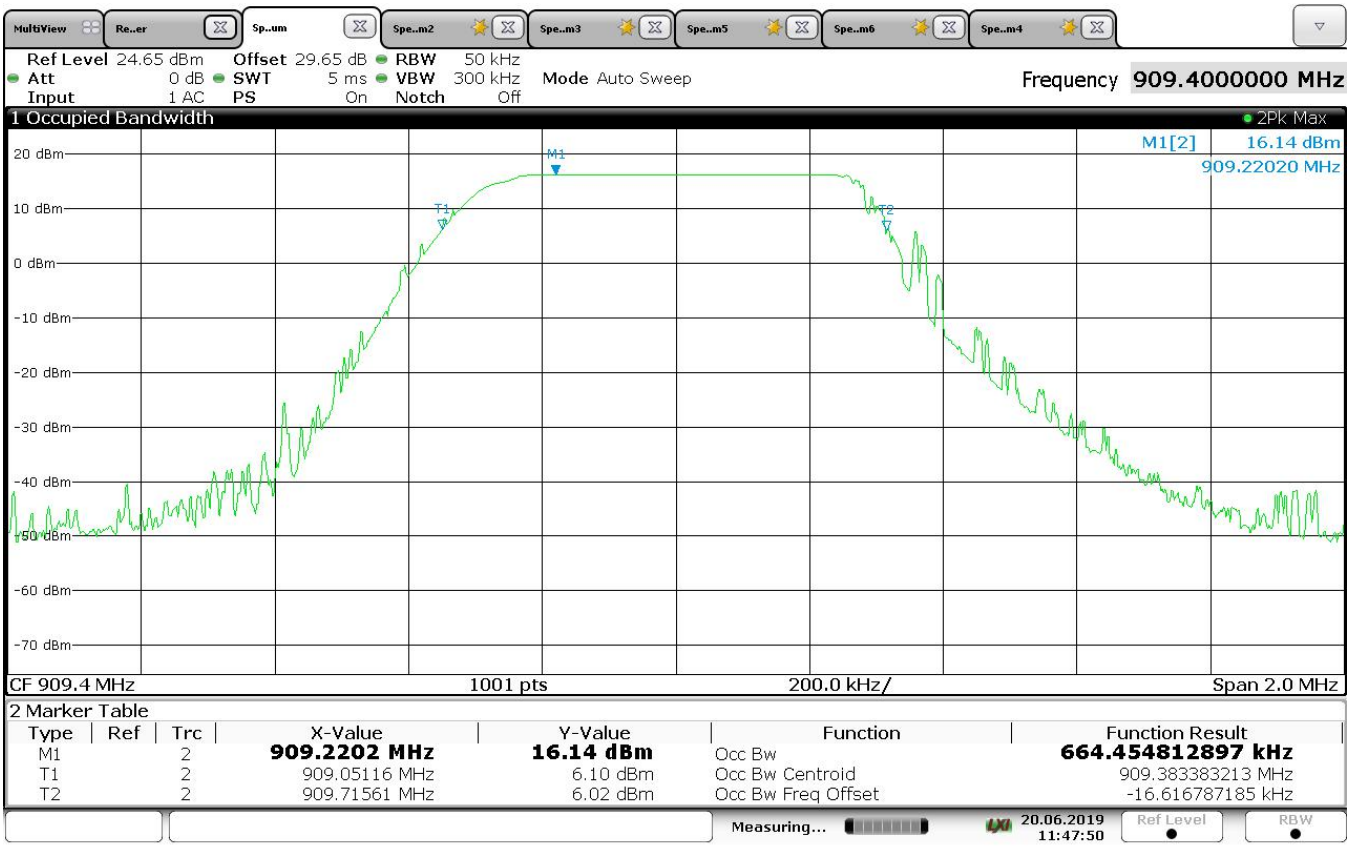
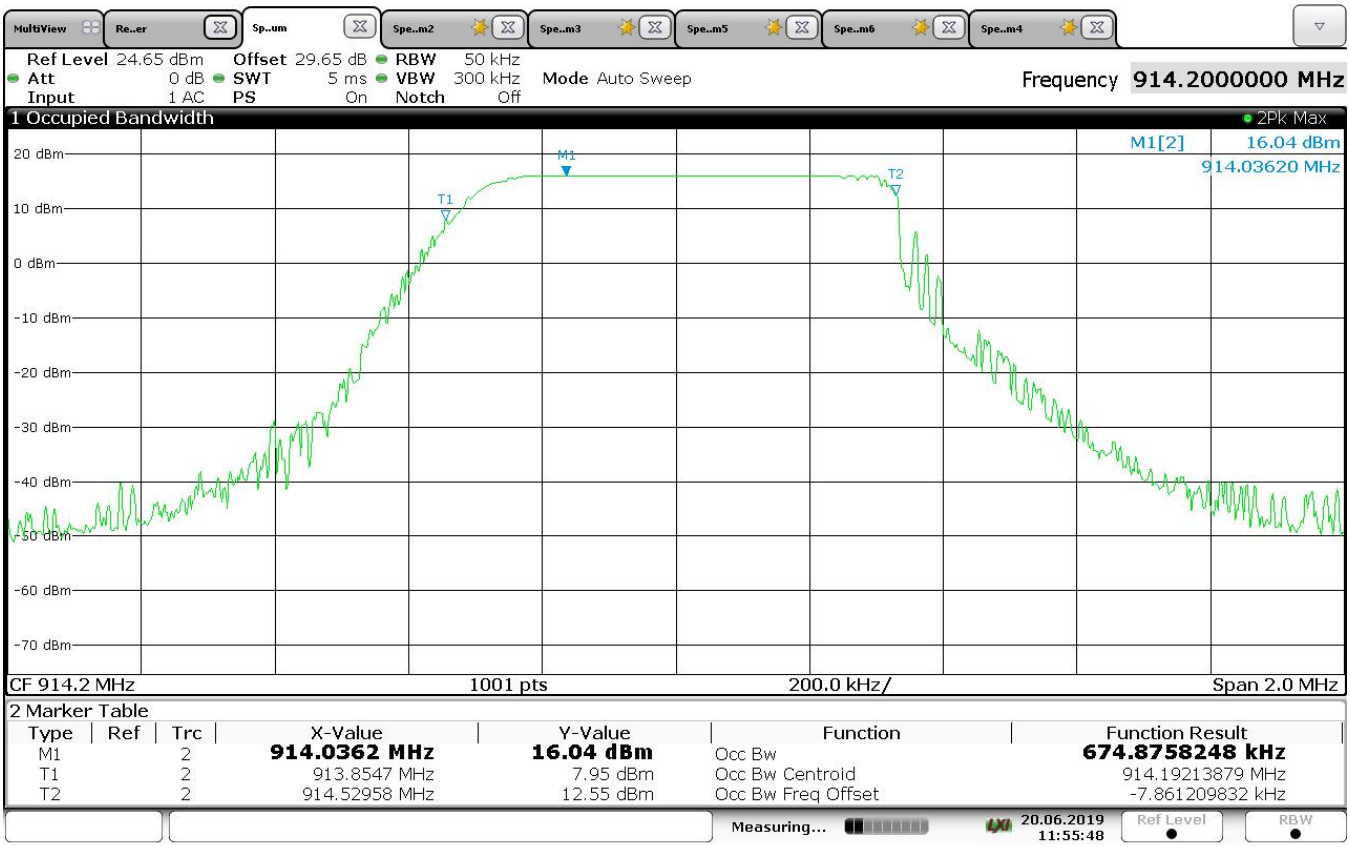


11:47:50 20.06.2019

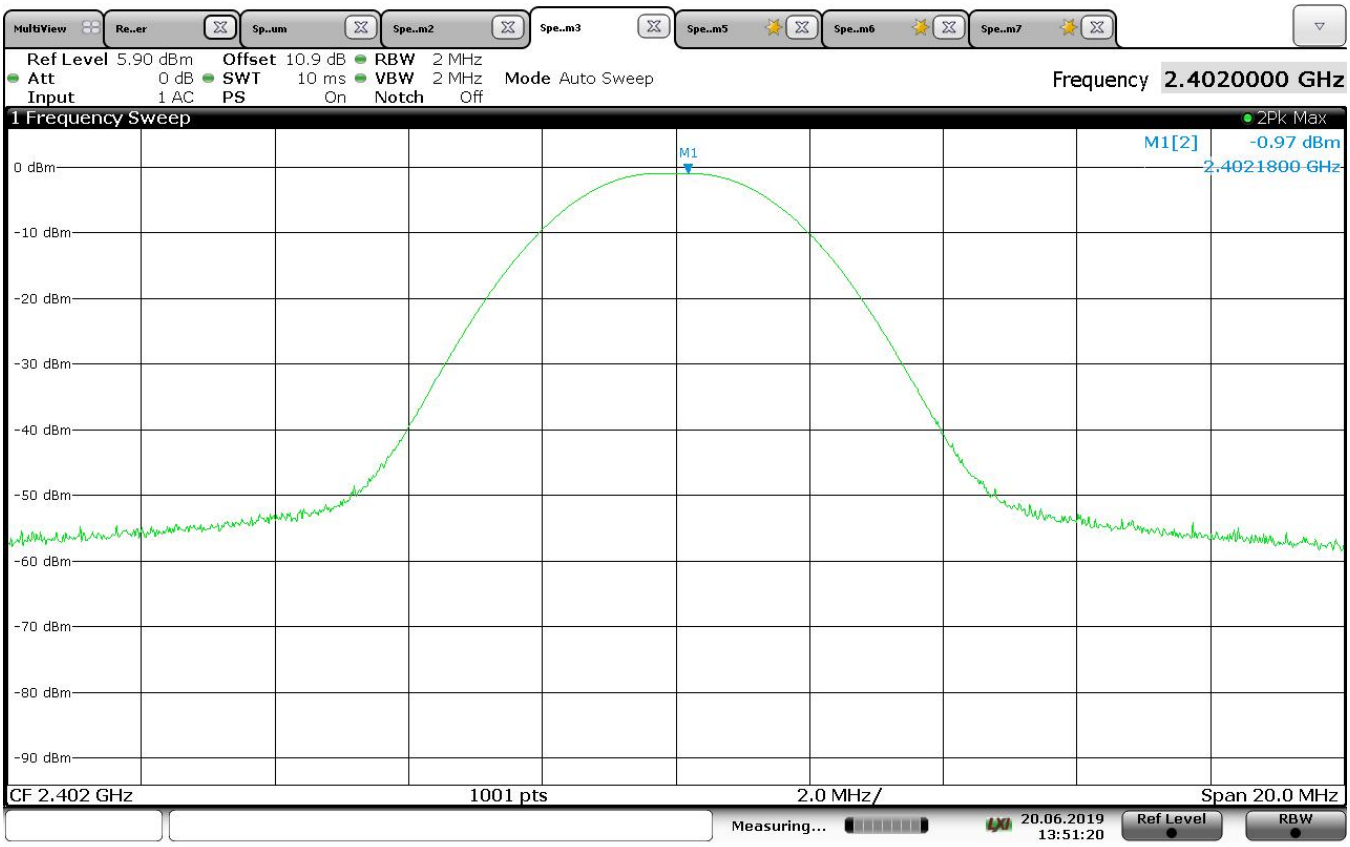
Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **99% Occupied Bandwidth**
Mode	: LoRA Tx 909.4MHz
Parameters	: 99% BW = **664.4kHz**
Date	: June 21-25,2019
Notes	: SF8



11:55:49 20.06.2019

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **99% Occupied Bandwidth**
Mode : LoRA Tx 914.2MHz
Parameters : 99% BW = **674.9kHz**
Date : June 21-25,2019
Notes : SF8

Peak Output Power

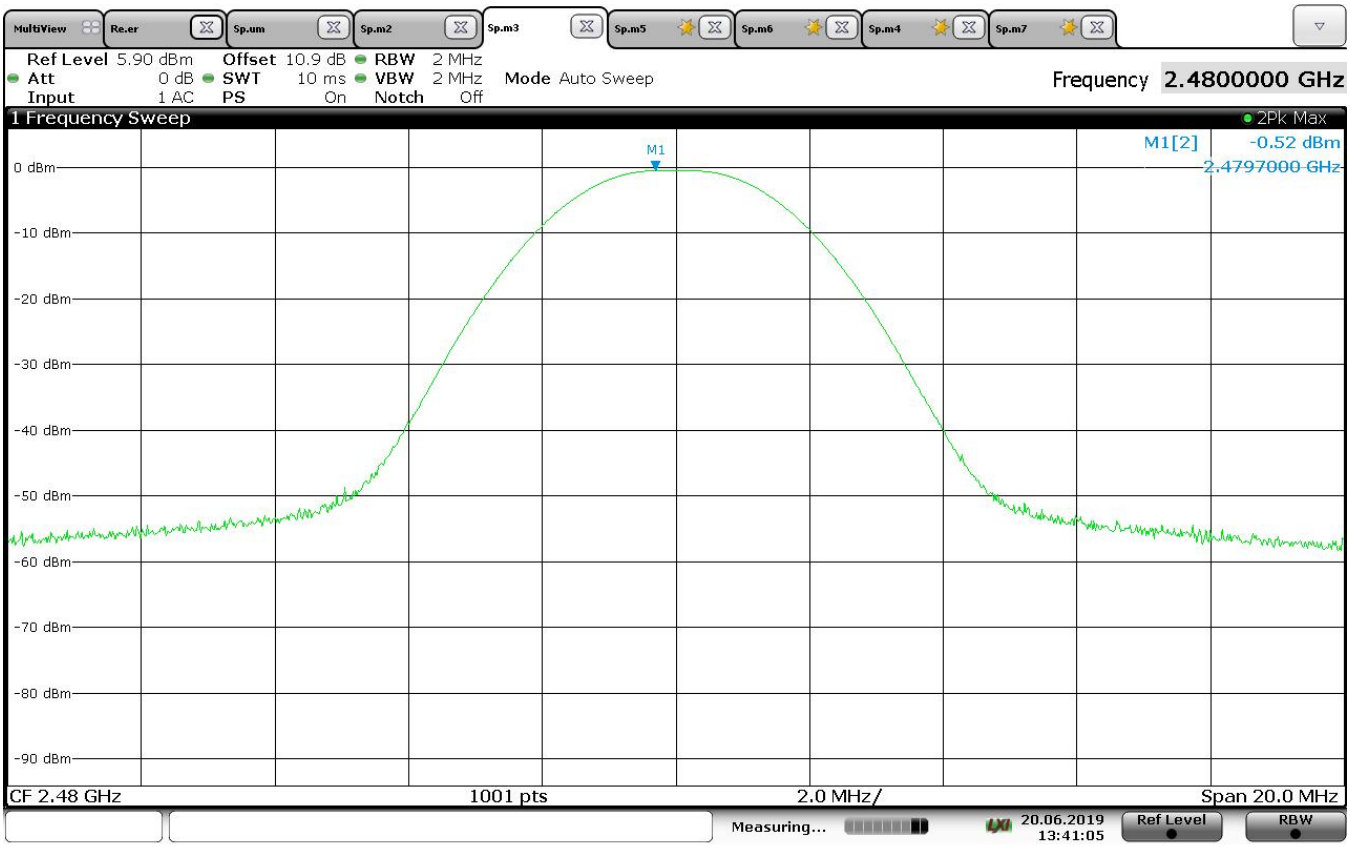


13:51:20 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Peak Output Power**
Mode	: BLE Tx 2402MHz
Parameters	: Peak Output Power = **-0.97dBm**
Date	: June 21-25,2019
Notes	:

16:08:53 25.06.2019

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **Peak Output Power**
Mode : BLE Tx 2440MHz
Parameters : Peak Output Power = **-2.74dBm**
Date : June 21-25,2019
Notes :



13:41:06 20.06.2019

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **Peak Output Power**
Mode : BLE Tx 2480MHz
Parameters : Peak Output Power = **-0.52dBm**
Date : June 21-25,2019
Notes :

Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBuV)	Matched Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2402.00	H	56.1	-6.2	5.6	3.4	-4.0	36.0	-40.0
2402.00	V	51.4	-9.6	5.6	3.4	-7.4	36.0	-43.4

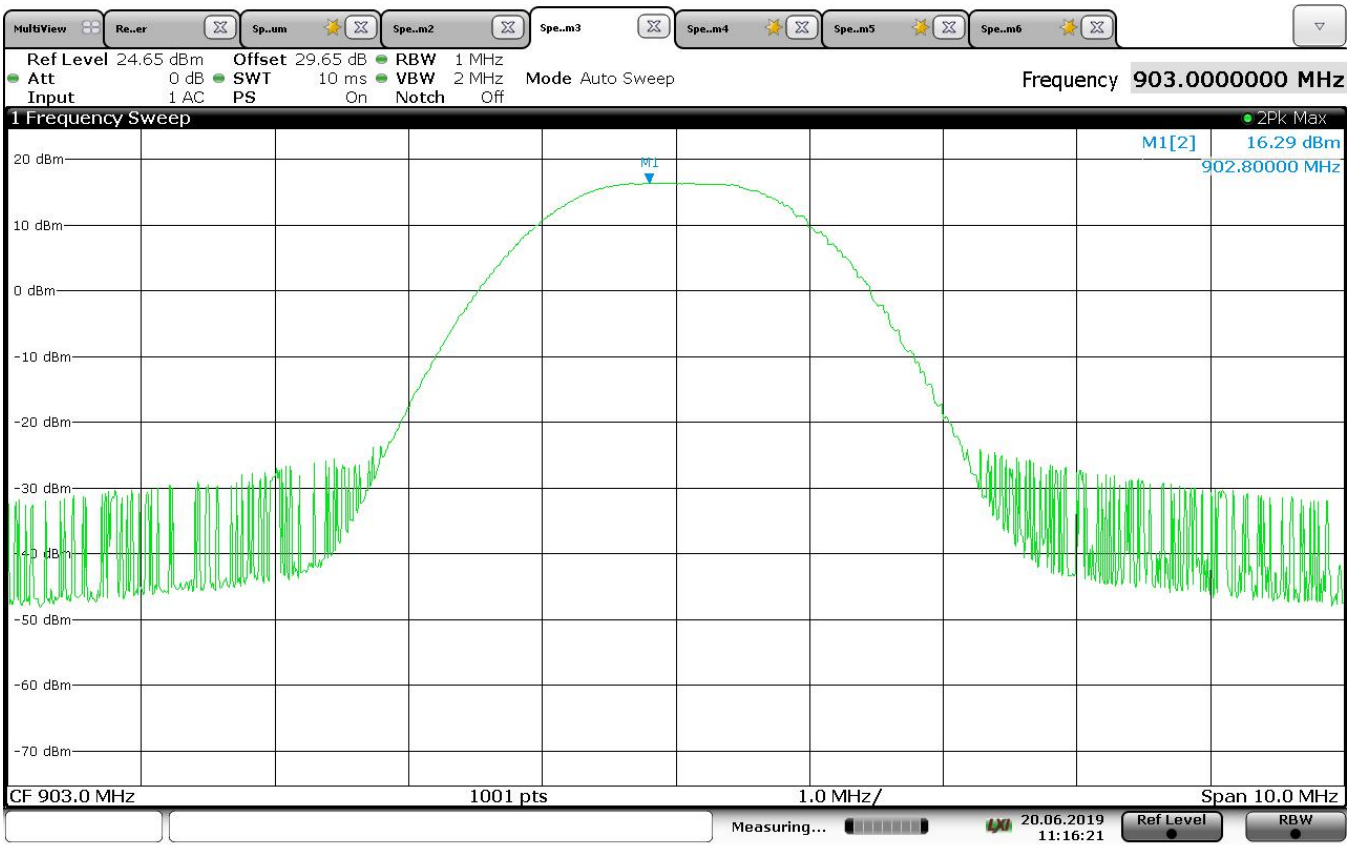
Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **EIRP**
Mode : BLE Tx 2402MHz
Parameters : EIRP = **-4dBm**
Date : June 21-25,2019
Notes :

Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBuV)	Matched Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2440.00	H	55.3	-6.0	5.7	3.5	-3.8	36.0	-39.8
2440.00	V	50.4	-10.8	5.7	3.5	-8.6	36.0	-44.6

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **EIRP**
Mode : BLE Tx 2440MHz
Parameters : EIRP = **-3.8dBm**
Date : June 21-25,2019
Notes :

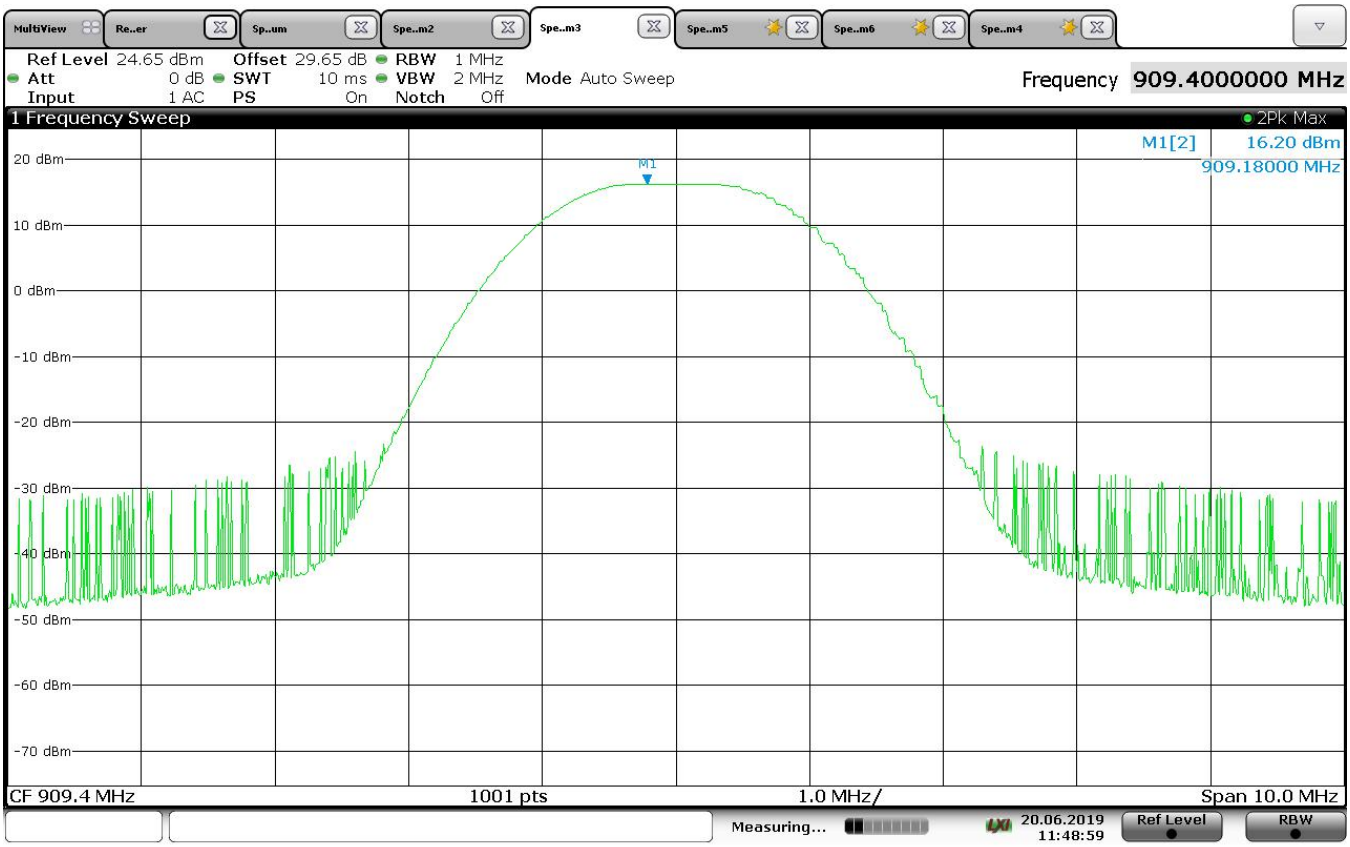
Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBuV)	Matched Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
2480.00	H	53.4	-6.2	5.8	3.5	-3.9	36.0	-39.9
2480.00	V	45.5	-15.0	5.8	3.5	-12.7	36.0	-48.7

