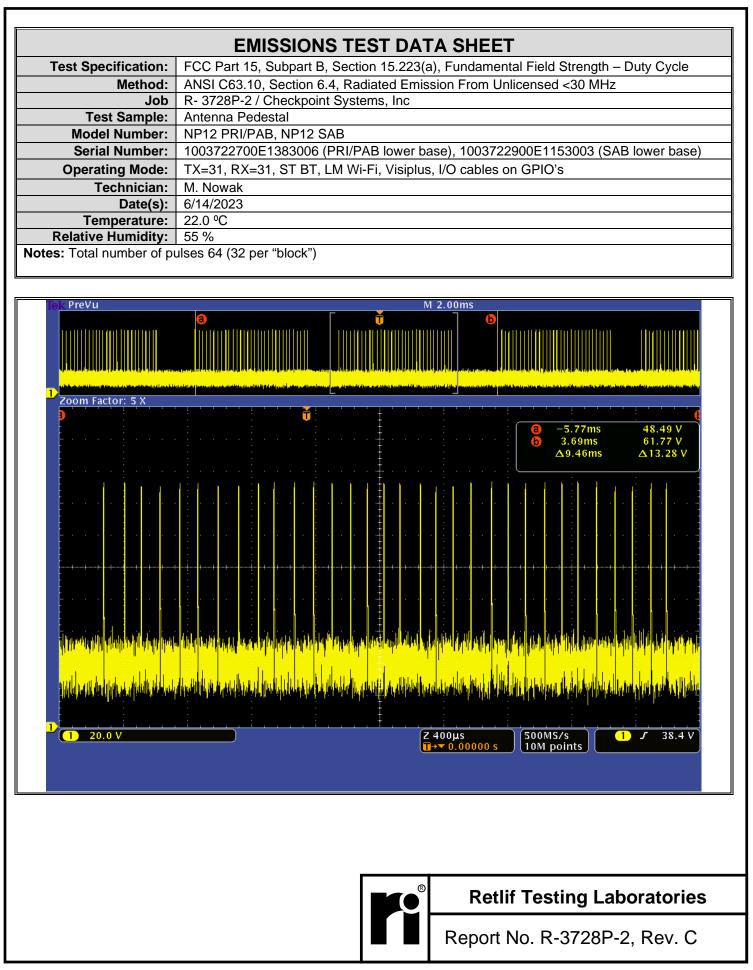
15.223(a) Fundamental Field Strength – Duty Cycle Test Data



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Requirements and Test Results

FCC Part 15.223 (b), Harmonics and Spurious Emissions

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in Table 4.

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 to 88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960	500	3

Results:

The field strength of spurious radiated emissions did not exceed the limits specified in Table 4.

Equipment List:

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
127A	ETS / EMCO	3104	ANTENNA, BICONICAL, 20 - 200 MHz	2319	12/31/2023
3207	ETS / EMCO	6502	ANTENNA, ACTIVE LOOP, 9 kHz - 30 MHz	1033	5/31/2024
5272	ROHDE &	ESPC	RECEIVER, EMI, 150 kHz - 1 GHz	843820/023	4/30/2024
8300	RETLIF	RPA	OPEN AREA TEST SITE, ATTENUATION, 3/10 Meter OATS	N/A	5/31/2024
8300C	UNKNOWN	3 METER CABLE	CABLE, COAXIAL, 3/10 METER	N/A	8/31/2023
8644	AGILENT / HP	85662A	ANALYZER, SPECTRUM, 100 Hz - 22 GHz	2848A18175	9/30/2023
8644A	AGILENT / HP	8566B	ANALYZER, SPECTRUM, 100 Hz - 22.5 GHz	2937A06124	9/30/2023
8644B	AGILENT / HP	85685A	ANALYZER, RF PRESELECTOR, 20 Hz - 2 GHz	2724A00532	9/30/2023
8668	DIGI-SENSE	20250-31	HYGROMETER, 0 - 50 deg. c, 10 - 90 % RH	140908984	10/31/2023