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **EIRP**
Mode : BLE Tx 2480MHz
Parameters : EIRP = **-3.9dBm**
Date : June 21-25,2019
Notes :



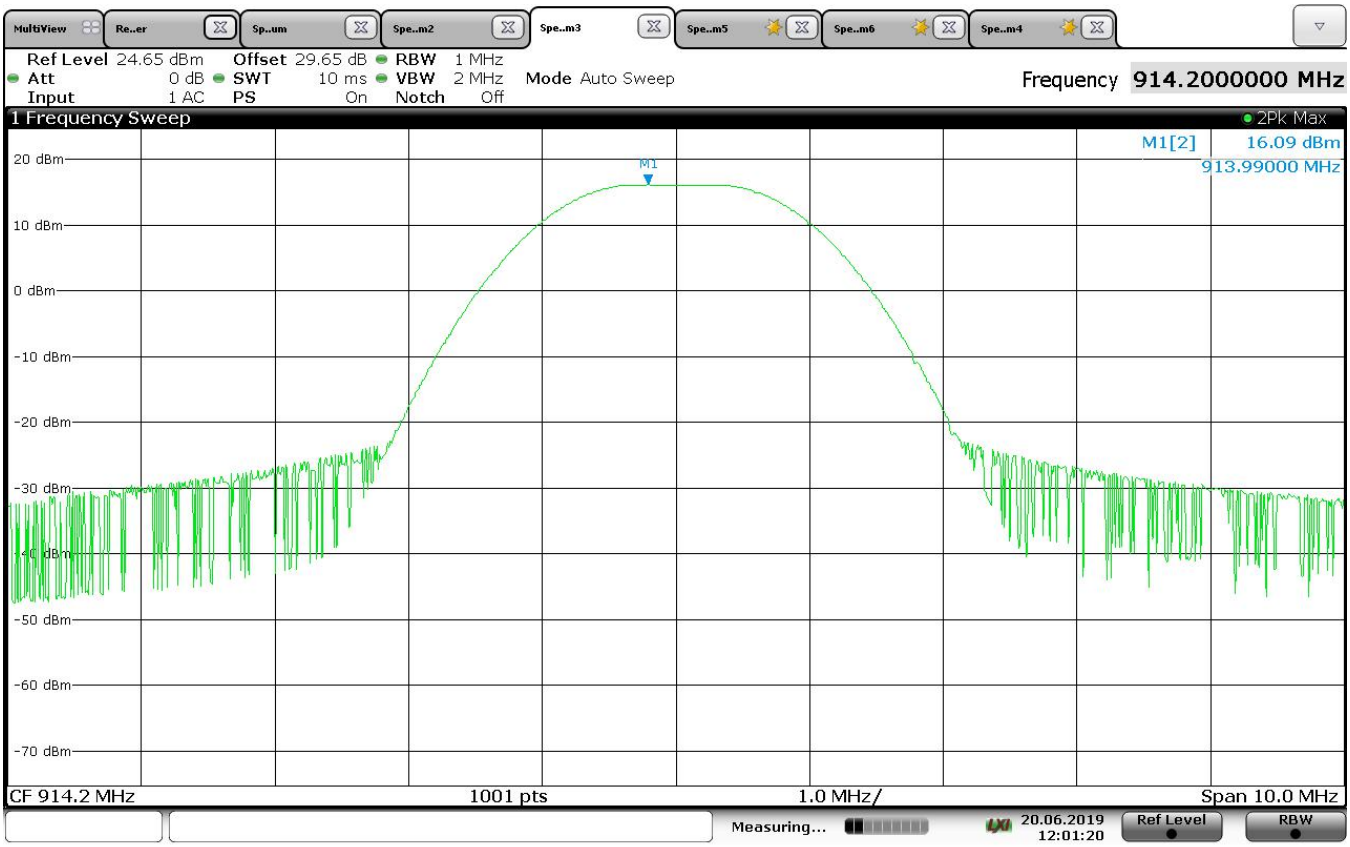
11:16:21 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Peak Output Power**
Mode	: LoRA Tx 903MHz
Parameters	: Peak Output Power = **16.29dBm**
Date	: June 21-25,2019
Notes	:



11:48:59 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Peak Output Power**
Mode	: LoRA Tx 909.4MHz
Parameters	: Peak Output Power = **16.20dBm**
Date	: June 21-25,2019
Notes	:



12:01:20 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Peak Output Power**
Mode	: LoRA Tx 914.2MHz
Parameters	: Peak Output Power = **16.09dBm**
Date	: June 21-25,2019
Notes	:

Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBuV)	Matched Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
903.00	H	87.6	21.4	2.2	2.0	21.5	36.0	-14.5
903.00	V	80.4	18.2	2.2	2.0	18.3	36.0	-17.7

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **EIRP**
Mode : LoRA Tx 903MHz
Parameters : EIRP = **21.5dBm**
Date : June 21-25,2019
Notes :

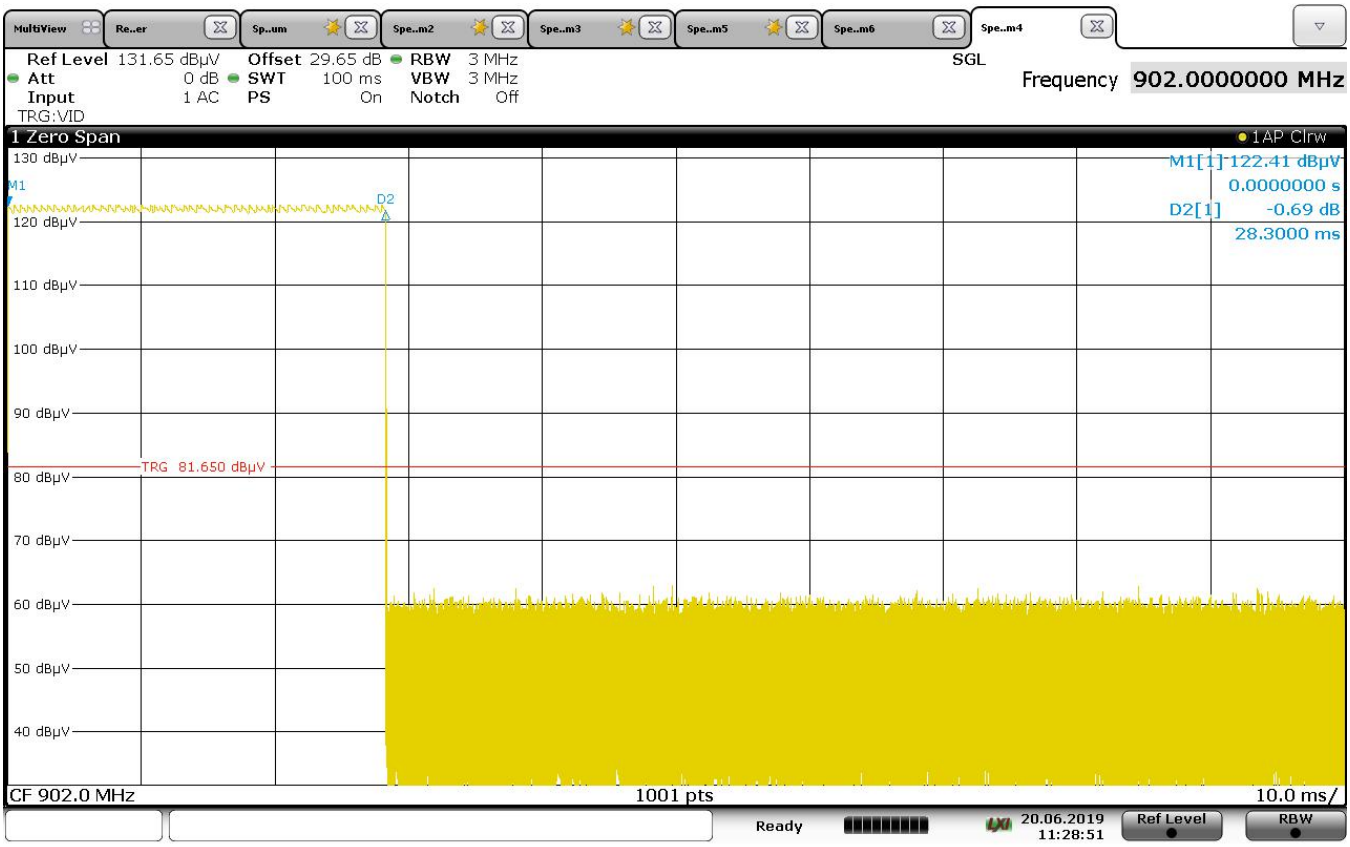
Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBuV)	Matched Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
909.40	H	86.0	19.8	2.2	2.0	19.9	36.0	-16.1
909.40	V	79.4	16.8	2.2	2.0	16.9	36.0	-19.1

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **EIRP**
Mode : LoRA Tx 909.4MHz
Parameters : EIRP = **19.9dBm**
Date : June 21-25,2019
Notes :

Freq. (MHz)	Ant Pol	Wide BW Meter Reading (dBuV)	Matched Sig. Gen. Reading (dBm)	Equivalent Antenna Gain (dB)	Cable Loss (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
914.20	H	85.6	19.5	2.2	2.1	19.6	36.0	-16.4
914.20	V	79.5	16.6	2.2	2.1	16.7	36.0	-19.3

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **EIRP**
Mode : LoRA Tx 914.2MHz
Parameters : EIRP = **19.6dBm**
Date : June 21-25,2019
Notes :

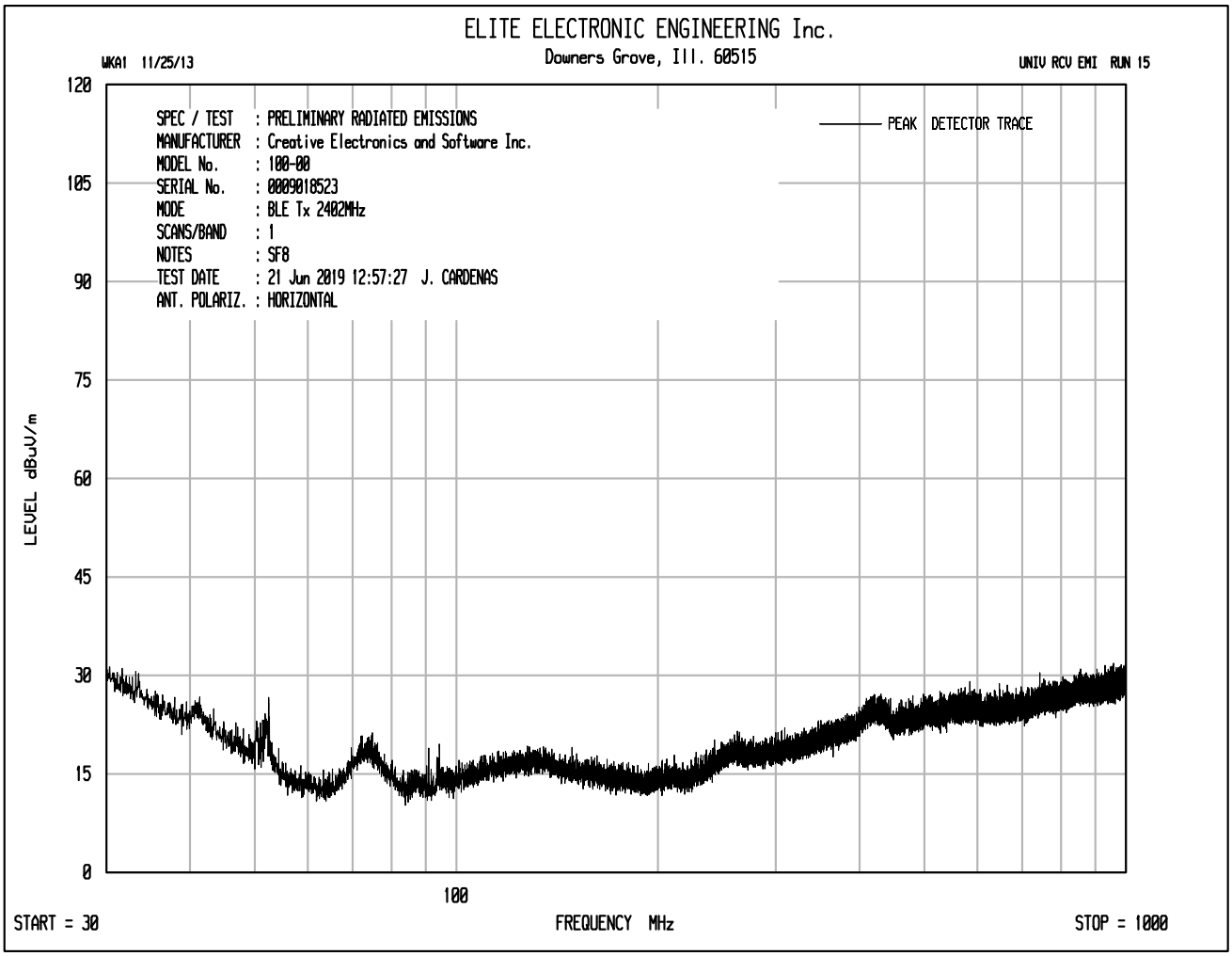
Duty Cycle Factor

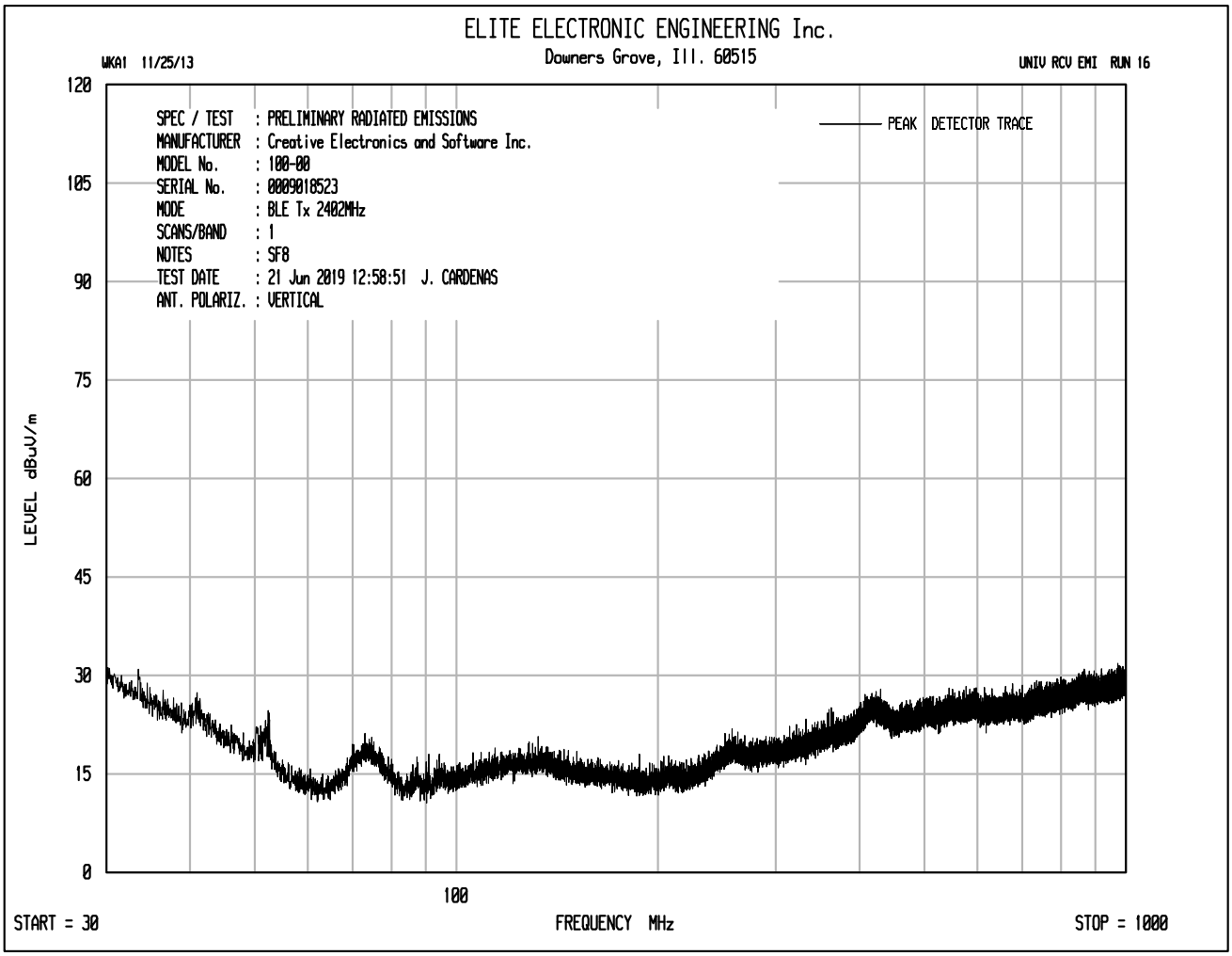


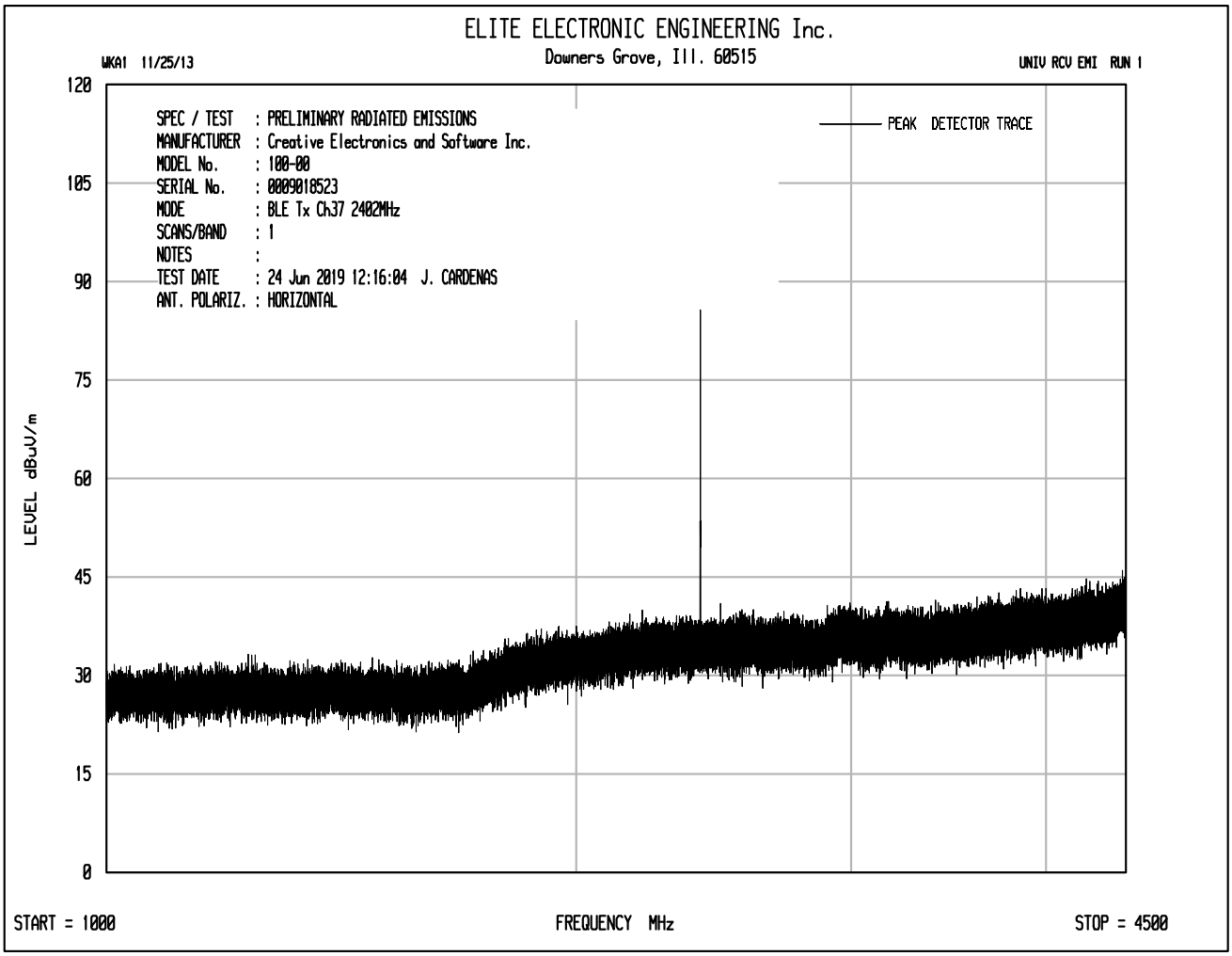
11:28:51 20.06.2019

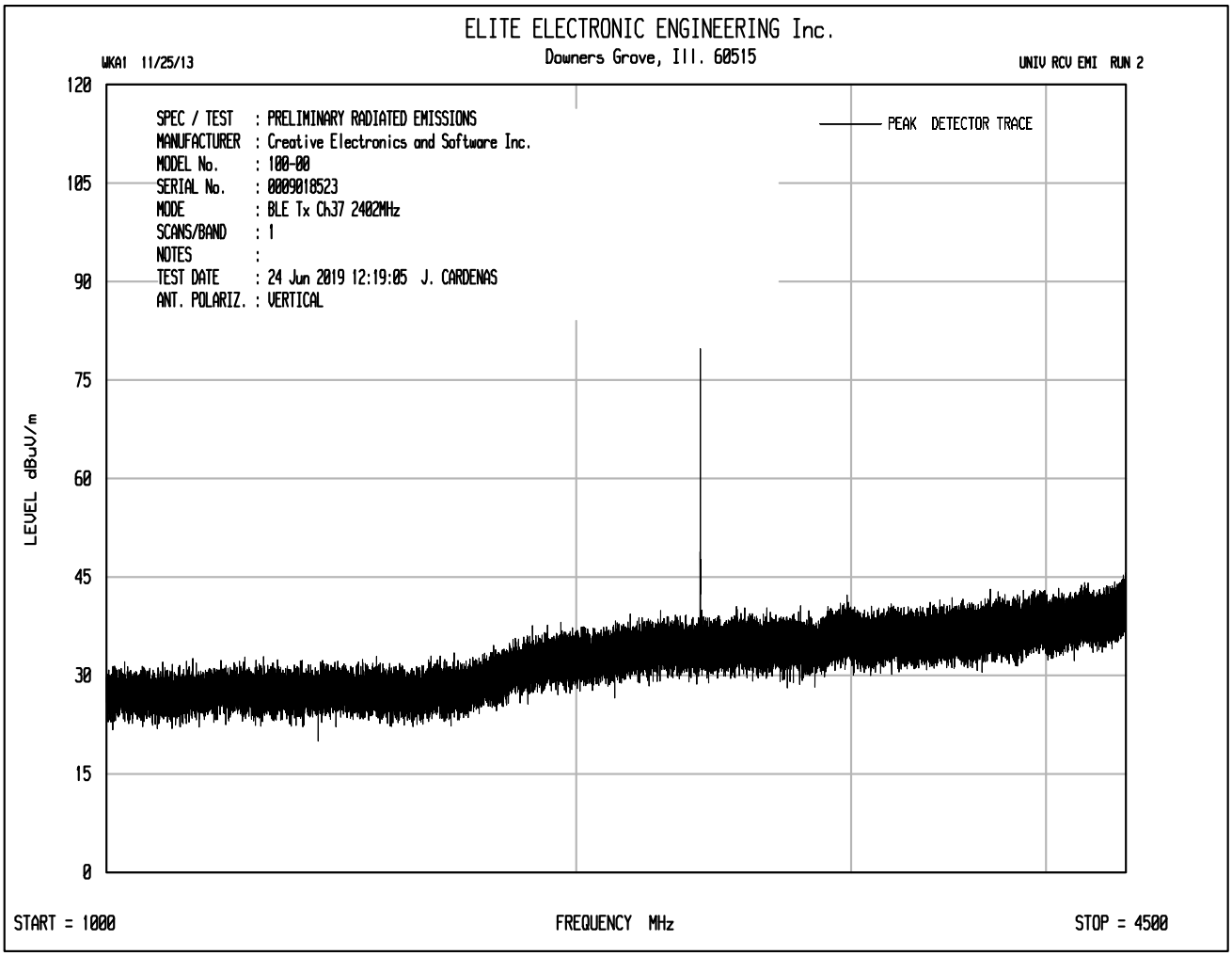
Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **Duty Cycle Factor**
Mode : LoRA
Parameters : On Time = 28.3ms
Date : June 21-25,2019
Notes : SF8

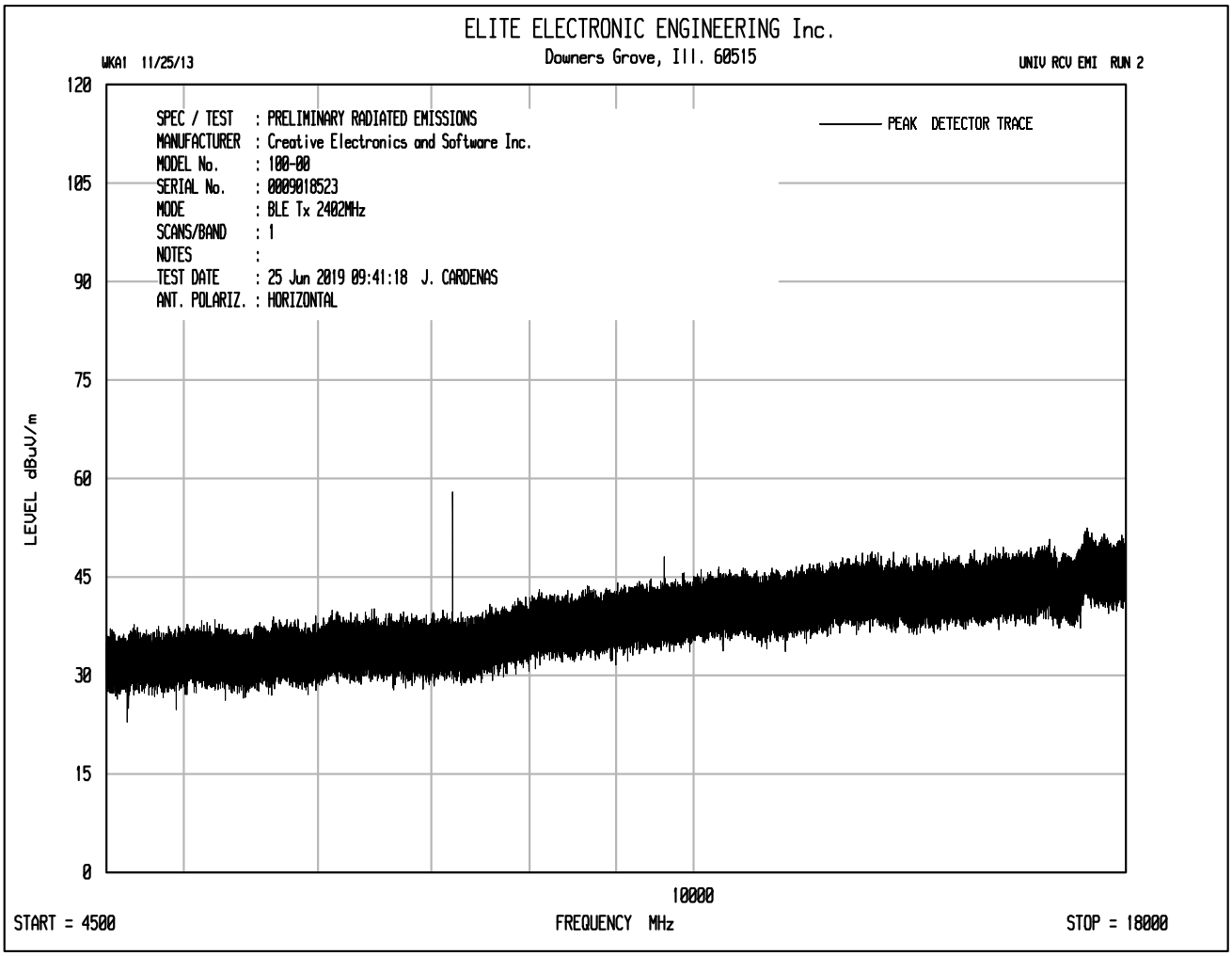
Duty Cycle Factor = -20Log(28.3ms/100ms) = 10.96

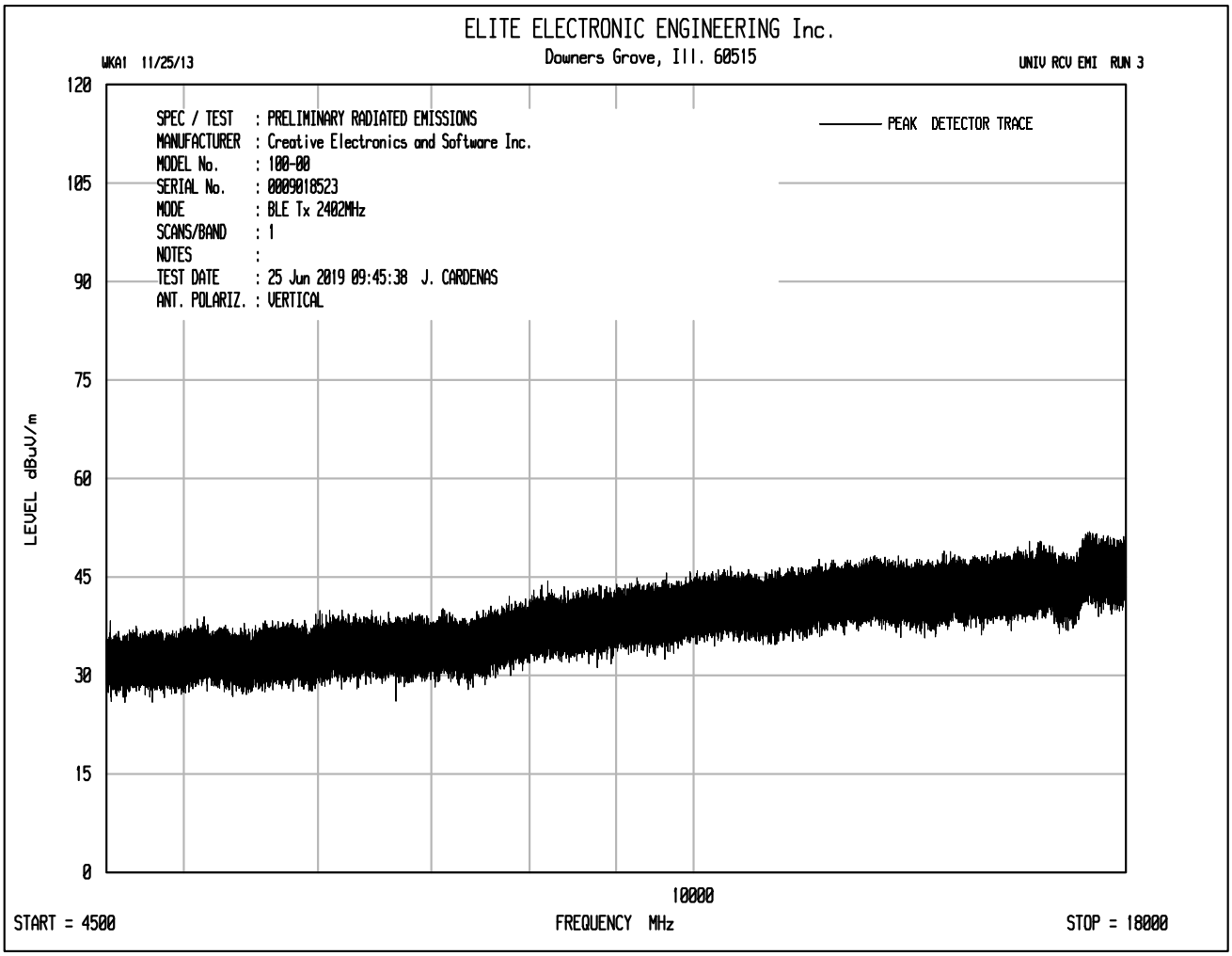

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 15
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2402MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 12:57:27 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

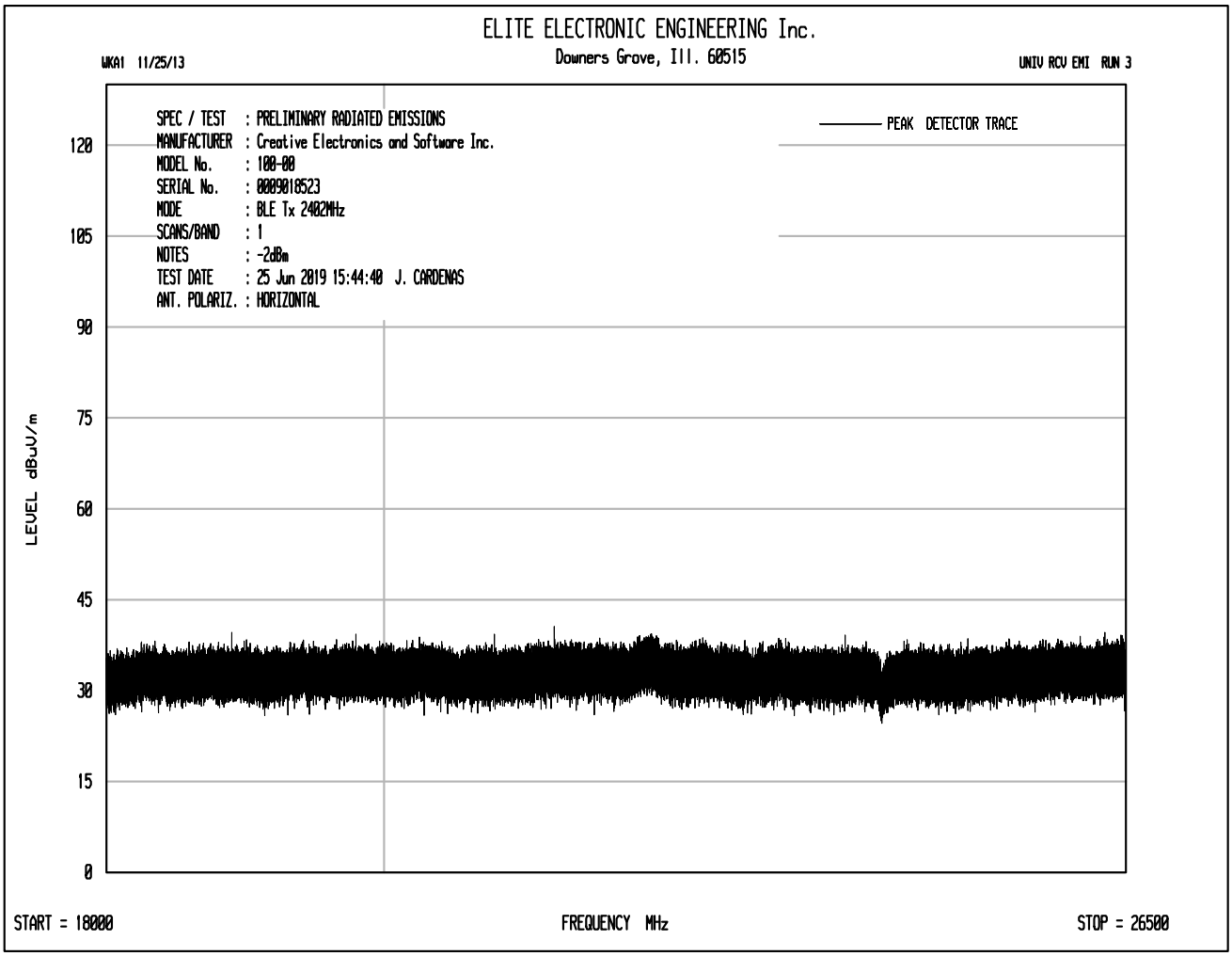

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 16
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2402MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 12:58:51 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

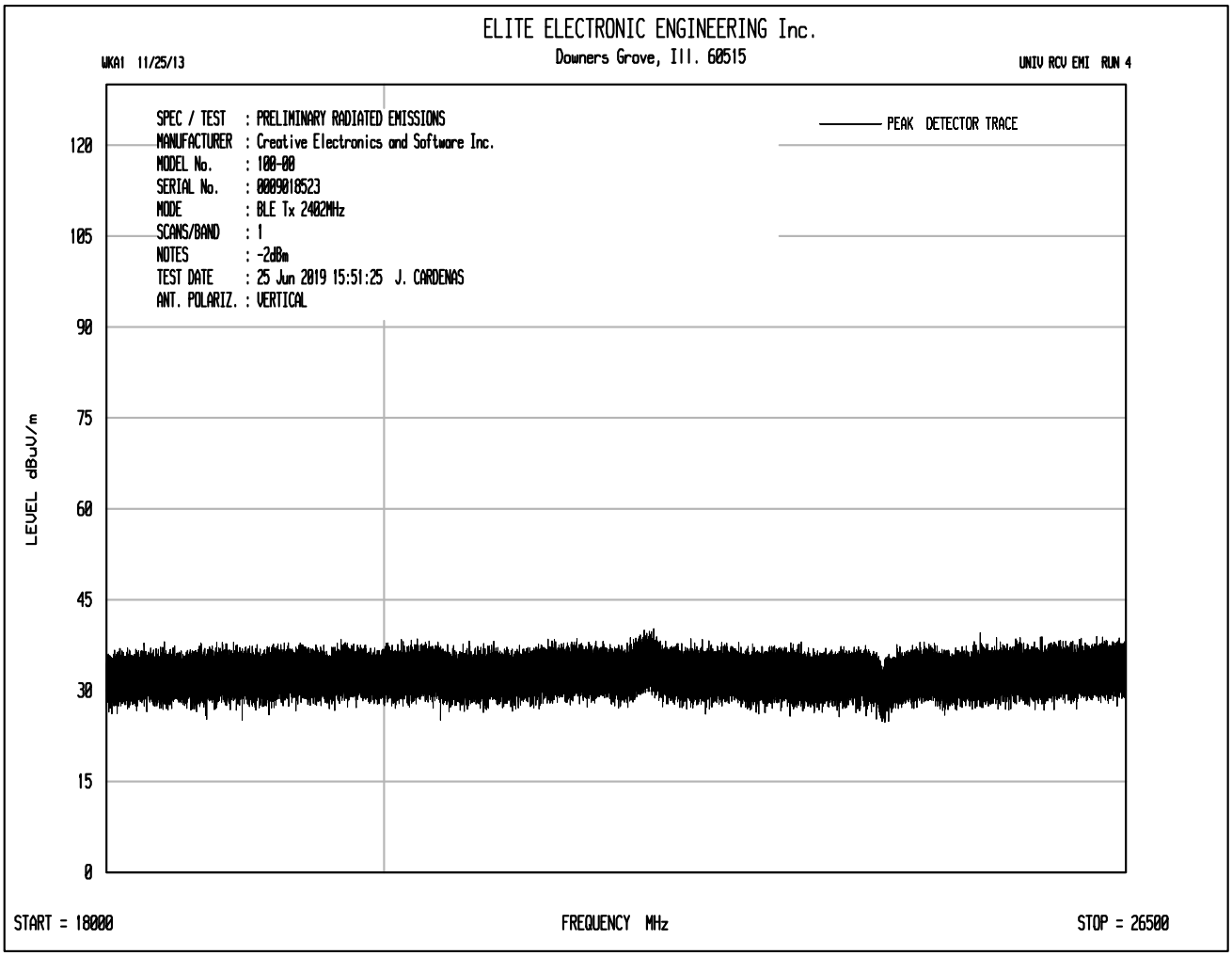

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx Ch37 2402MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 24 Jun 2019 12:16:04 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

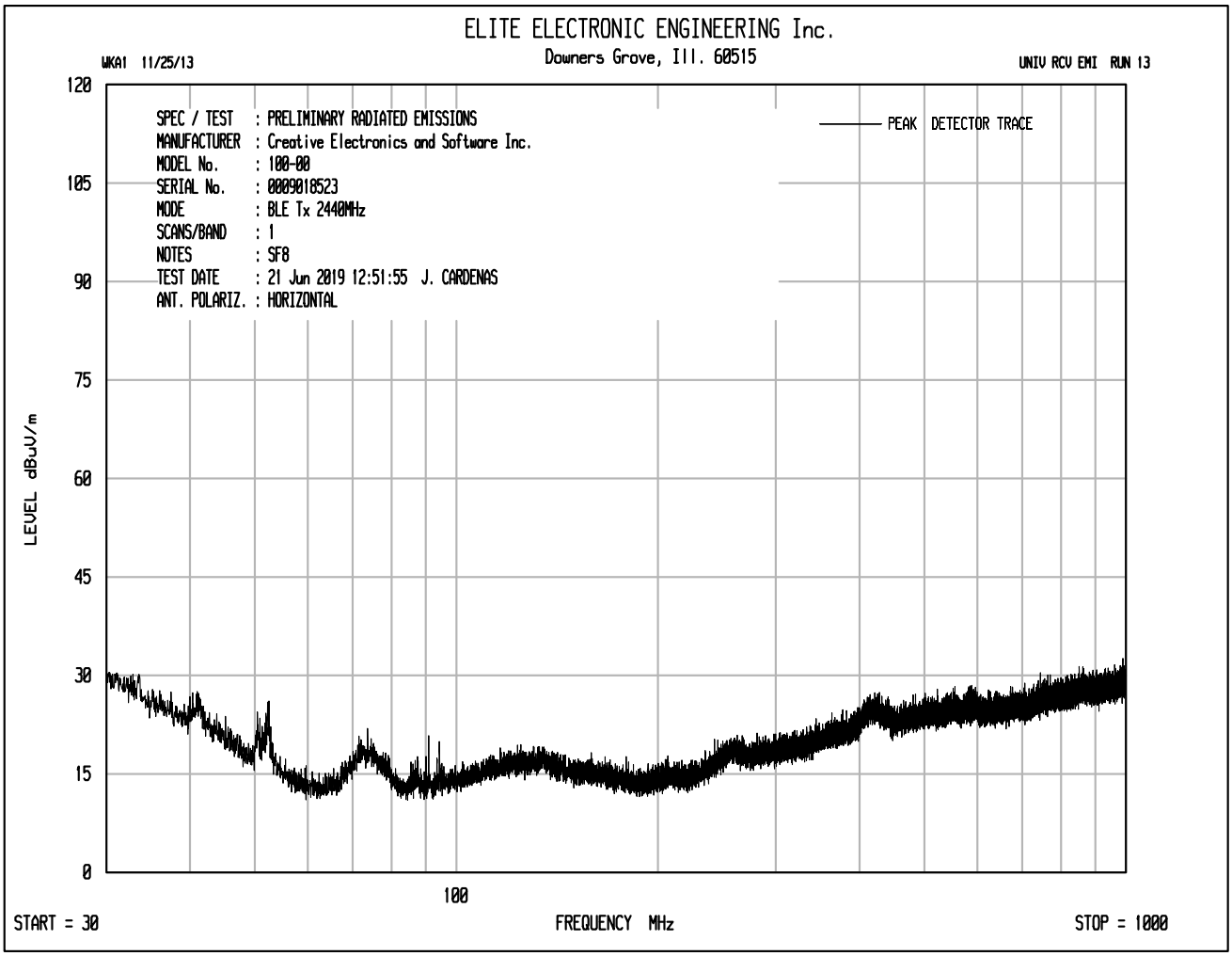

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx Ch37 2402MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 24 Jun 2019 12:19:05 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