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Tost Sn	ecification:	FCC Part 15	Subpart C	Section 15.223	(h) Harmoni	ce and Sourio			
rest op					יוט), דומודוטווו		us LIIIISSIUIIS		
	Method:	ANSI C63.10							
Job Number		R- 3728P-2 /		Systems, Inc					
	est Sample:	Antenna Pede							
	el Number:	NP12 PRI/PA							
	al Number:			RI/PAB lower			03 (SAB lowe	er base	
	ating Mode:	,	51, ST BT, LI	M Wi-Fi, Visipl	us, I/O cables	s on GPIO's			
	Technician:	M. Nowak							
_	Date(s):	6/15/2023							
	mperature:	23.7 °C							
Relative	e Humidity: Detector:	43 %							
Tor	betector: at Distance:	Quasi-peak 3m	Quasi-peak						
are presented	s observed fro	minimum sens	not exceed	·		highest read	ings relative to	o the lin	
are presented	s observed fro	om the EUT do	not exceed	the specified li		highest read	ings relative to Converted Reading	the lin Limit at 300m	
are presented Noise floor m	s observed fro	om the EUT do minimum sens EUT	not exceed itivity of mea Meter	the specified li asurement system Correction	tem.	Converted	Converted	Limit at 300m	
are presented Noise floor m	Antenna Position (Par/Perp)	om the EUT do minimum sens EUT Orientation	not exceed itivity of mea Meter Reading	the specified li asurement syst Correction Factor	Corrected Reading	Converted to 300m	Converted Reading	Limit at 300m uV/m	
are presented Noise floor m Frequency MHz	Antenna Position (Par/Perp)	om the EUT do minimum sens EUT Orientation	not exceed itivity of mea Meter Reading	the specified li asurement syst Correction Factor	Corrected Reading	Converted to 300m	Converted Reading	Limit	
are presented Noise floor m Frequency MHz	Antenna Position (Par/Perp)	om the EUT do minimum sens EUT Orientation	not exceed itivity of mea Meter Reading	the specified li asurement syst Correction Factor	Corrected Reading	Converted to 300m	Converted Reading	Limit at 300m uV/m	
Frequency 0.009	Antenna Position (Par/Perp)	om the EUT do minimum sens EUT Orientation	not exceed itivity of mea Meter Reading	the specified li asurement syst Correction Factor	Corrected Reading	Converted to 300m	Converted Reading	Limi at 300m uV/m 266.6 1 4.89 Limi at	
Frequency 0.009 0.490	Antenna Position (Par/Perp) / Height Antenna	EUT do EUT Orientation Degrees EUT	not exceed itivity of mea Meter Reading dBuV Meter	the specified li asurement system Correction Factor dB Correction	Corrected Reading dBuV/m	Converted to 300m dBuV/m Converted	Converted Reading uV/m Converted	Limit at 300m uV/m 266.6 1 4.89 Limit at 30m	
Frequency 0.009 0.490	Antenna Position (Par/Perp) / Height Antenna Position (Par/Perp)	EUT Orientation	not exceed itivity of mea Meter Reading dBuV Meter Reading	the specified li asurement system Correction Factor dB Correction Factor	Corrected Reading dBuV/m Corrected Reading	Converted to 300m dBuV/m Converted to 30m	Converted Reading uV/m Converted Reading	Limit at 300m uV/m 266.6 1 4.89 Limit	
Frequency 0.009 0.490 Frequency 0.490	Antenna Position (Par/Perp) / Height Antenna Position (Par/Perp)	EUT Orientation	not exceed itivity of mea Meter Reading dBuV Meter Reading	the specified li asurement system Correction Factor dB Correction Factor	Corrected Reading dBuV/m Corrected Reading	Converted to 300m dBuV/m Converted to 30m	Converted Reading uV/m Converted Reading	Limit at 300m uV/m 266.6 1 4.89 Limit at 30m uV/m	
Frequency 0.009 0.490 Frequency MHz MHz	Antenna Position (Par/Perp) / Height Antenna Position (Par/Perp)	EUT Orientation	not exceed itivity of mea Meter Reading dBuV Meter Reading	the specified li asurement system Correction Factor dB Correction Factor	Corrected Reading dBuV/m Corrected Reading	Converted to 300m dBuV/m Converted to 30m	Converted Reading uV/m Converted Reading	Limit at 300m uV/m 266.6 1 4.89 Limit at 30m uV/m	

1.705

*12.59

*20.00

30.00

Par / 1.00

Par / 1.00

180.0

180.0



17.8

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		EMISS	SIONS TES	ST DATA S	HEET						
Test Sp	ecification:	FCC Part 15, S	ubpart C, Secti	on 15.223(b), H	larmonics and	Spurious Emiss	sions				
	Method:	ANSI C63.10, S	Section 6.4 and	6.5.							
Job Number	/Customer:	R- 3728P-2 / Cl	3728P-2 / Checkpoint Systems, Inc								
Т	est Sample:	Antenna Pedes									
Mod	lel Number:	NP12 PRI/PAB, NP12 SAB									
Ser	ial Number:	1003722700E1	383006 (PRI/P.	AB lower base)	, 1003722900E	1153003 (SAB	lower base)				
Opera	ating Mode:	TX=31, RX=31,	ST BT, LM Wi	-Fi, Visiplus, I/C	cables on GP	IO's					
-	Technician:	M. Nowak									
	· · /	6/15/2023									
		23.7 °C									
Relativ		43 %									
		Quasi-peak									
		3m									
The emission are presented	s observed from	e was scanned fi m the EUT do no minimum sensitiv	ot exceed the s	pecified limits.	Two highest rea	adings relative	to the limit				
				1							
Frequency	Antenna Pol /Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit				