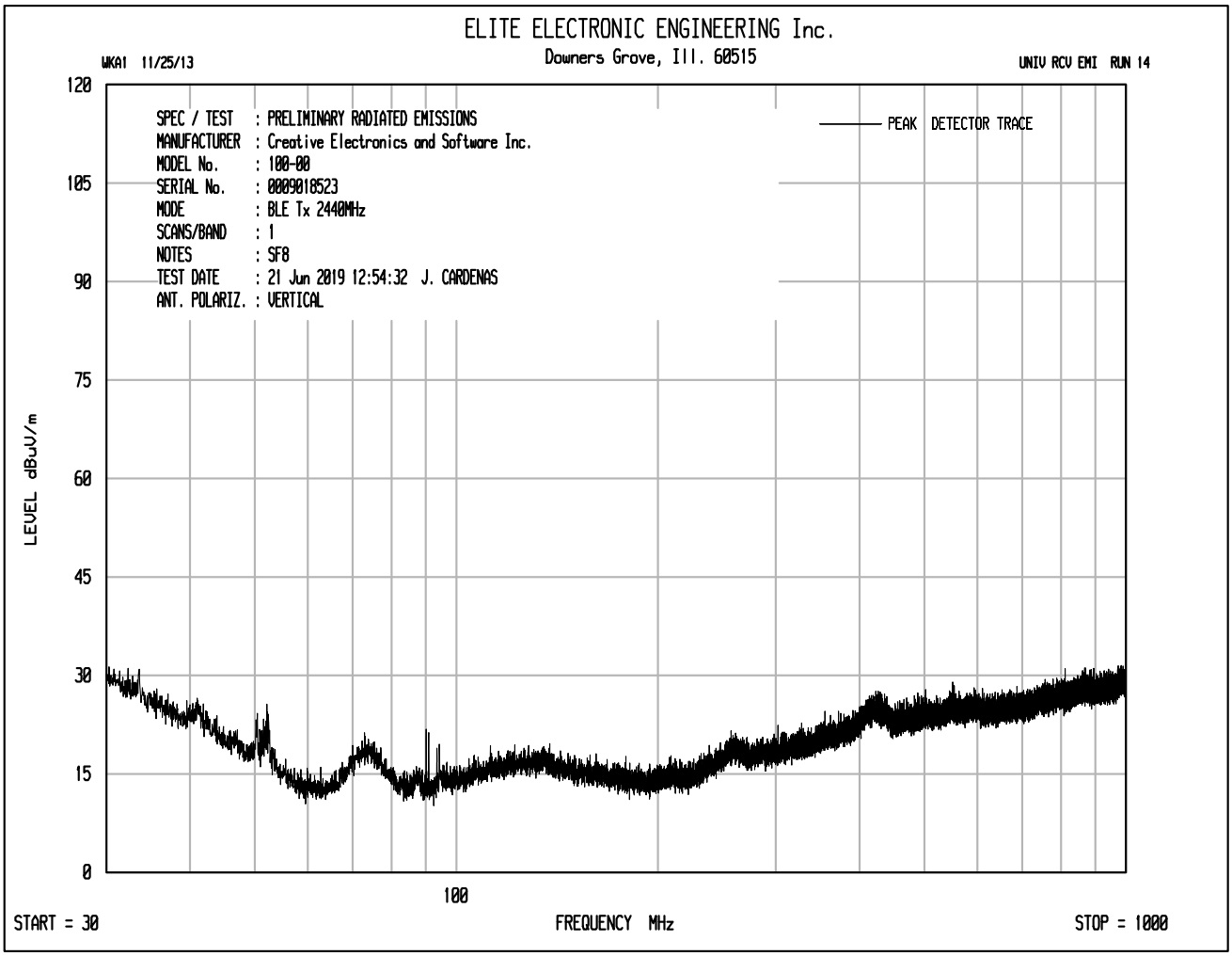

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2402MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 09:41:18 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 4500
FREQUENCY MHz
STOP = 18000

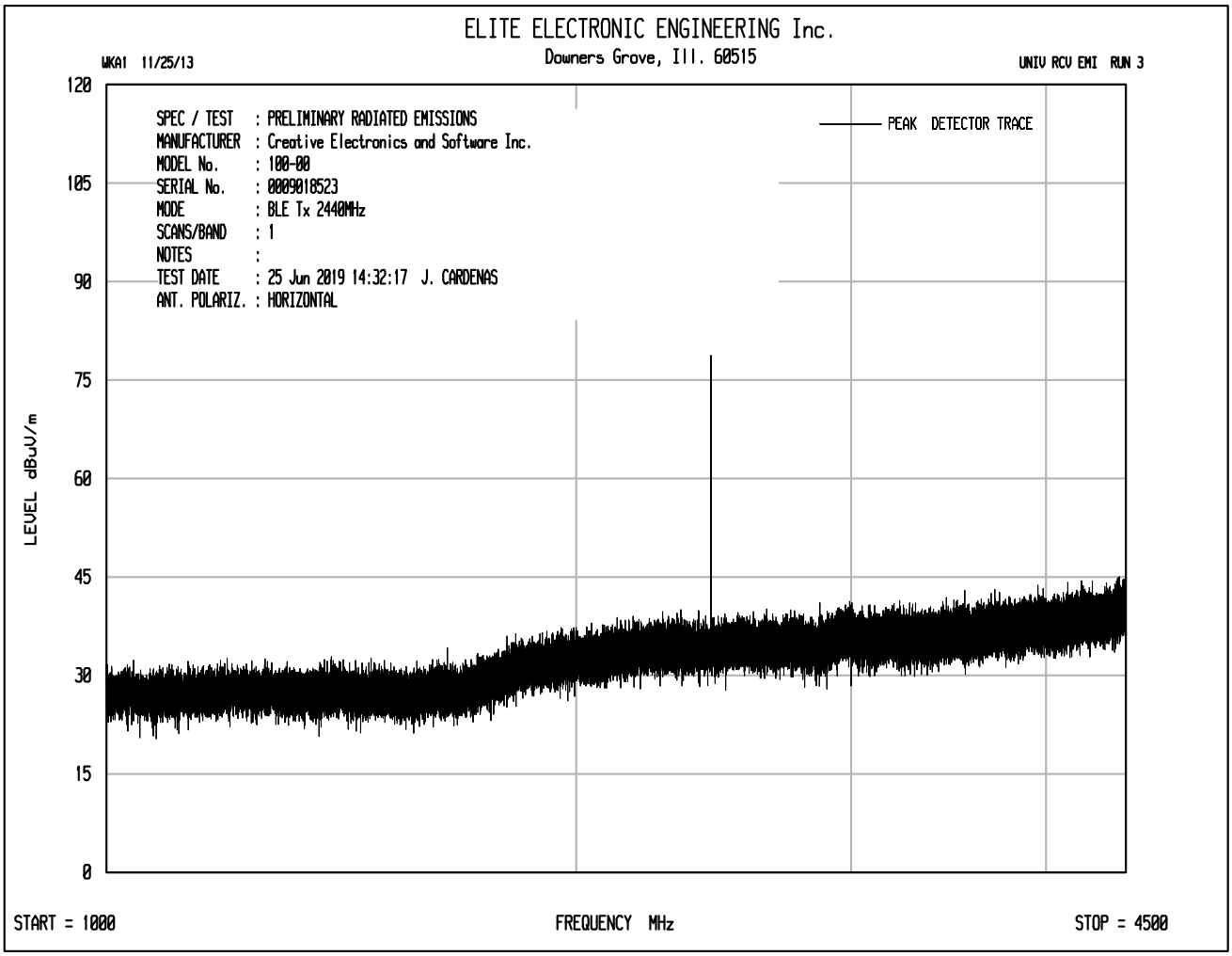

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2402MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 09:45:38 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 4500
FREQUENCY MHz
STOP = 18000

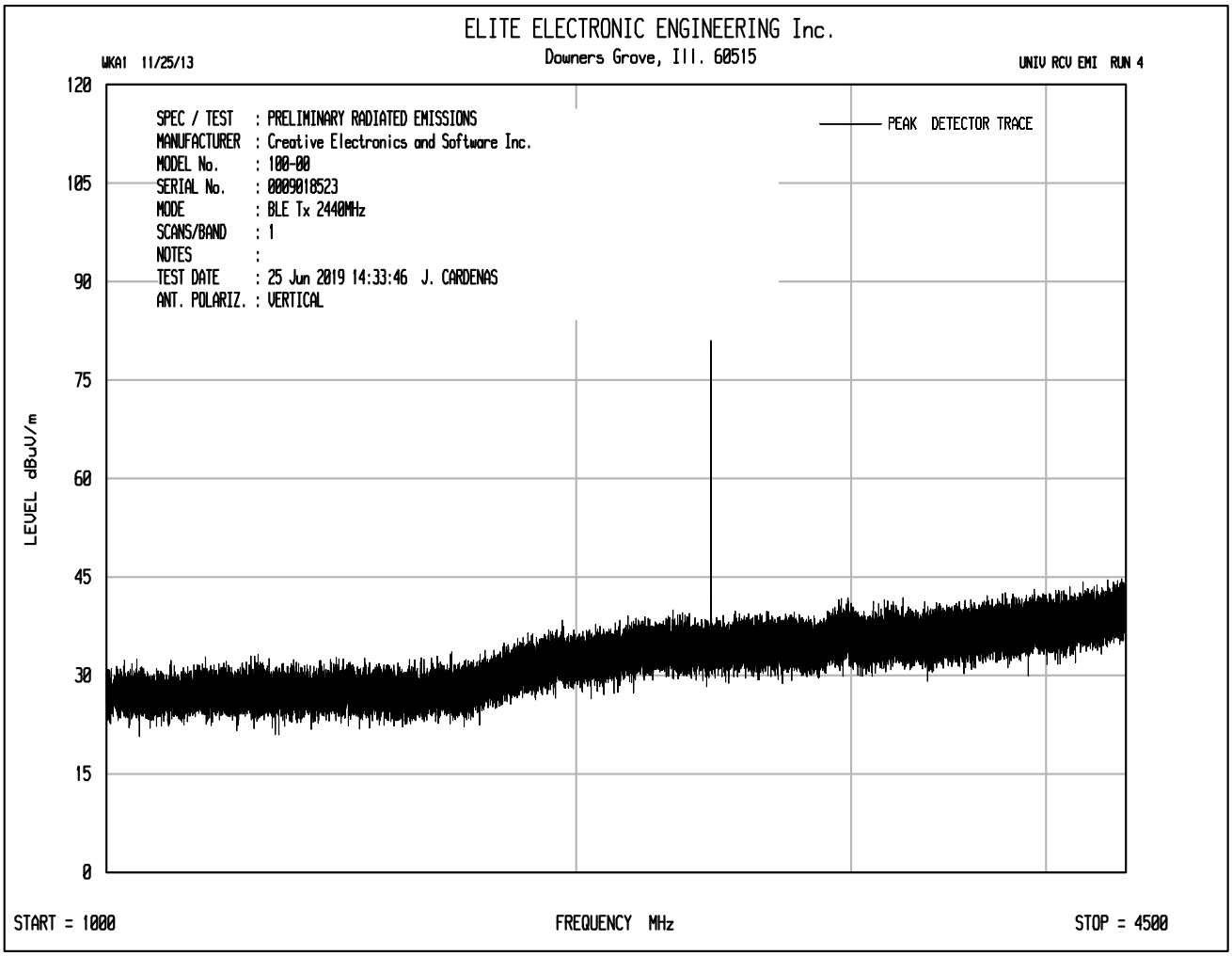

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009018523
MODE : BLE Tx 2402MHz
SCANS/BAND : 1
NOTES : -2dBm
TEST DATE : 25 Jun 2019 15:44:40 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 26500

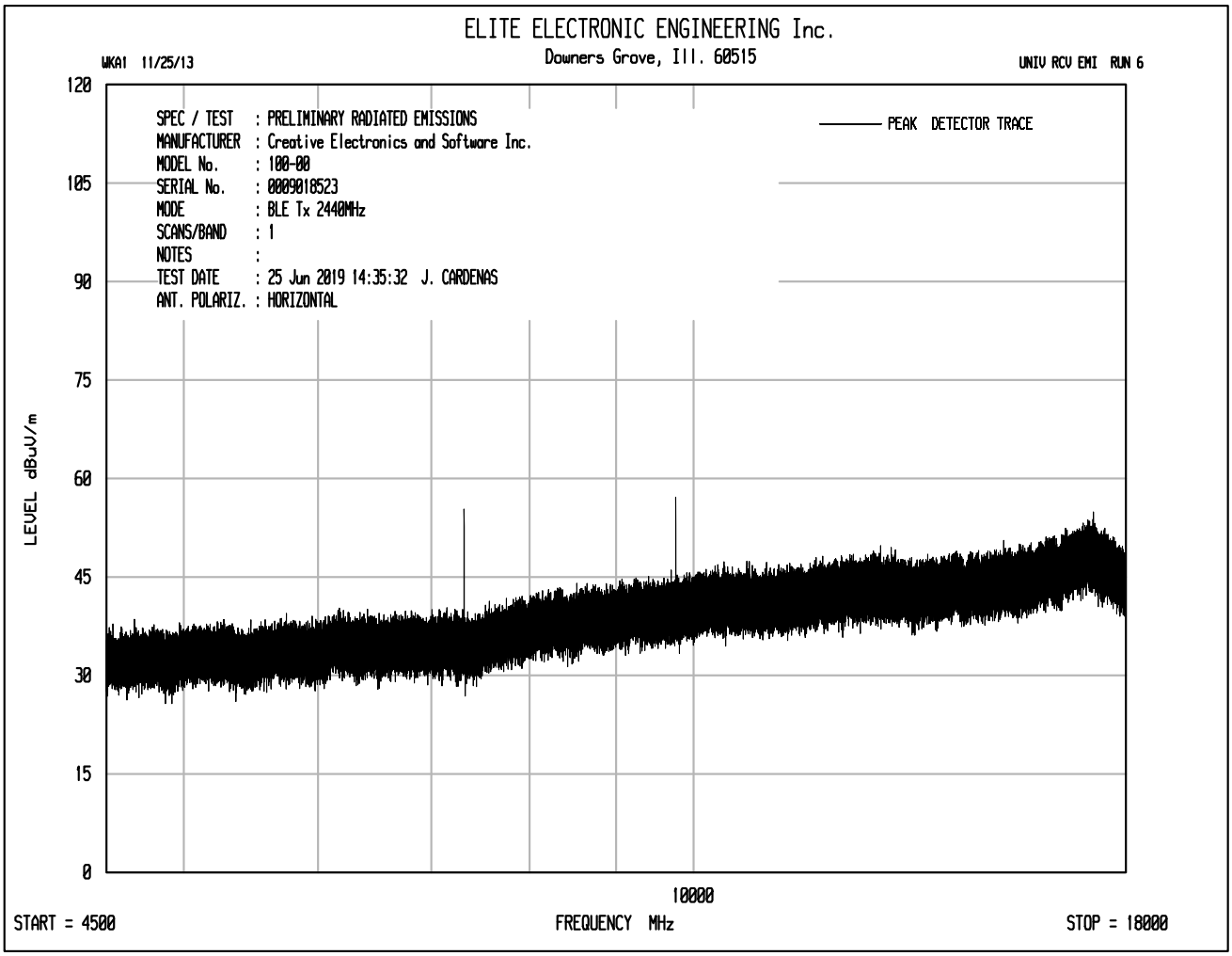

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009018523
MODE : BLE Tx 2402MHz
SCANS/BAND : 1
NOTES : -2dBm
TEST DATE : 25 Jun 2019 15:51:25 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 26500

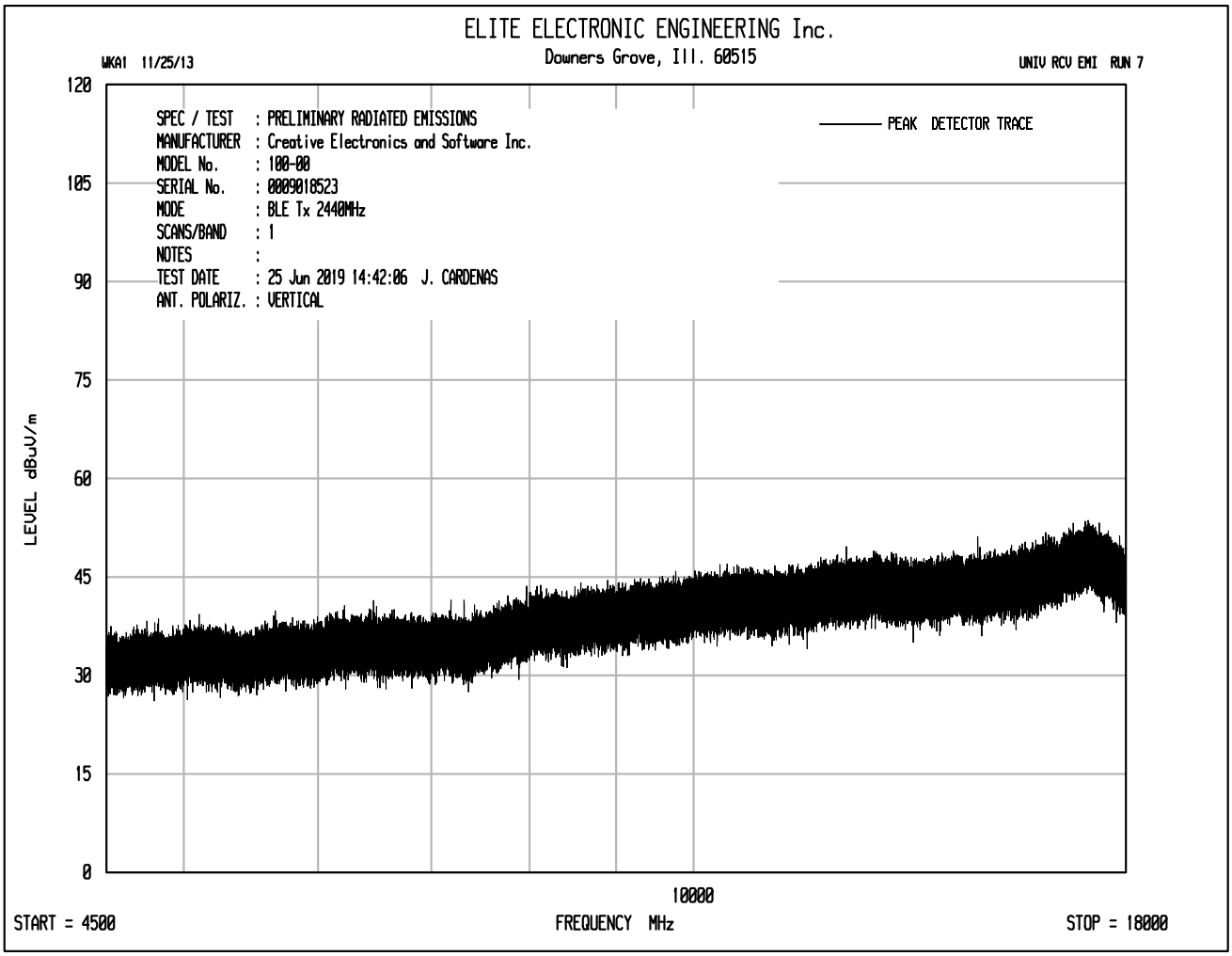

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 13
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 12:51:55 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

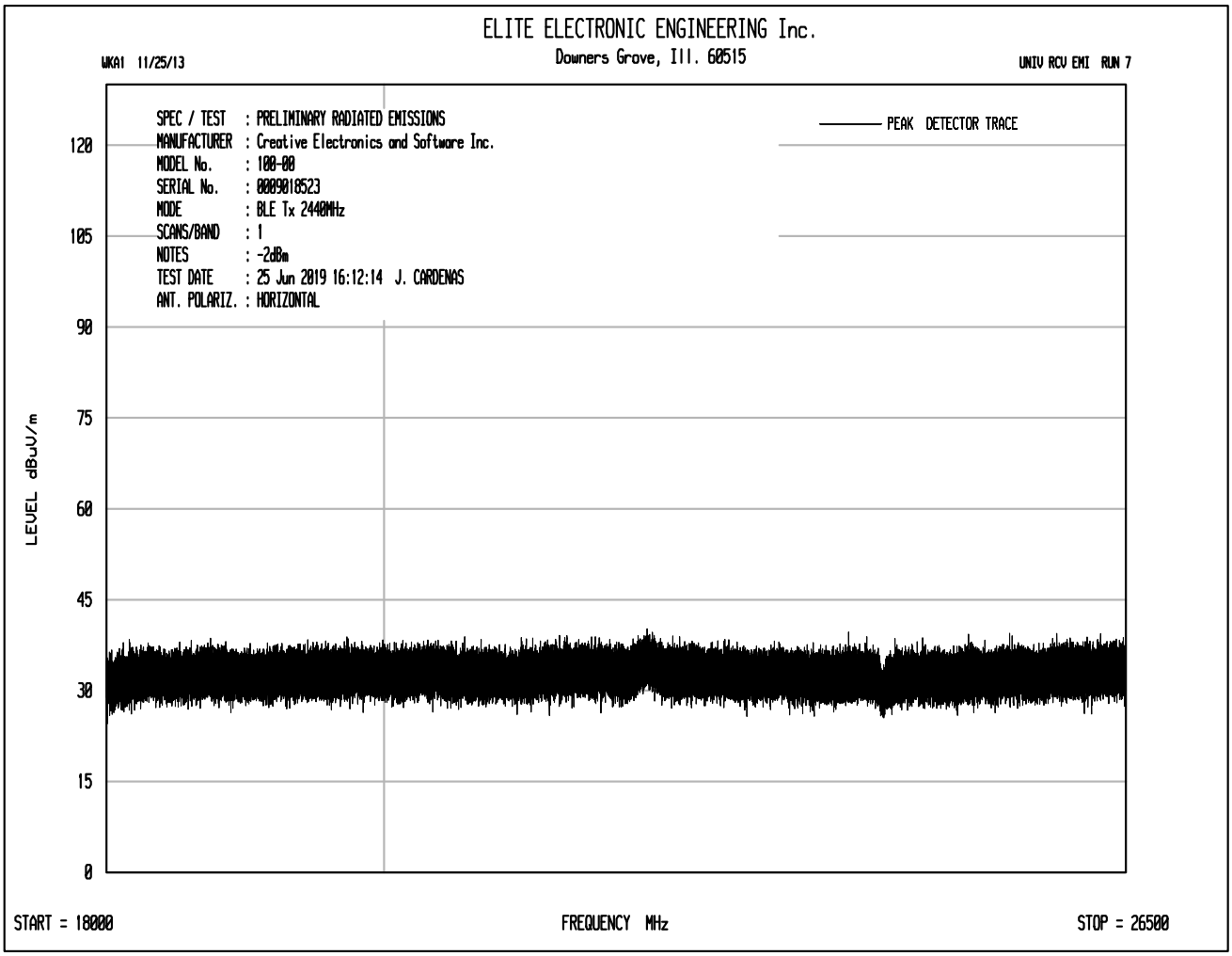

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 14
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 12:54:32 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

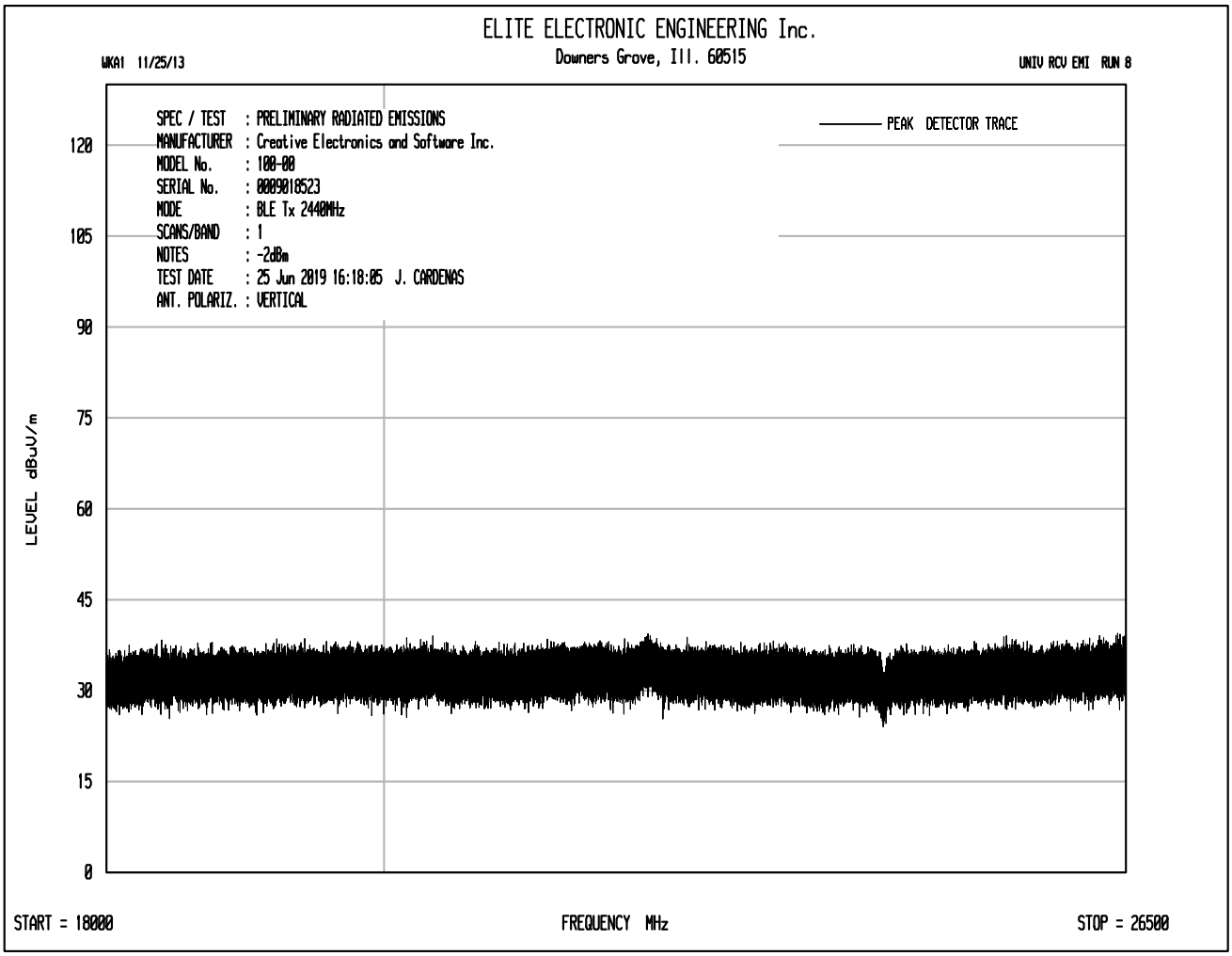

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 14:32:17 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

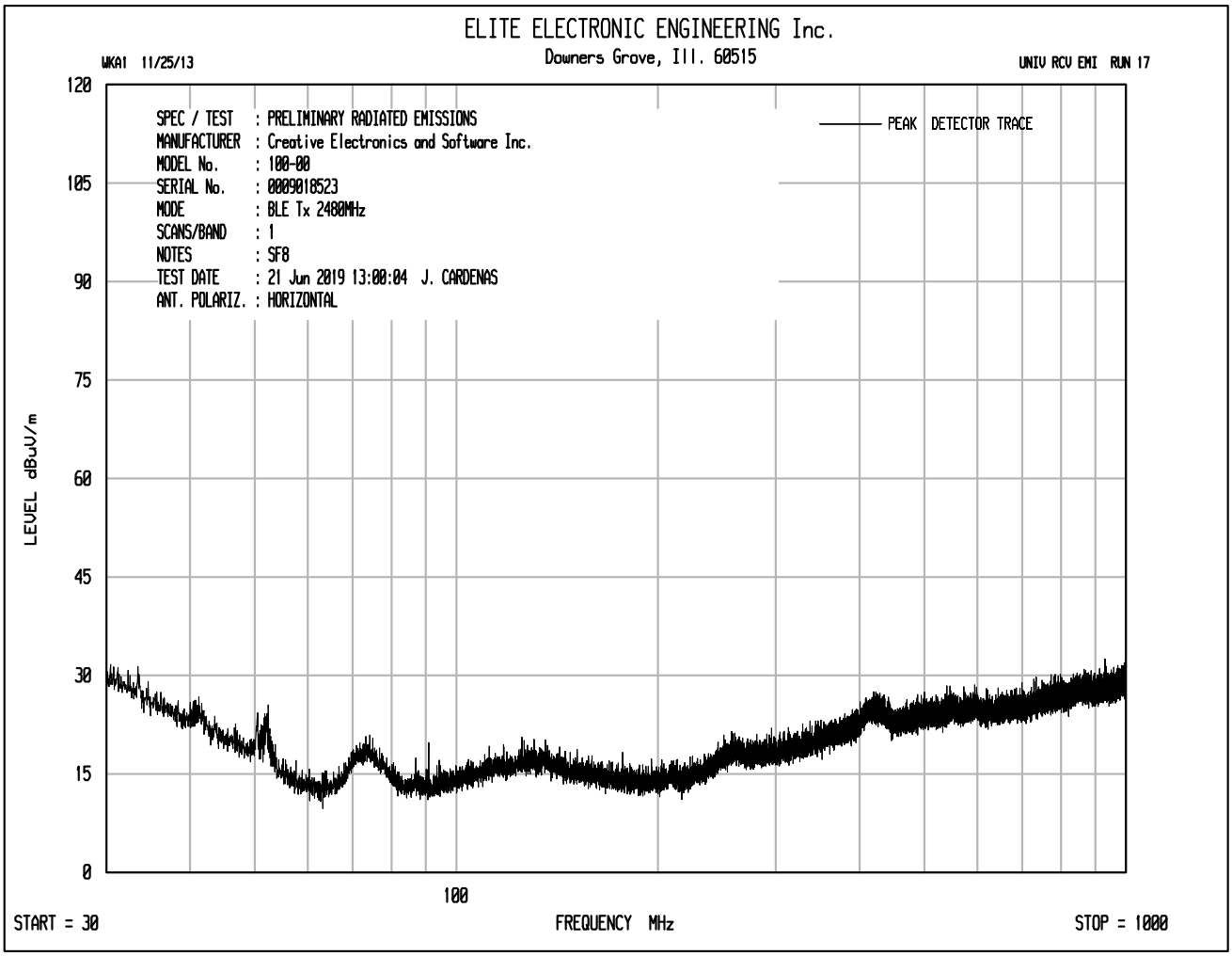

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 14:33:46 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

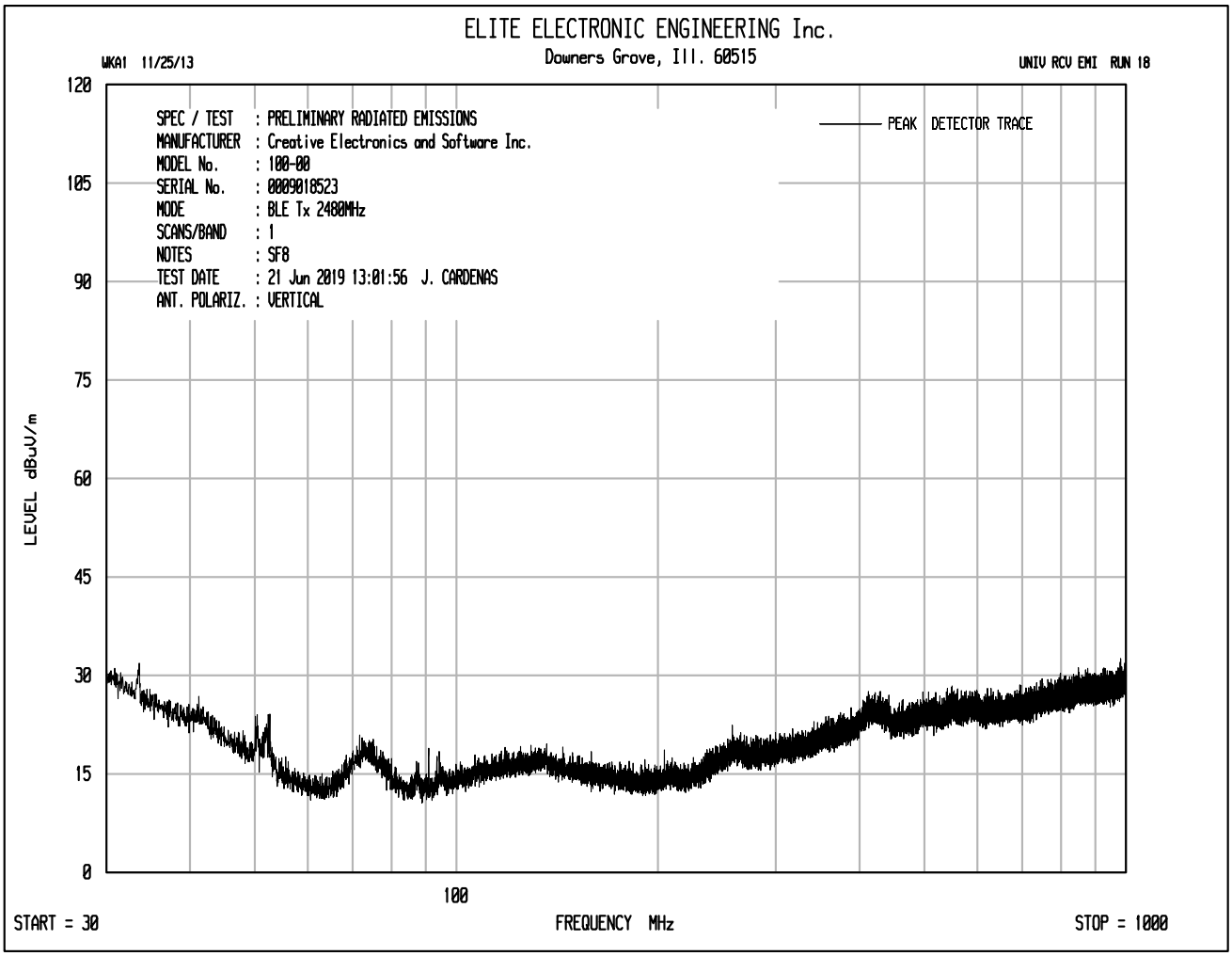

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 14:35:32 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 4500
FREQUENCY MHz
STOP = 18000

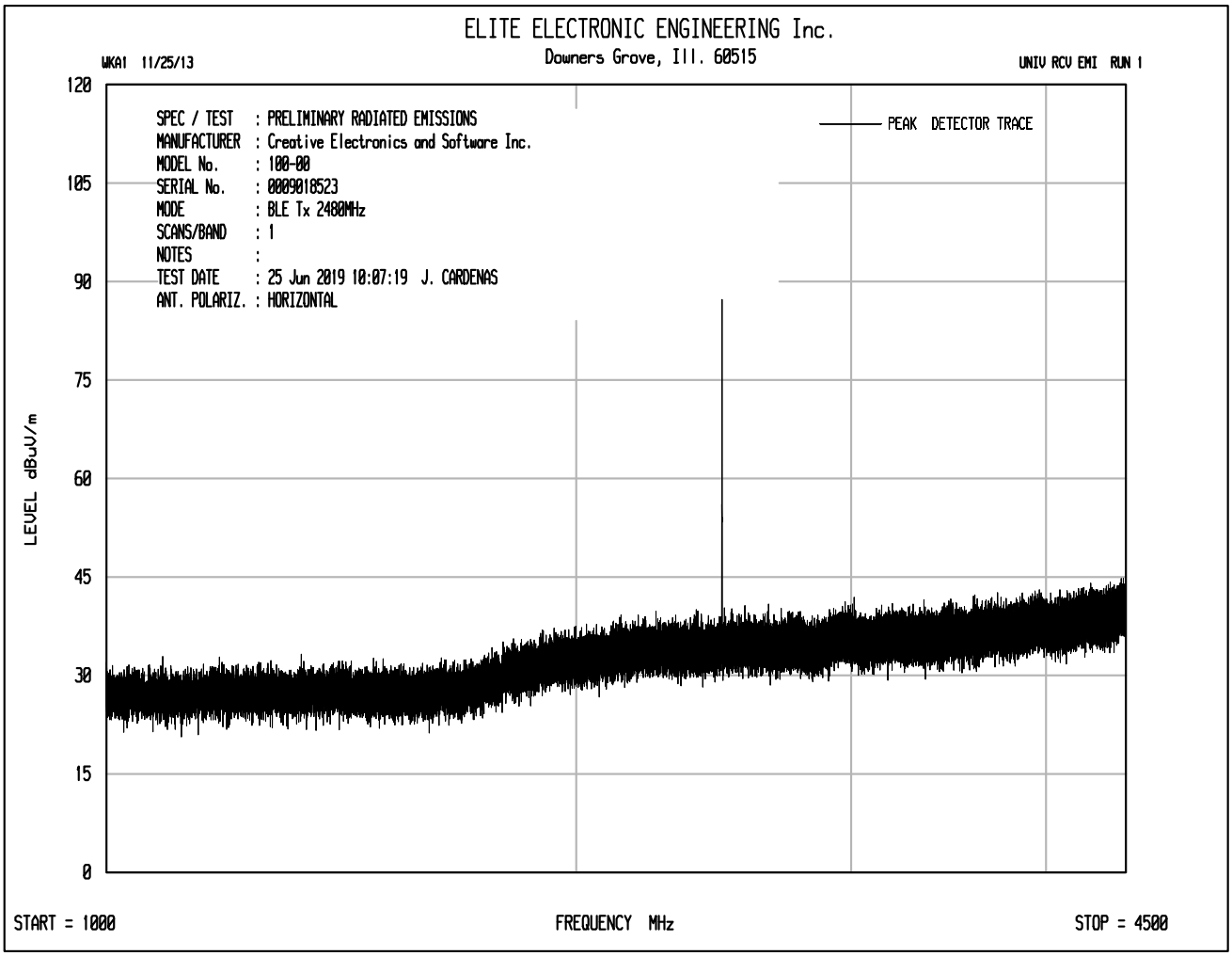

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 14:42:06 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 4500
FREQUENCY MHz
STOP = 18000

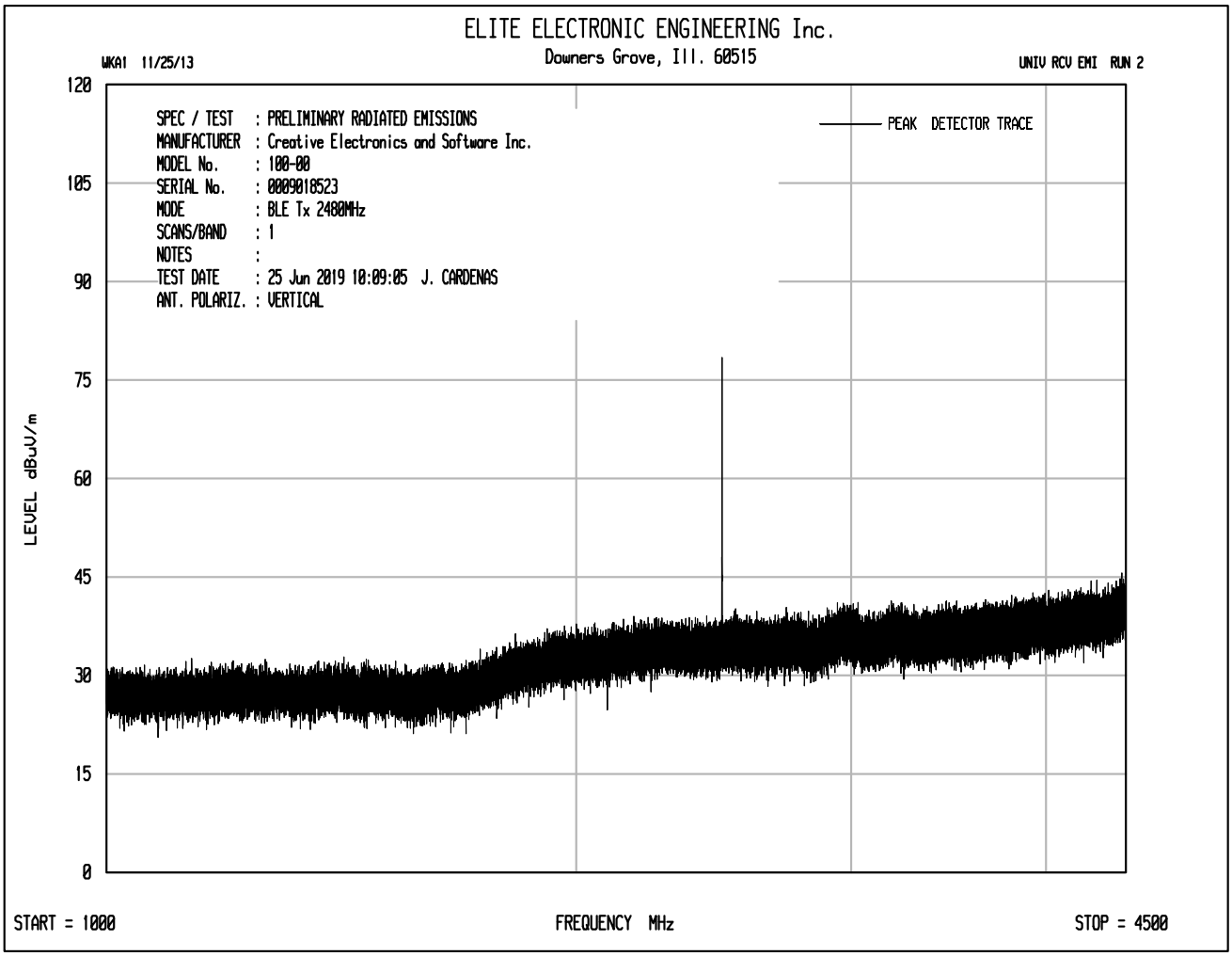

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009018523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES : -2dBm
TEST DATE : 25 Jun 2019 16:12:14 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 26500

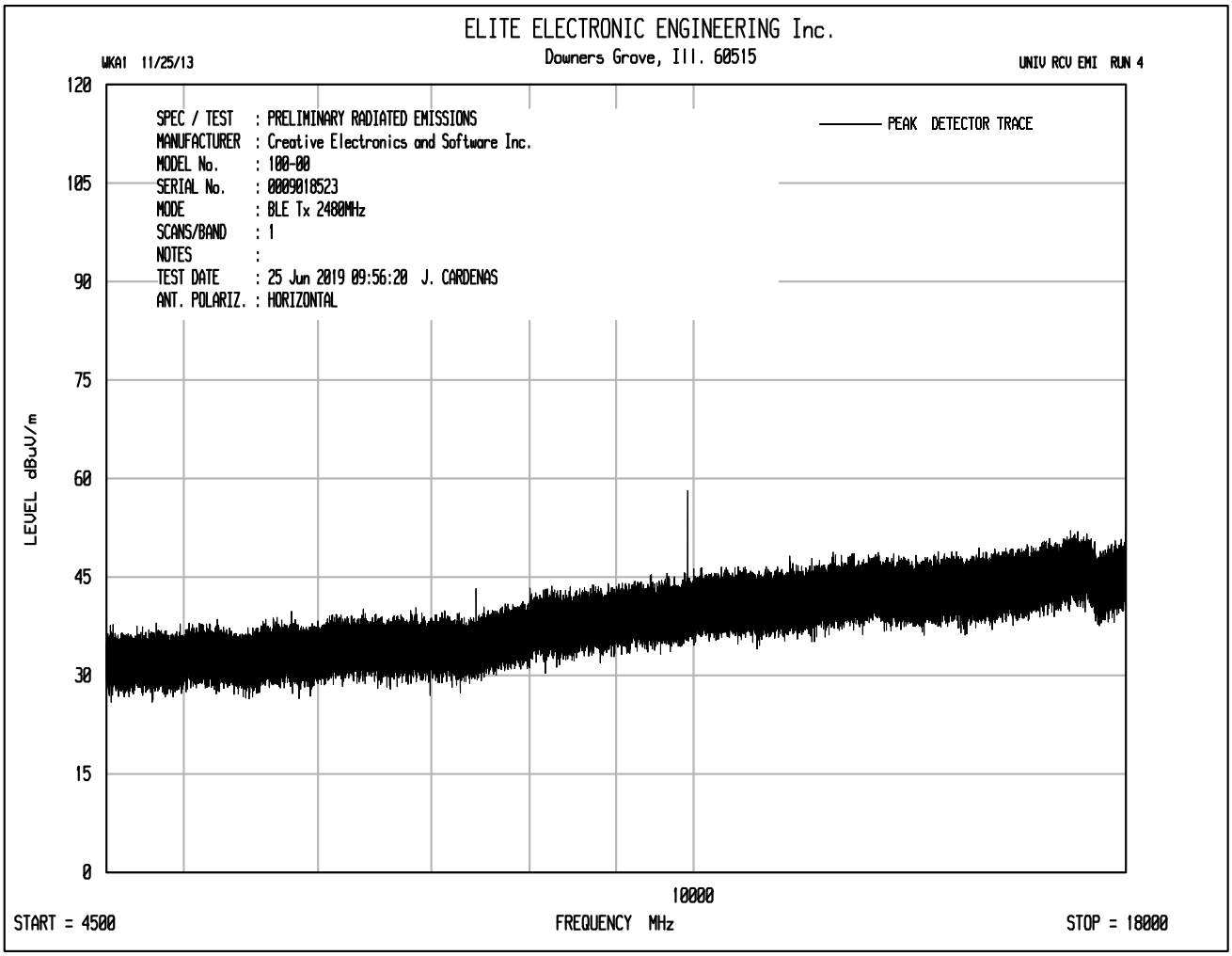

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009018523
MODE : BLE Tx 2440MHz
SCANS/BAND : 1
NOTES : -2dBm
TEST DATE : 25 Jun 2019 16:18:05 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 26500