Frequency	Antenna Pol /Height	EUT Orientation	Meter Reading	Correction Factor	Corrected Reading	Converted Reading	Limit
MHz	(V/H) / (m)	Degrees	dBuV	dB	dBuV/m	uV/m	uV/m
30.00							100
							I
*38.00	H / 1.00	180.0	6.3	12.9	19.2	9.13	I
I							I
*80.00	H / 1.00	180.0	12.1	8.4	20.5	10.60	I
							I
88.00							100
88.00							150
I							I
100.00							150



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Requirements and Test Results

FCC Part 15.205, Restricted Bands of Operation

Except as shown in Section 15.205(d), only spurious emissions are permitted in any of the frequency bands listed in Table 4.

MHz	MHz	MHz	GHz
0.090–0.110	16.42–16.423	399.9–410	4.5–5.15
¹ 0.495–0.505	16.69475–16.69525	608–614	5.35–5.46
2.1735–2.1905	16.80425-16.80475	960–1240	7.25–7.75
4.125–4.128	25.5–25.67	1300–1427	8.025–8.5
4.17725–4.17775	37.5–38.25	1435–1626.5	9.0–9.2
4.20725-4.20775	73–74.6	1645.5–1646.5	9.3–9.5
6.215–6.218	74.8–75.2	1660–1710	10.6–12.7
6.26775-6.26825	108–121.94	1718.8–1722.2	13.25–13.4
6.31175–6.31225	123–138	2200–2300	14.47–14.5
8.291–8.294	149.9–150.05	2310–2390	15.35–16.2
8.362-8.366	156.52475-156.52525	2483.5–2500	17.7–21.4
8.37625-8.38675	156.7–156.9	2690–2900	22.01–23.12
8.41425-8.41475	162.0125–167.17	3260–3267	23.6–24.0
12.29–12.293	167.72–173.2	3332–3339	31.2–31.8
12.51975-12.52025	240–285	3345.8–3358	36.43–36.5
12.57675-12.57725	322–335.4	3600-4400	(2)
13.36–13.41			

Table 5 – Restricted Bands of Operation

• Results:

The spurious emissions found within restricted bands did not exceed the radiated emissions limits of Part 15.209.

Equipment List:

EN	Manufacturer	Model No.	Description	Serial No.	Due Date
3207	ETS / EMCO	6502	ANTENNA, ACTIVE LOOP, 9 kHz - 30 MHz	1033	5/31/2024
8300C	UNKNOWN	3 METER CABLE	CABLE, COAXIAL, 3/10 METER	N/A	2/29/2024
8668	DIGI-SENSE	20250-31	HYGROMETER, 0 - 50 deg. c, 10 - 90 % RH	140908984	10/31/2023
8816	ROHDE &	ESW26	RECEIVER, EMI, 1 Hz - 26 GHz	103087	8/31/2024



Retlif Testing Laboratories

	EMISSIONS TEST DATA SHEET
Test Specification:	FCC Part 15, Subpart C, Section 15.205, Restricted Bands, 15.209
Method:	ANSI C63.10, Section 6.4, Radiated Emission From Unlicensed <30 MHz
Job Number/Customer:	R- 3728P-2 / Checkpoint Systems, Inc
Test Sample:	Antenna Pedestal
Model Number:	NP12 PRI/PAB, NP12 SAB
Serial Number:	1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)
Operating Mode:	TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's
Technician:	M. Nowak
Date(s):	10/6/2023
Temperature:	23.5 °C
Relative Humidity:	59%
Detector:	Quasi-Peak
Test Distance:	10m
Notes: Test Sample Opera	ting at 7.975 MHz

	Restricted Band 8.291 to 8.294 MHz										
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m			
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m			
8.291	Perpendicular / 1.00	170	21.60	12.0	-19.09	14.51	5.32	30			
8.291	Parallel / 1.00	90	24.33	12.0	-19.09	17.24	7.28	30			
8.291	Parallel to Ground / 1.00	180	19.84	12.0	-19.09	12.75	4.34	30			