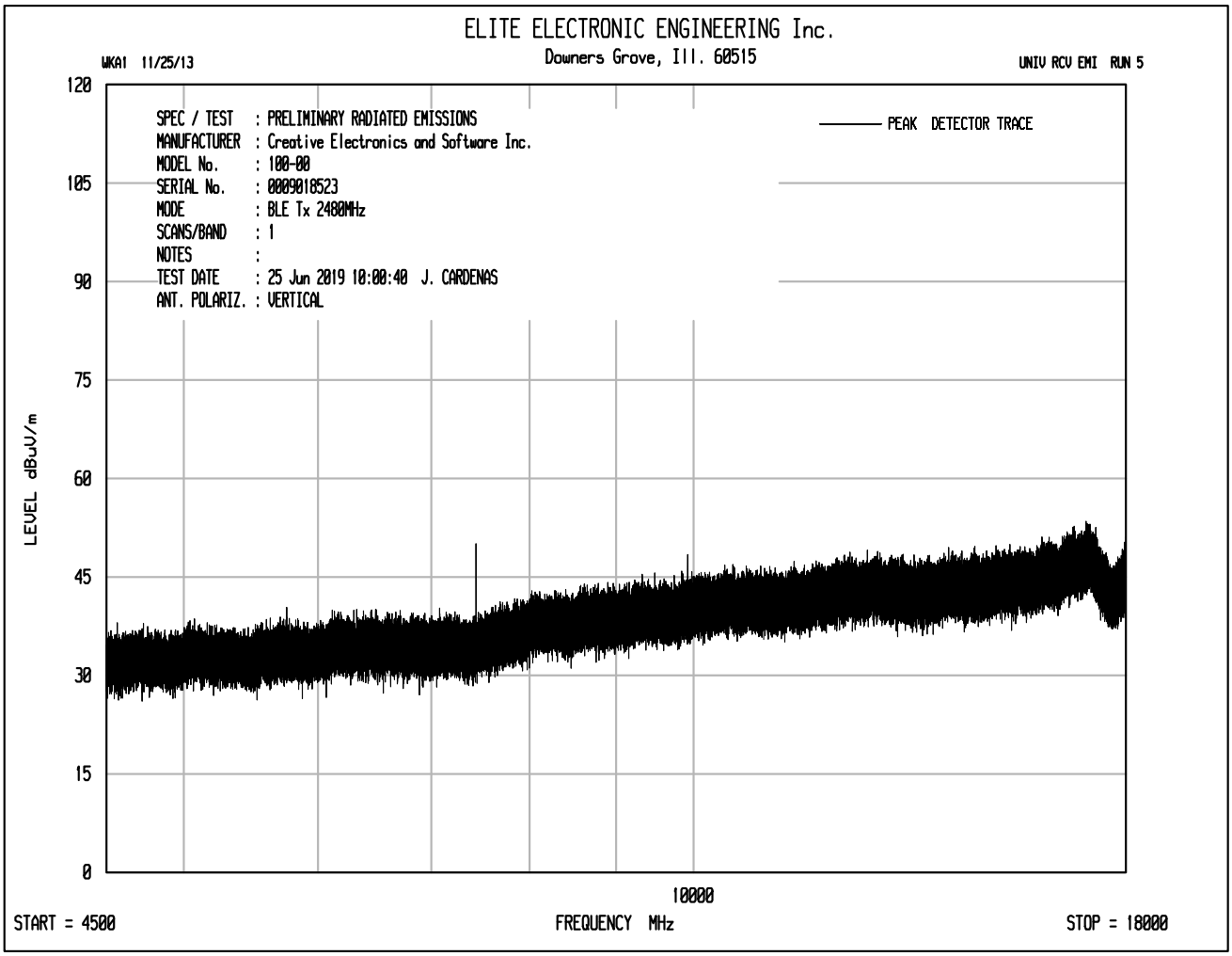

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 17
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 13:00:04 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

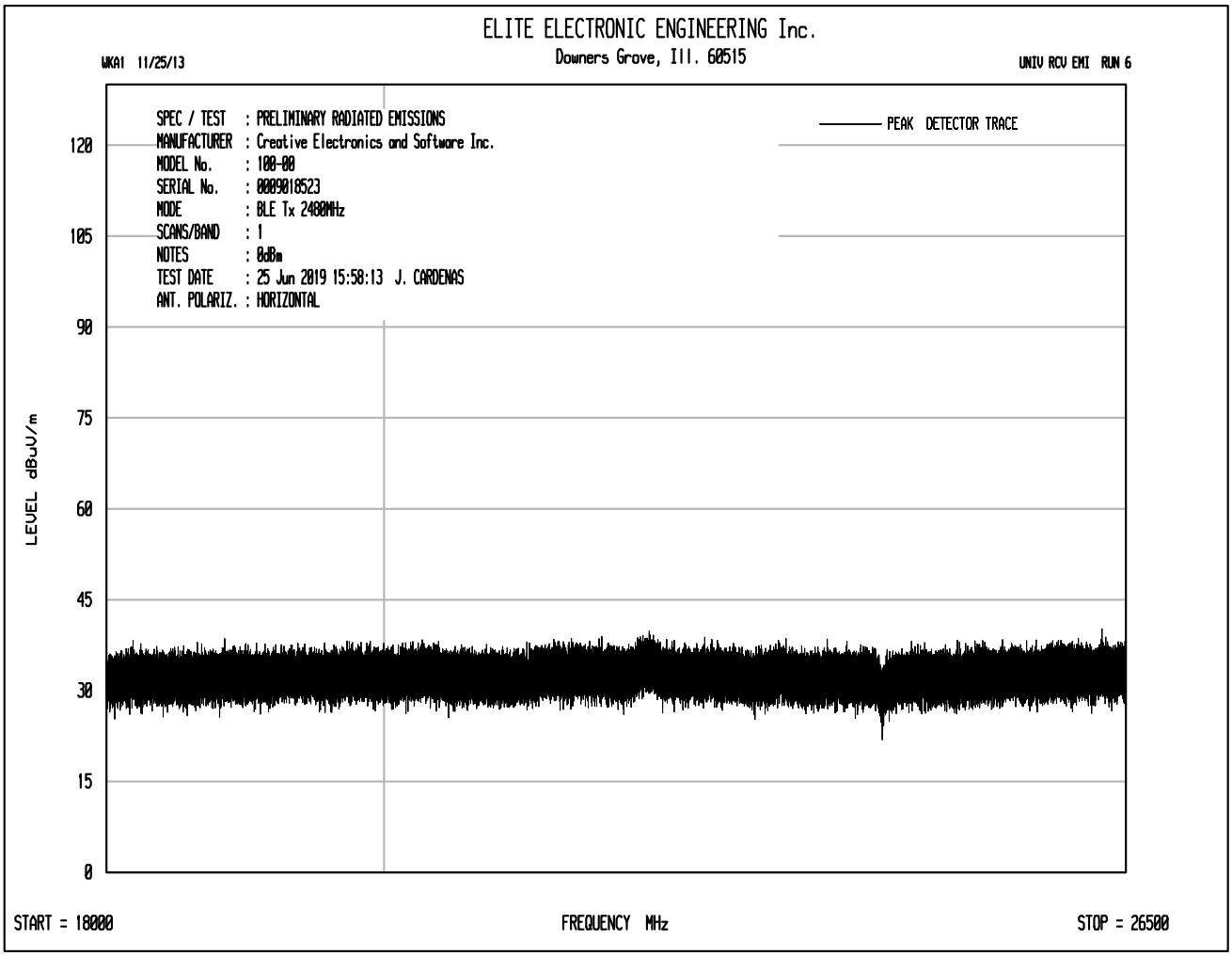

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 18
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 13:01:56 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

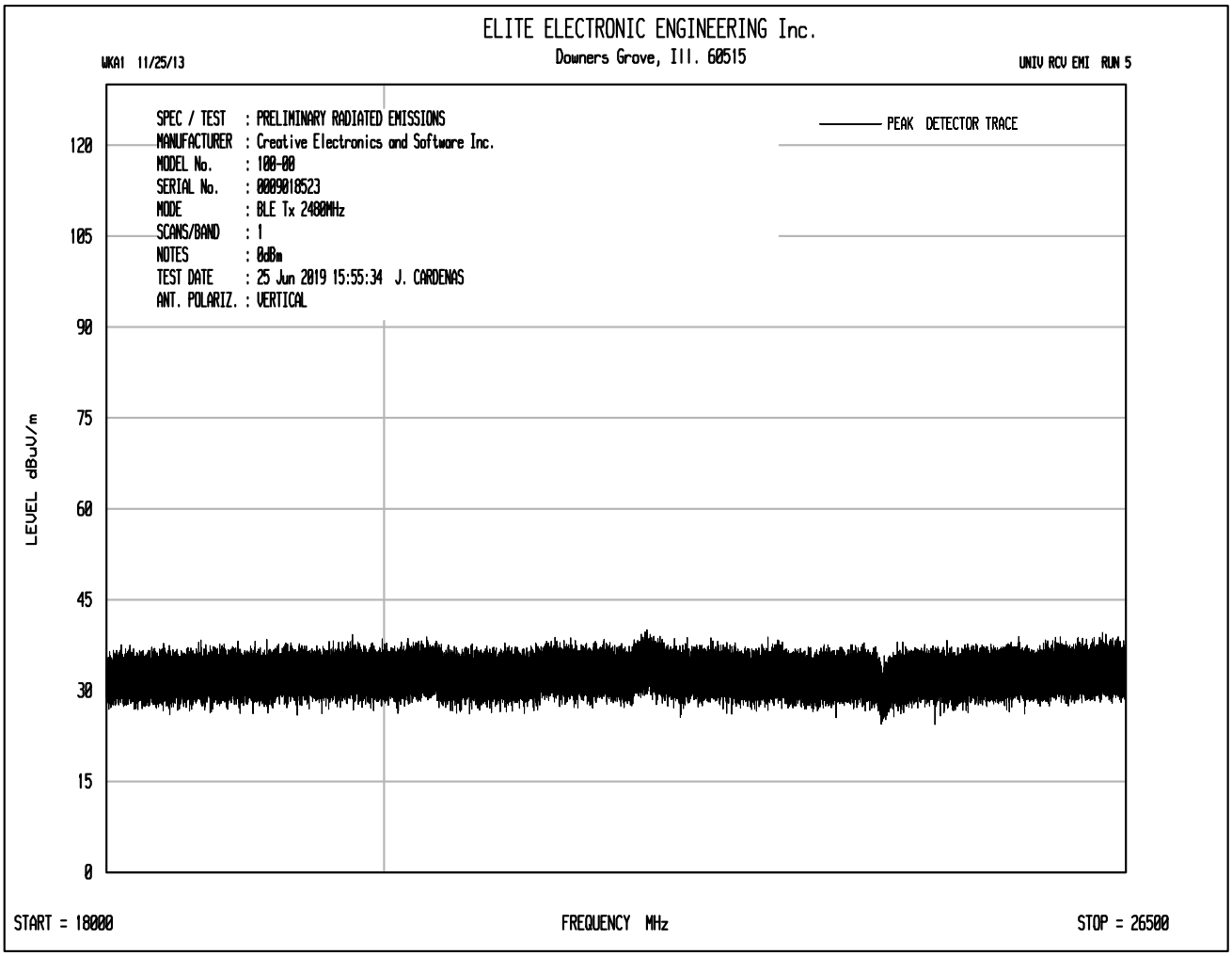

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 1
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 10:07:19 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

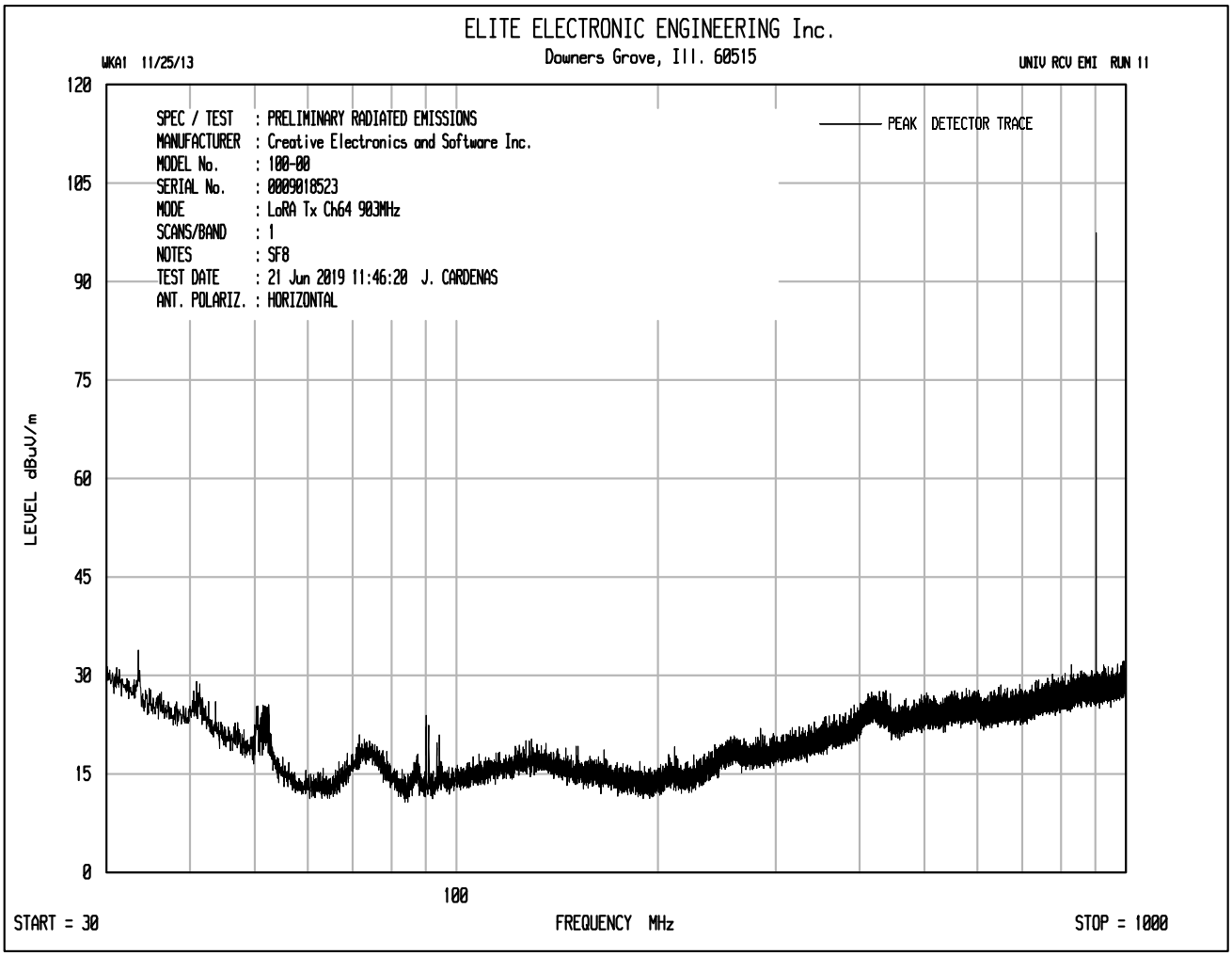

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 2
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 10:09:05 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 4500

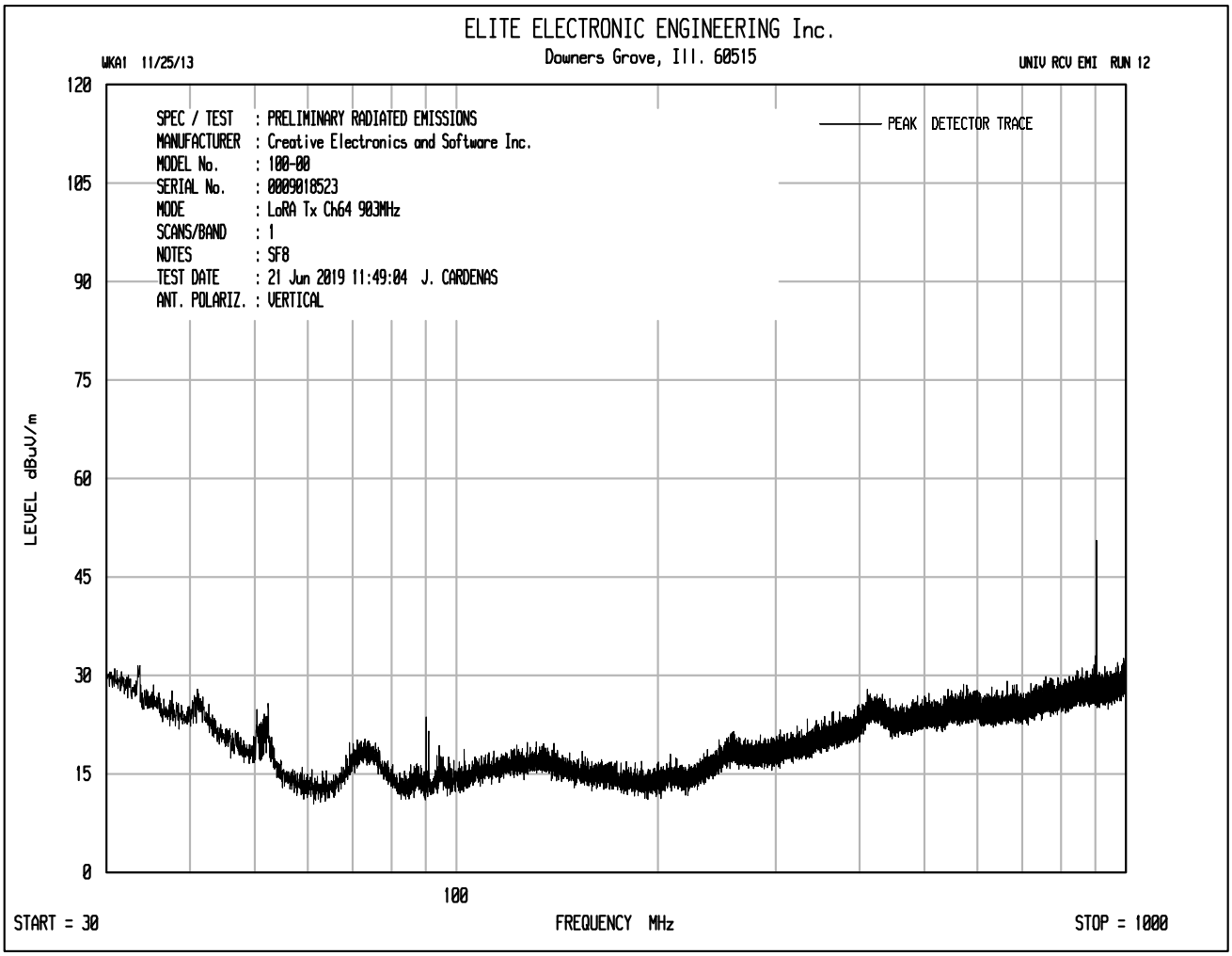

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 09:56:20 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 4500
FREQUENCY MHz
STOP = 18000

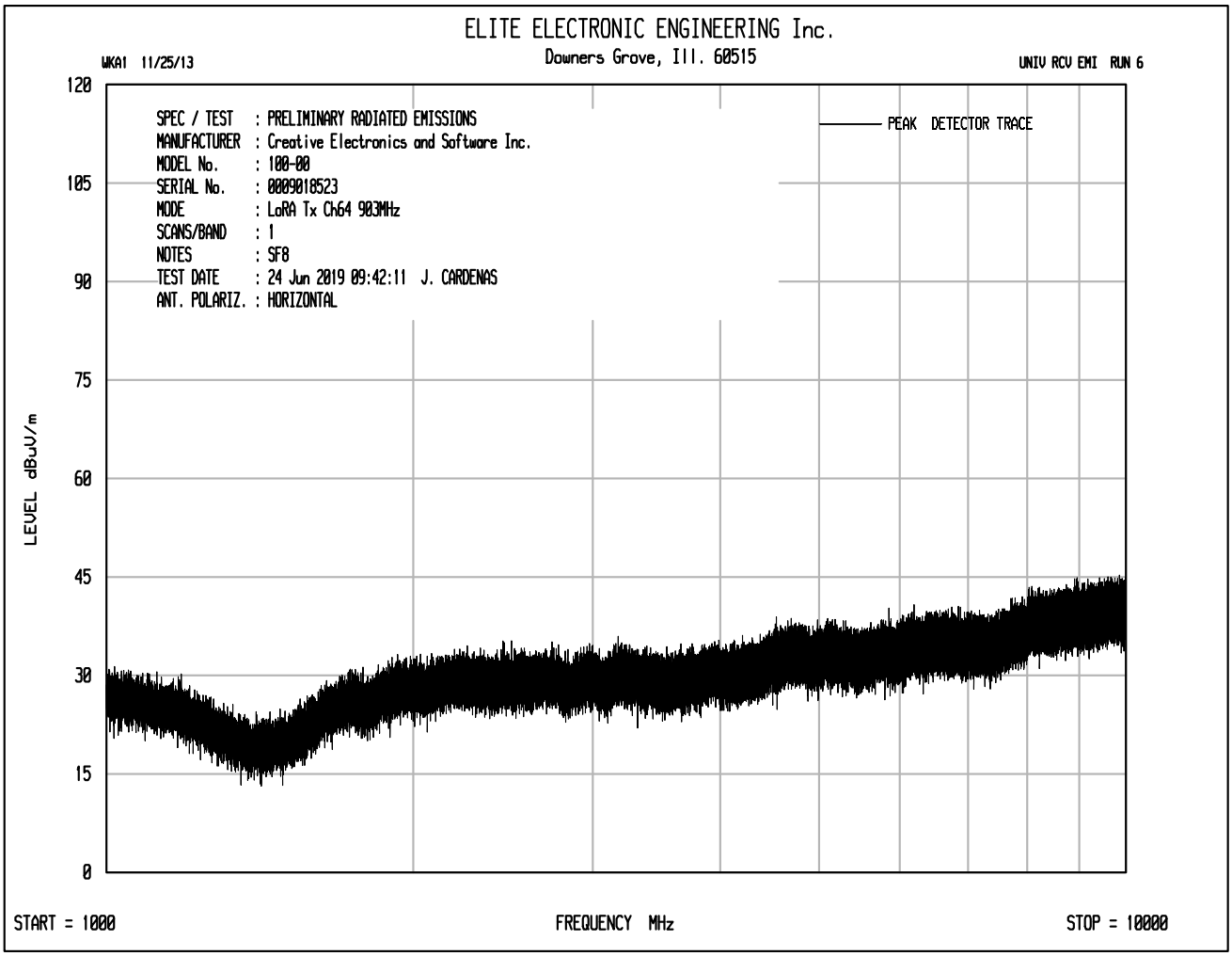

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES :
TEST DATE : 25 Jun 2019 10:00:40 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
10000
START = 4500
FREQUENCY MHz
STOP = 18000

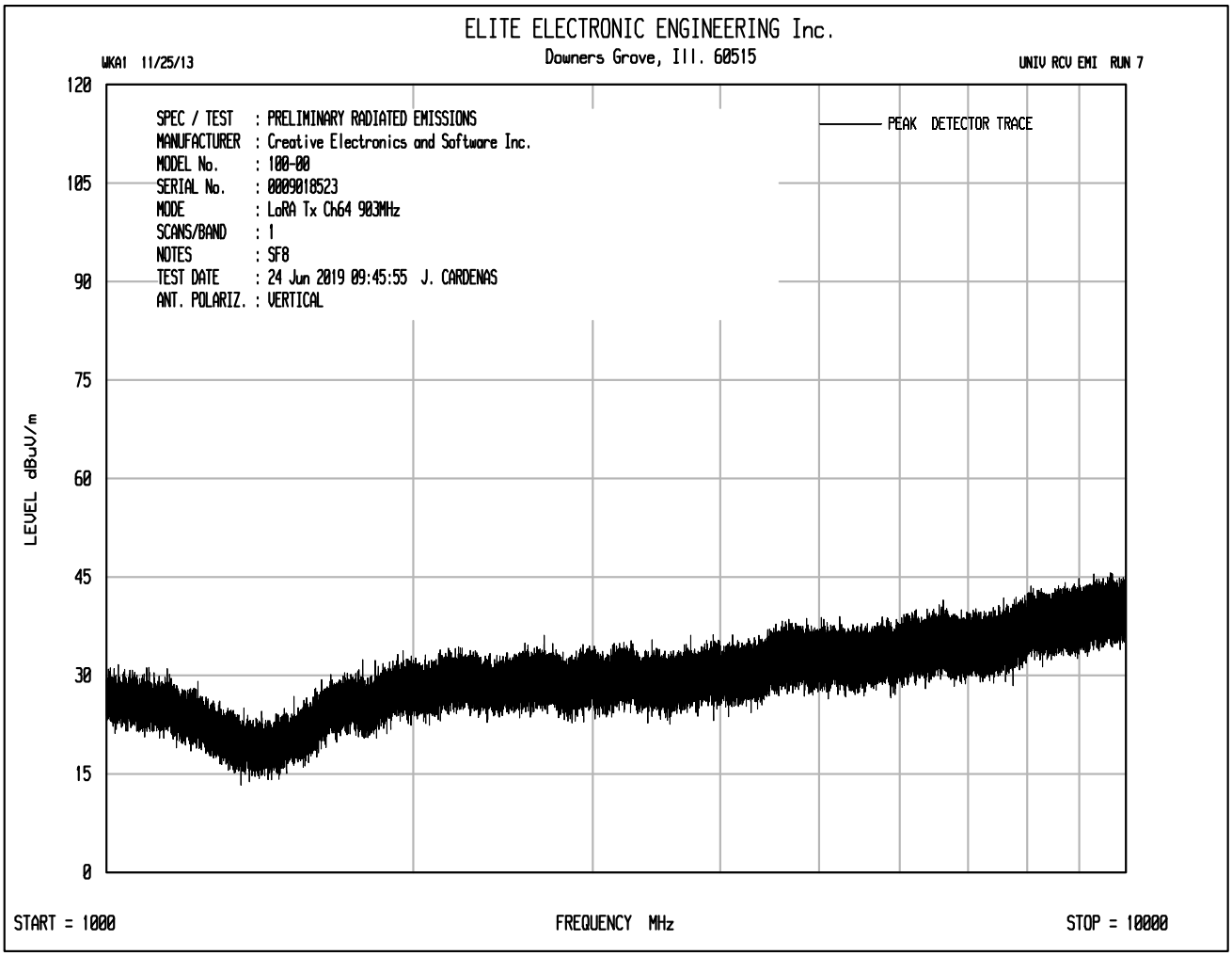

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009018523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES : 0dBm
TEST DATE : 25 Jun 2019 15:58:13 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 26500

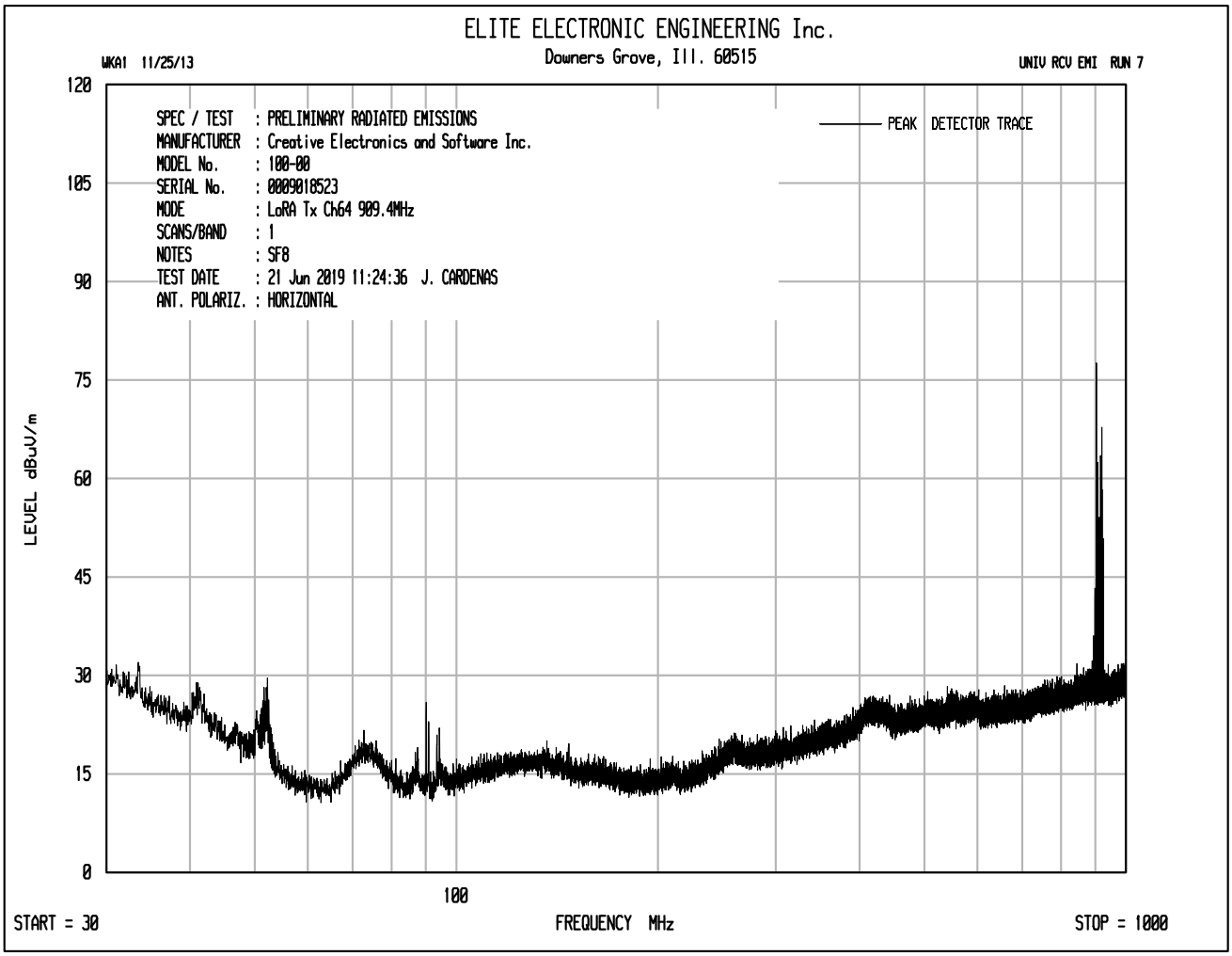

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 5
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009018523
MODE : BLE Tx 2480MHz
SCANS/BAND : 1
NOTES : 0dBm
TEST DATE : 25 Jun 2019 15:55:34 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 18000
FREQUENCY MHz
STOP = 26500

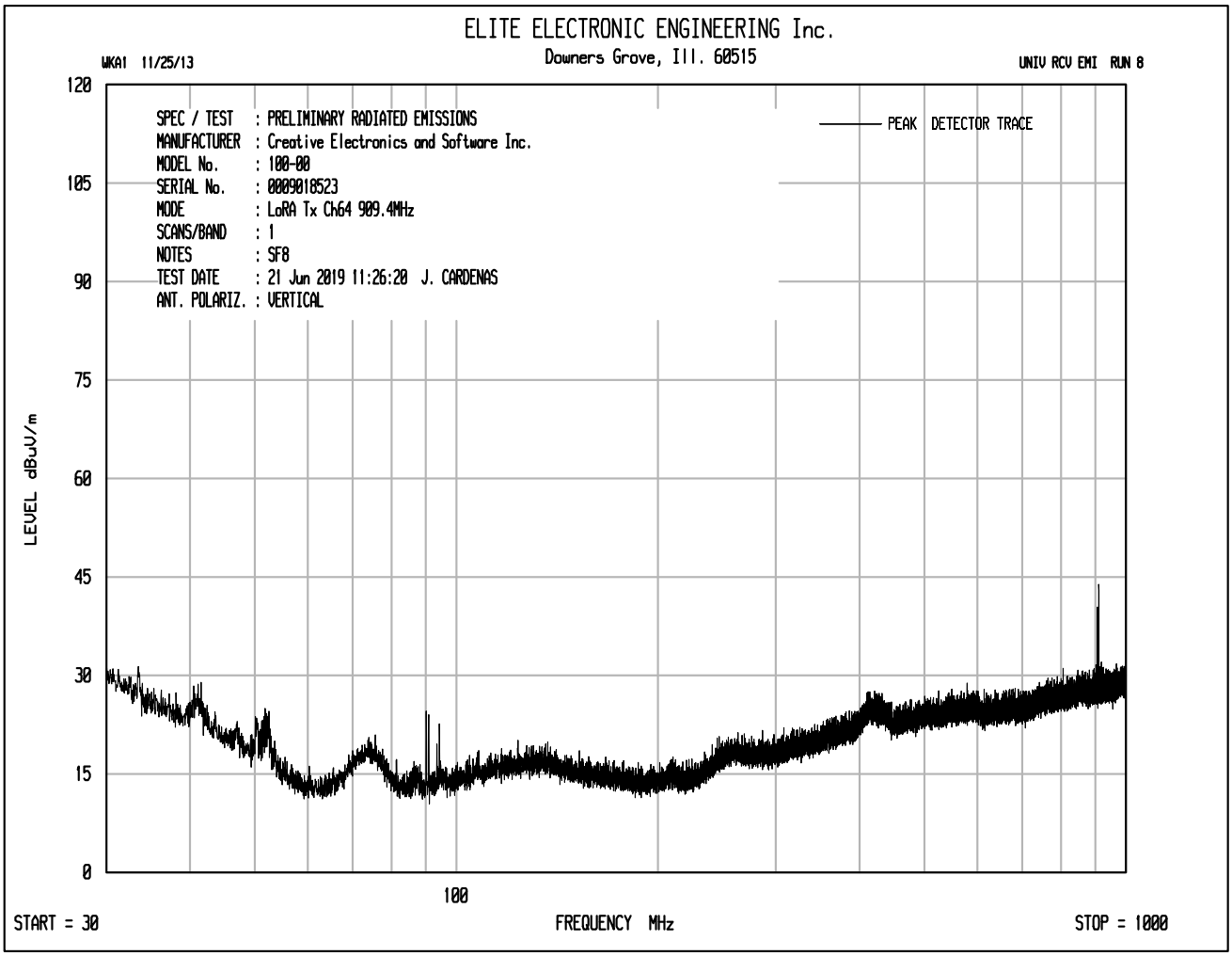

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 11
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 903MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 11:46:20 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

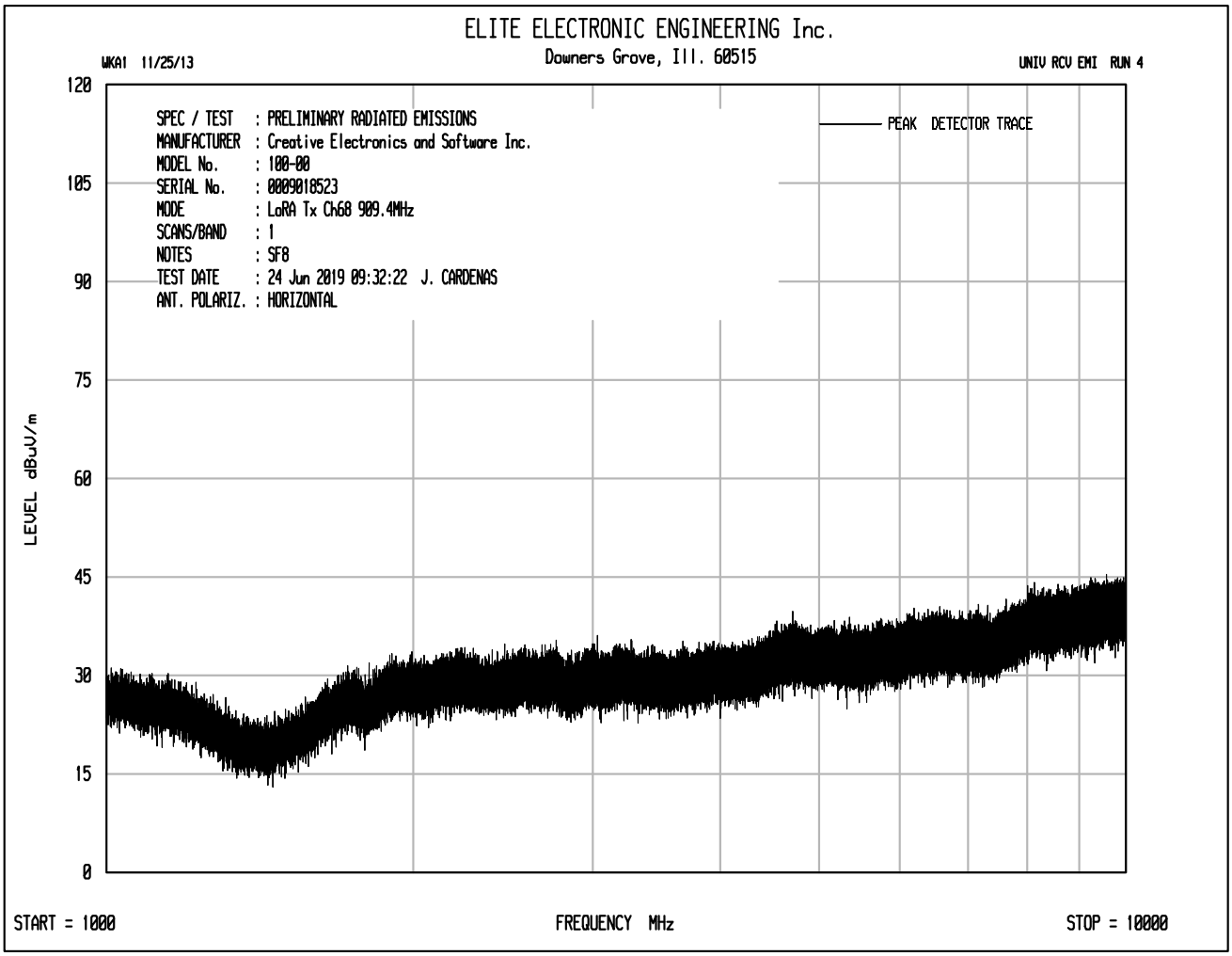

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 12
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 903MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 11:49:04 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

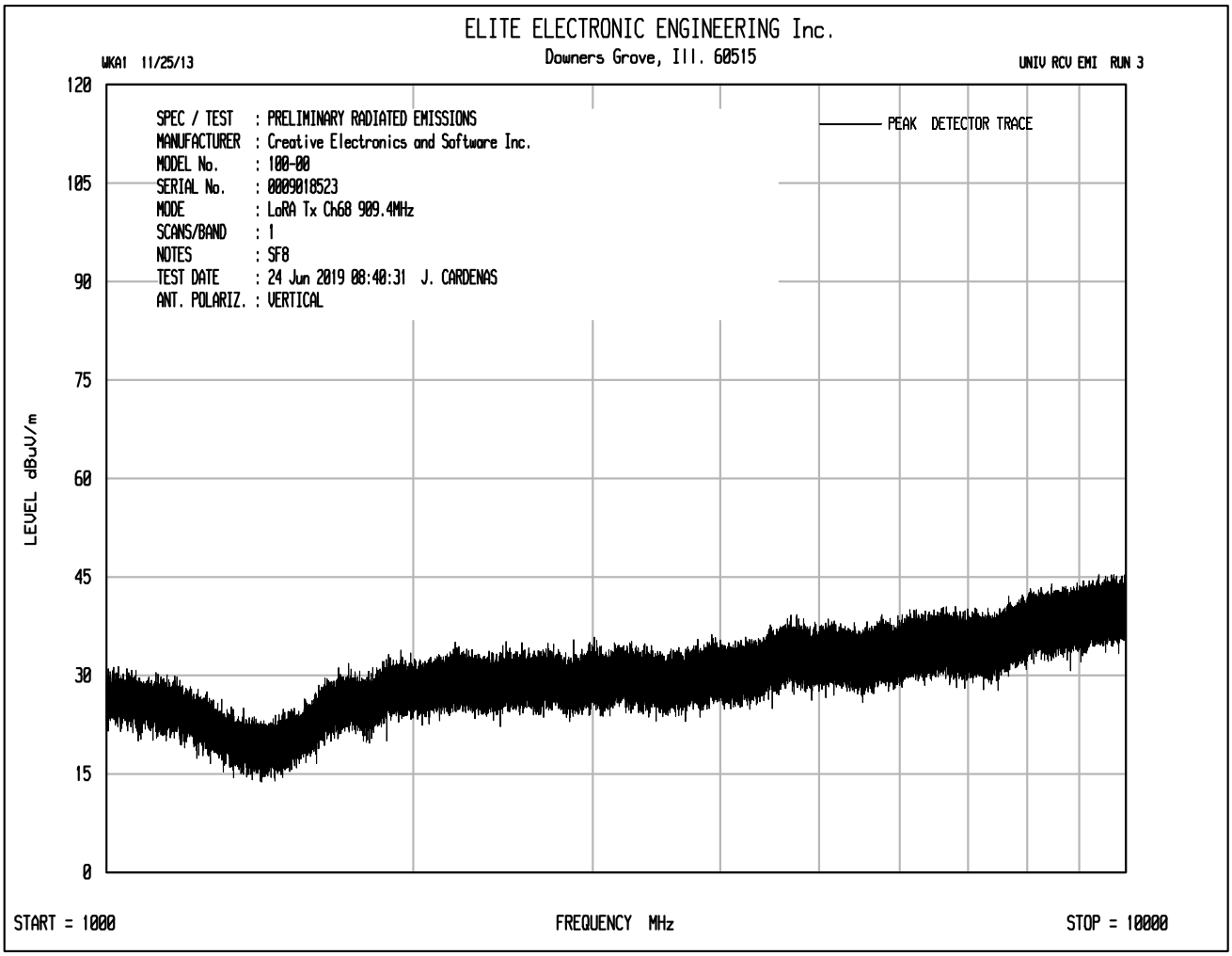

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 6
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 903MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 24 Jun 2019 09:42:11 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 10000

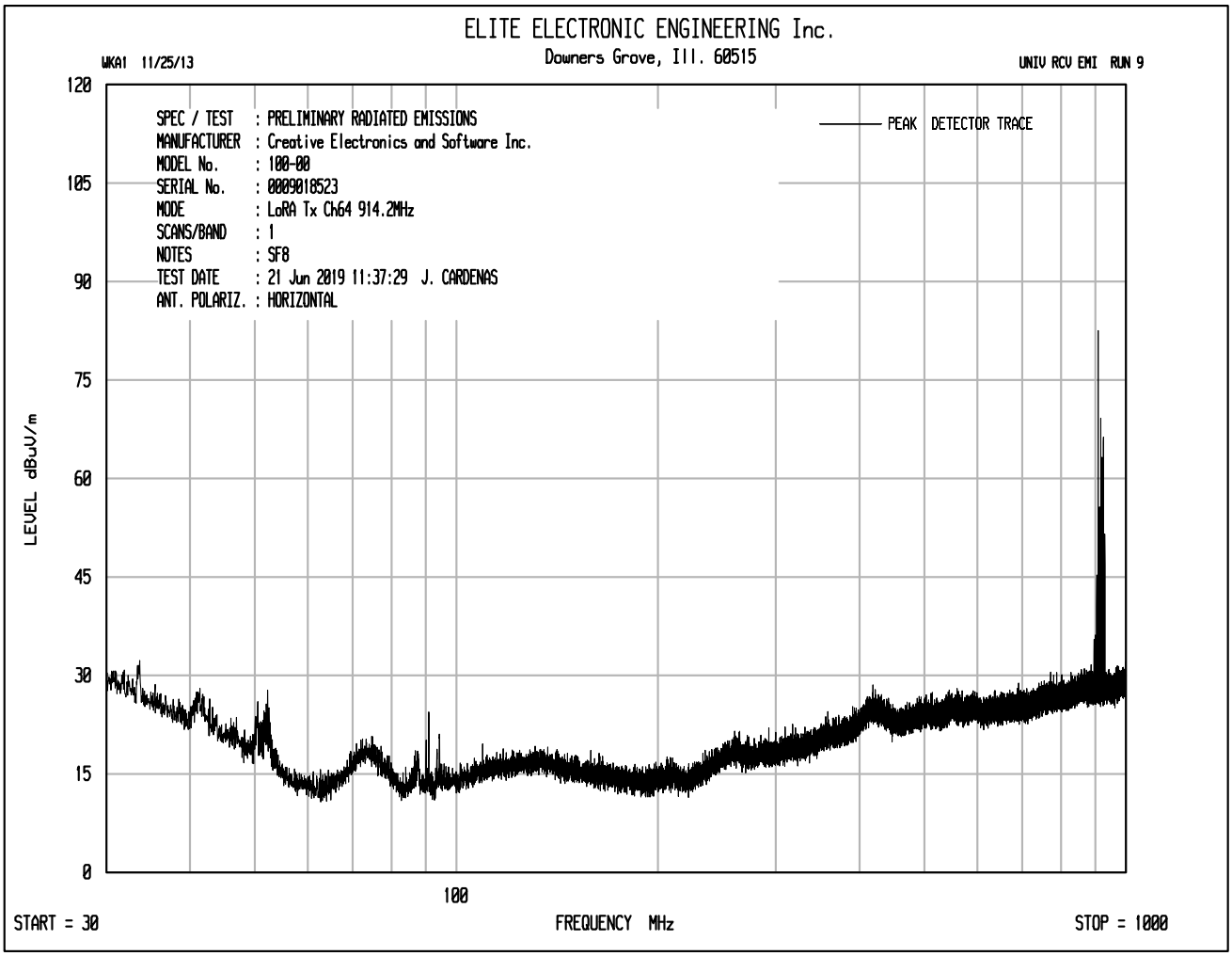

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 903MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 24 Jun 2019 09:45:55 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 10000