Restricted Band 8.362 to 8.366 MHz

Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.362	Perpendicular / 1.00	170	22.63	12.0	-19.09	15.54	5.98	30
8.362	Parallel / 1.00	90	22.03	12.0	-19.09	14.94	5.59	30
8.362	Parallel to Ground / 1.00	180	17.82	12.0	-19.09	10.73	3.44	30

Restricted Band 8.37625 to 8.38675 MHz

Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.37625	Perpendicular / 1.00	170	22.57	12.0	-19.09	15.48	5.94	30
8.37625	Parallel / 1.00	90	21.77	12.0	-19.09	14.68	5.42	30
8.37625	Parallel to Ground / 1.00	180	17.74	12.0	-19.09	10.65	3.41	30

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		Rest	ricted Ban	a 8.41425	10 8.414/5			
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.41425	Perpendicular / 1.00	170	20.71	12.0	-19.09	13.62	4.80	30
8.41425	Parallel / 1.00	90	22.59	12.0	-19.09	15.50	5.96	30
8.41425	Parallel to Ground / 1.00	180	18.56	12.0	-19.09	11.47	3.75	30

Restricted Band 8.41425 to 8.41475 MHz



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		EN	IISSIONS	S TEST D	ATA SHE	ET		
Test \$	Specification:	FCC Part 1	I5, Subpart C	, Section 15.	205, Restricte	ed Bands, 15.	209	
	Method:		•	-	Emission Fro	-		
Job Numb	er/Customer:			nt Systems, Ir				
	Test Sample:				-			
	odel Number:		PAB, NP12 S	SAB				
S	erial Number:	100372270	00E1383006	(PRI/PAB low	ver base), 100)3722900E11	53003 (SAB	lower base)
Оре	erating Mode:	TX=31, RX	(=31, ST BT,	LM Wi-Fi, Vis	siplus, I/O cab	oles on GPIO'	S	·
-	Technician:	M. Nowak						
	Date(s):	10/6/2023						
	Temperature:	23.5 °C						
Relat	ive Humidity:	59%						
	Detector:		k					
	est Distance:							
otes: Test	Sample Opera							
		Re	stricted B	and 8.291	to 8.294 M	Hz		
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.291	Perpendicular / 1.00	170	29.23	12.0	-19.09	22.14	12.79	30
8.291	Parallel / 1.00	90	28.06	12.0	-19.09	20.97	11.18	30
8.291	Parallel to Ground / 1.00	180	24.50	12.0	-19.09	17.41	7.42	30
		Re	stricted B	and 8.362	to 8.366 M	Hz	•	
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.362	Perpendicular / 1.00	170	15.91	12.0	-19.09	8.82	2.76	30
8.362	Parallel / 1.00	90	20.11	12.0	-19.09	13.02	4.48	30
8.362	Parallel to Ground / 1.00	180	15.07	12.0	-19.09	7.98	2.51	30
		Rest	ricted Ban	d 8.37625	to 8.38675	MHz		
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
MHz	Perpendicular	170	13.12	12.0	-19.09	6.03	2.00	30
MHz 8.37625	/ 1.00							
		90	19.31	12.0	-19.09	12.22	4.08	30



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	Restricted Band 8.41425 to 8.41475 MHz											
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m				
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m				
8.41425	Perpendicular / 1.00	170	18.31	12.0	-19.09	11.22	3.64	30				
8.41425	Parallel / 1.00	90	22.19	12.0	-19.09	15.10	5.69	30				
8.41425	Parallel to Ground / 1.00	180	17.86	12.0	-19.09	10.77	3.46	30				

Restricted Band 8.41425 to 8.41475 MHz



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	EMISSIONS TEST DATA SHEET								
Test Specification:	FCC Part 15, Subpart C, Section 15.205, Restricted Bands, 15.209								
Method:	ANSI C63.10, Section 6.4, Radiated Emission From Unlicensed <30 MHz								
Job Number/Customer:	R- 3728P-2 / Checkpoint Systems, Inc								
Test Sample:	Antenna Pedestal								
Model Number:	Model Number: NP12 PRI/PAB, NP12 SAB								
Serial Number:	1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)								
Operating Mode:	TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's								
Technician:	M. Nowak								
Date(s):	10/6/2023								
Temperature:	23.5 °C								
Relative Humidity:	59%								
Detector:	Quasi-Peak								
Test Distance:	10m								
Notes: Test Sample Opera	ting at 8.275 MHz								

	Restricted Band 8.291 to 8.294 MHz											
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m				
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m				
8.291	Perpendicular / 1.00	170	36.49	12.0	-19.09	29.40	29.51	30				
8.291	Parallel / 1.00	90	33.13	12.0	-19.09	26.04	20.04	30				
8.291	Parallel to Ground / 1.00	180	30.78	12.0	-19.09	23.69	15.29	30				

Restricted Band 8.362 to 8.366 MHz

Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m			
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m			
8.362	Perpendicular / 1.00	170	34.43	12.0	-19.09	27.34	23.28	30			
8.362	Parallel / 1.00	90	30.41	12.0	-19.09	23.32	14.66	30			
8.362	Parallel to Ground / 1.00	180	28.11	12.0	-19.09	21.02	11.25	30			

Restricted Band 8.37625 to 8.38675 MHz

Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.37625	Perpendicular / 1.00	170	33.88	12.0	-19.09	26.79	21.85	30
8.37625	Parallel / 1.00	90	29.83	12.0	-19.09	22.74	13.71	30
8.37625	Parallel to Ground / 1.00	180	27.52	12.0	-19.09	20.43	10.51	30

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	Restricted Band 8.41425 to 8.41475 MHz											
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m				
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m				
8.41425	Perpendicular / 1.00	170	31.35	12.0	-19.09	24.26	16.33	30				
8.41425	Parallel / 1.00	90	28.49	12.0	-19.09	21.40	11.75	30				
8.41425	Parallel to Ground / 1.00	180	25.75	12.0	-19.09	18.66	8.57	30				

Restricted Band 8.41425 to 8.41475 MHz



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	EMISSIONS TEST DATA SHEET								
Test Specification:	FCC Part 15, Subpart C, Section 15.205, Restricted Bands, 15.209								
Method:	ANSI C63.10, Section 6.4, Radiated Emission From Unlicensed <30 MHz								
Job Number/Customer:	R- 3728P-2 / Checkpoint Systems, Inc								
Test Sample:	Antenna Pedestal								
Model Number:	Model Number: NP12 PRI/PAB, NP12 SAB								
Serial Number:	1003722700E1383006 (PRI/PAB lower base), 1003722900E1153003 (SAB lower base)								
Operating Mode:	TX=31, RX=31, ST BT, LM Wi-Fi, Visiplus, I/O cables on GPIO's								
Technician:	M. Nowak								
Date(s):	10/6/2023								
Temperature:	23.5 °C								
Relative Humidity:	59%								
Detector:	Quasi-Peak								
Test Distance:	10m								
Notes: Test Sample Opera	ting at 8.425 MHz								

	Restricted Band 8.291 to 8.294 MHz											
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m				
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m				
8.294	Perpendicular / 1.00	170	32.72	12.0	-19.09	25.63	19.12	30				
8.294	Parallel / 1.00	90	26.99	12.0	-19.09	19.90	9.89	30				
8.294	Parallel to Ground / 1.00	180	26.97	12.0	-19.09	19.88	9.86	30				

Restricted Band 8.362 to 8.366 MHz

Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.366	Perpendicular / 1.00	170	35.89	12.0	-19.09	28.80	27.54	30
8.366	Parallel / 1.00	90	32.05	12.0	-19.09	24.96	17.70	30
8.366	Parallel to Ground / 1.00	180	29.82	12.0	-19.09	22.73	13.69	30

Restricted Band 8.37625 to 8.38675 MHz

Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m
8.38675	Perpendicular / 1.00	170	36.24	12.0	-19.09	29.15	28.67	30
8.38675	Parallel / 1.00	90	32.63	12.0	-19.09	25.54	18.92	30
8.38675	Parallel to Ground / 1.00	180	30.38	12.0	-19.09	23.29	14.61	30

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	Restricted Band 8.41425 to 8.41475 MHz											
Frequency	Antenna Orientation / Height	EUT Orientation	Meter Reading @10m	Correction Factor	Distance Correction	Corrected Reading @ 30m	Converted Reading @ 30m	Limit @ 30m				
MHz		Degrees	dBuV	dB	dB	dBuV/m	uV/m	uV/m				
8.41475	Perpendicular / 1.00	170	36.33	12.0	-19.09	29.24	28.97	30				
8.41475	Parallel / 1.00	90	32.44	12.0	-19.09	25.35	18.51	30				
8.41475	Parallel to Ground / 1.00	180	30.27	12.0	-19.09	23.18	14.42	30				

Restricted Band 8.41425 to 8.41475 MHz



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