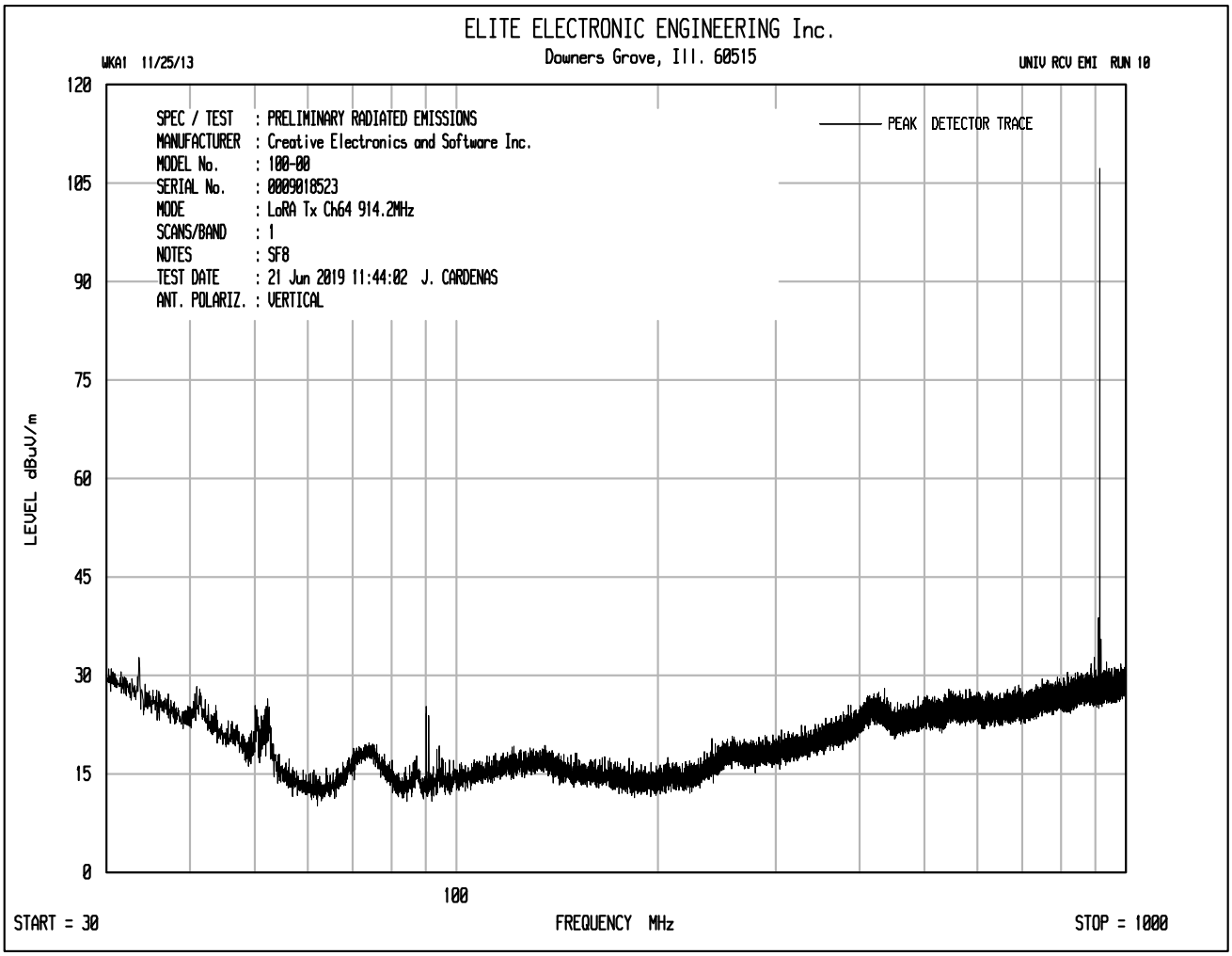

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 7
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 909.4MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 11:24:36 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

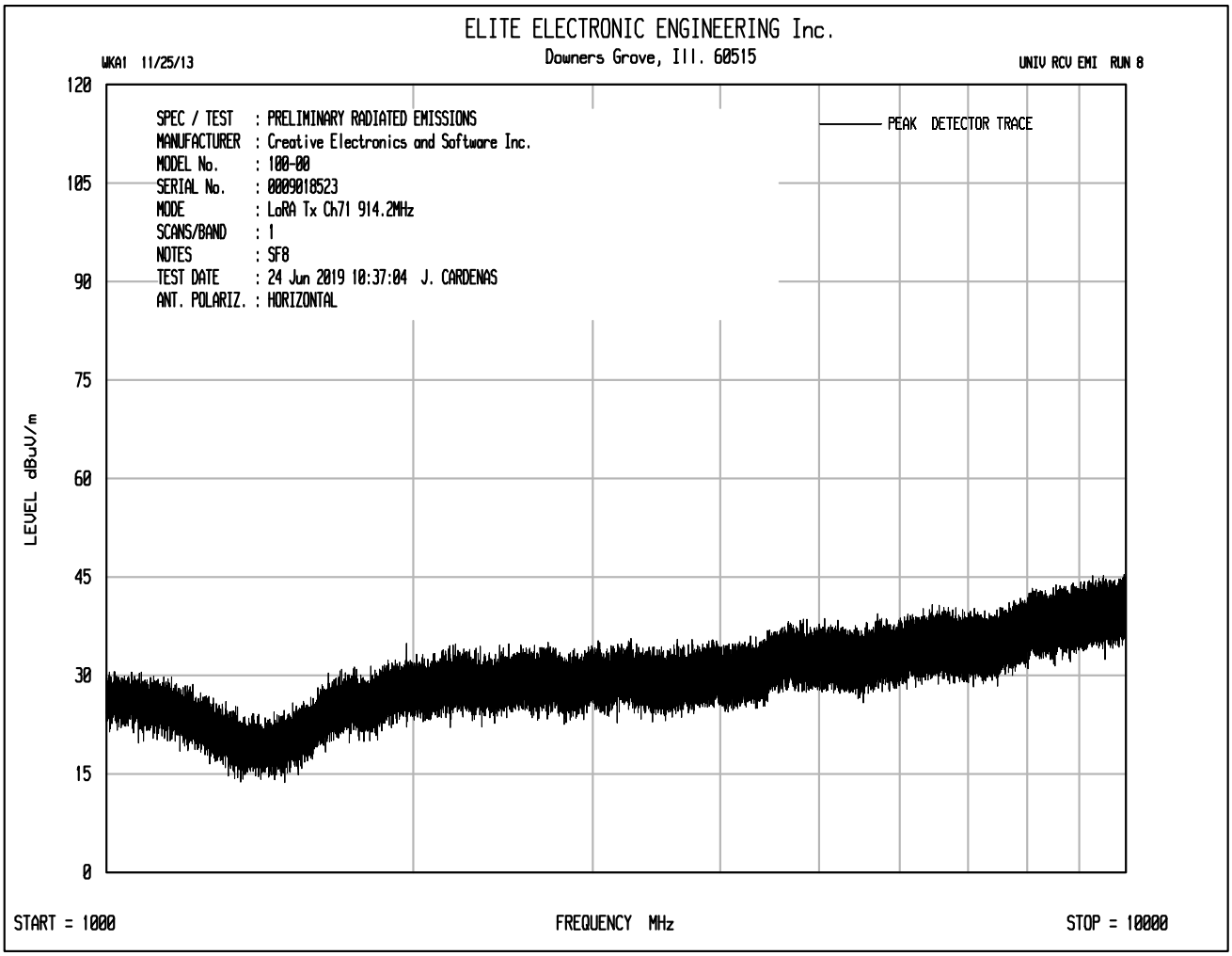

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 909.4MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 11:26:20 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000

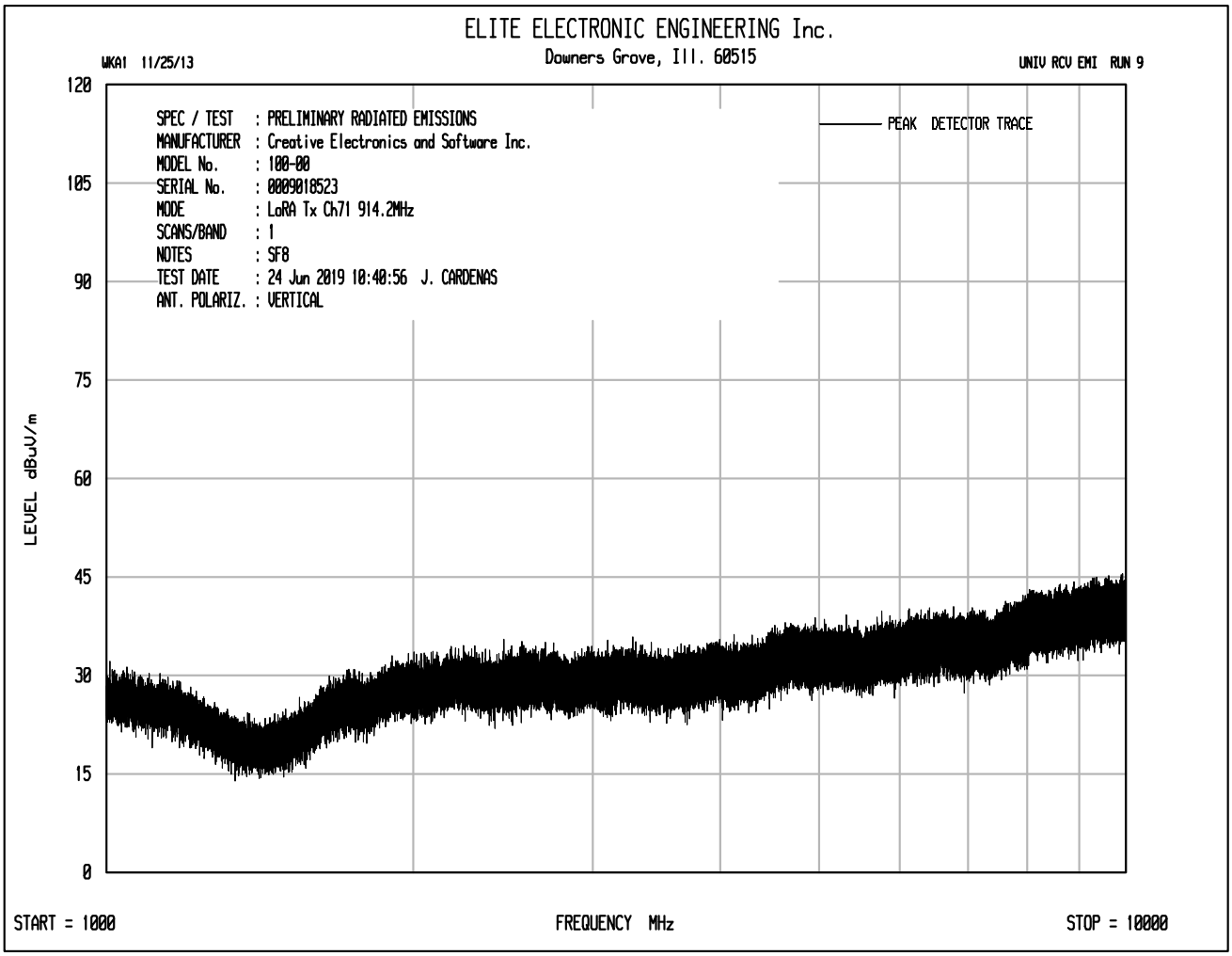

ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 4
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch68 909.4MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 24 Jun 2019 09:32:22 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 10000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 3
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch68 909.4MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 24 Jun 2019 08:40:31 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 10000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 9
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 914.2MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 11:37:29 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 10
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch64 914.2MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 21 Jun 2019 11:44:02 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
100
START = 30
FREQUENCY MHz
STOP = 1000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 8
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch71 914.2MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 24 Jun 2019 10:37:04 J. CARDENAS
ANT. POLARIZ. : HORIZONTAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 10000


ELITE ELECTRONIC ENGINEERING Inc.
Downers Grove, Ill. 60515
WKA1 11/25/13
UNIV RCV EMI RUN 9
SPEC / TEST : PRELIMINARY RADIATED EMISSIONS
MANUFACTURER : Creative Electronics and Software Inc.
MODEL No. : 100-00
SERIAL No. : 0009010523
MODE : LoRA Tx Ch71 914.2MHz
SCANS/BAND : 1
NOTES : SF8
TEST DATE : 24 Jun 2019 10:40:56 J. CARDENAS
ANT. POLARIZ. : VERTICAL
PEAK DETECTOR TRACE
LEVEL dBuV/m
120
105
90
75
60
45
30
15
0
START = 1000
FREQUENCY MHz
STOP = 10000

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2402MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions in Restricted Bands
Date : June 24,2019
Test Distance : 3 meters
Notes : Peak Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4804.00	H	49.1	*	4.8	36.9	-40.2	50.6	338.9	5000.0	-23.4
4804.00	V	49.9	*	4.8	36.9	-40.2	51.4	370.3	5000.0	-22.6
12010.00	H	51.0	*	8.0	41.7	-39.7	61.0	1118.6	5000.0	-13.0
12010.00	V	50.8	*	8.0	41.7	-39.7	60.8	1100.7	5000.0	-13.1
19216.00	H	38.3	*	2.2	40.4	-28.2	52.7	431.7	5000.0	-21.3
19216.00	V	35.8	*	2.2	40.4	-28.2	50.2	323.4	5000.0	-23.8

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2402MHz
Test Specification : FCC-15.247, RSS-247 Average Radiated Emissions in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Average Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4804.00	H	37.2	*	4.8	36.9	-40.2	0.0	38.6	85.4	500.0	-15.3
4804.00	V	34.9	*	4.8	36.9	-40.2	0.0	36.3	65.6	500.0	-17.6
12010.00	H	35.6	*	8.0	41.7	-39.7	0.0	45.7	191.9	500.0	-8.3
12010.00	V	35.5	*	8.0	41.7	-39.7	0.0	45.6	189.5	500.0	-8.4
19216.00	H	22.8	*	2.2	40.4	-28.2	0.0	37.2	72.3	500.0	-16.8
19216.00	V	20.5	*	2.2	40.4	-28.2	0.0	34.9	55.4	500.0	-19.1

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp + Duty Cycle

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2402MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions not in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Peak Detector with 100kHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
2402.00	H	55.6		3.4	33.6	0.0	92.6	42819.9		
2402.00	V	51.3		3.4	33.6	0.0	88.3	26040.3		
7206.00	H	62.9		6.1	38.1	-40.1	67.0	2243.2	5000.0	-7.0
7206.00	V	53.0		6.1	38.1	-40.1	57.1	718.4	5000.0	-16.9
9608.00	H	62.4		6.8	39.2	-39.6	68.8	2754.3	5000.0	-5.2
9608.00	V	51.3		6.8	39.2	-39.6	57.7	766.5	5000.0	-16.3
14412.00	H	40.8	*	8.7	42.0	-40.0	51.5	375.8	5000.0	-22.5
14412.00	V	40.8	*	8.7	42.0	-40.0	51.5	377.5	5000.0	-22.4
16814.00	H	37.4	*	9.4	45.0	-38.9	53.0	444.6	5000.0	-21.0
16814.00	V	37.1	*	9.4	45.0	-38.9	52.7	431.0	5000.0	-21.3
21618.00	H	27.4	*	2.2	40.6	-28.6	41.6	120.7	5000.0	-32.3
21618.00	V	27.3	*	2.2	40.6	-28.6	41.5	119.3	5000.0	-32.4
24020.00	H	27.2	*	2.2	40.6	-28.8	41.2	115.0	5000.0	-32.8
24020.00	V	26.7	*	2.2	40.6	-28.8	40.7	108.7	5000.0	-33.3

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2440MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions in Restricted Bands
Date : June 24,2019
Test Distance : 3 meters
Notes : Peak Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4880.00	H	50.0	*	4.9	36.7	-40.3	51.3	365.8	5000.0	-22.7
4880.00	V	49.6	*	4.9	36.7	-40.3	50.9	349.7	5000.0	-23.1
7320.00	H	53.8		6.2	38.1	-40.1	58.0	793.8	5000.0	-16.0
7320.00	V	50.7		6.2	38.1	-40.1	54.9	556.2	5000.0	-19.1
12200.00	H	51.4	*	8.0	41.8	-39.6	61.6	1201.4	5000.0	-12.4
12200.00	V	50.2	*	8.0	41.8	-39.6	60.4	1047.6	5000.0	-13.6
19520.00	H	38.6	*	2.2	40.4	-28.2	53.0	448.9	5000.0	-20.9
19520.00	V	36.2	*	2.2	40.4	-28.2	50.6	340.5	5000.0	-23.3

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2440MHz
Test Specification : FCC-15.247, RSS-247 Average Radiated Emissions in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Average Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4880.00	H	34.5	*	4.9	36.7	-40.3	0.0	35.8	61.8	500.0	-18.2
4880.00	V	34.5	*	4.9	36.7	-40.3	0.0	35.8	61.5	500.0	-18.2
7320.00	H	42.97		6.2	38.1	-40.1	0.0	47.2	229.2	500.0	-6.8
7320.00	V	36.6		6.2	38.1	-40.1	0.0	40.8	109.6	500.0	-13.2
12200.00	H	35.8	*	8.0	41.8	-39.6	0.0	45.9	198.0	500.0	-8.0
12200.00	V	35.7	*	8.0	41.8	-39.6	0.0	45.9	196.7	500.0	-8.1
19520.00	H	22.5	*	2.2	40.4	-28.2	0.0	36.9	69.9	500.0	-17.1
19520.00	V	22.4	*	2.2	40.4	-28.2	0.0	36.9	69.6	500.0	-17.1

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp + Duty Cycle

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2440MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions not in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Peak Detector with 100kHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
2440.00	H	53.1		3.5	33.6	0.0	90.1	31937.9		
2440.00	V	50.2		3.5	33.6	0.0	87.2	23004.1		
9760.00	H	59.8		6.9	39.4	-39.6	66.6	2125.8	5000.0	-7.4
9760.00	V	51.8		6.9	39.4	-39.6	58.5	843.4	5000.0	-15.5
14640.00	H	41.2	*	8.8	42.4	-40.2	52.2	408.9	5000.0	-21.7
14640.00	V	40.8	*	8.8	42.4	-40.2	51.9	391.8	5000.0	-22.1
17080.00	H	38.1	*	9.5	45.0	-38.8	53.9	492.9	5000.0	-20.1
17080.00	V	37.9	*	9.5	45.0	-38.8	53.6	481.2	5000.0	-20.3
21960.00	H	27.3	*	2.2	40.6	-28.9	41.3	115.5	5000.0	-32.7
21960.00	V	26.8	*	2.2	40.6	-28.9	40.8	109.1	5000.0	-33.2
24400.00	H	29.3	*	2.2	40.6	-29.1	43.1	142.3	5000.0	-30.9
24400.00	V	29.9	*	2.2	40.6	-29.1	43.6	151.8	5000.0	-30.4

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2480MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions in Restricted Bands
Date : June 24,2019
Test Distance : 3 meters
Notes : Peak Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
4960.00	H	50.2	*	4.9	37.0	-40.3	51.8	389.3	5000.0	-22.2
4960.00	V	50.0	*	4.9	37.0	-40.3	51.5	377.4	5000.0	-22.4
7440.00	H	56.0		6.2	38.2	-40.0	60.3	1034.6	5000.0	-13.7
7440.00	V	53.5		6.2	38.2	-40.0	57.8	778.6	5000.0	-16.2
12400.00	H	51.5		8.0	41.7	-39.5	61.7	1220.3	5000.0	-12.3
12400.00	V	49.5		8.0	41.7	-39.5	59.7	969.3	5000.0	-14.3
19840.00	H	38.0	*	2.2	40.4	-28.4	52.2	407.4	5000.0	-21.8
19840.00	V	37.7	*	2.2	40.4	-28.4	52.0	397.2	5000.0	-22.0
22320.00	H	37.9	*	2.2	40.6	-29.0	51.7	384.3	5000.0	-22.3
22320.00	V	37.3	*	2.2	40.6	-29.0	51.1	358.2	5000.0	-22.9

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2480MHz
Test Specification : FCC-15.247, RSS-247 Average Radiated Emissions in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Average Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
4960.00	H	35.3	*	4.9	37.0	-40.3	0.0	36.9	70.0	500.0	-17.1
4960.00	V	34.7	*	4.9	37.0	-40.3	0.0	36.3	65.4	500.0	-17.7
7440.00	H	47.84		6.2	38.2	-40.0	0.0	52.2	406.7	500.0	-1.8
7440.00	V	44.5		6.2	38.2	-40.0	0.0	48.8	276.2	500.0	-5.2
12400.00	H	38.1		8.0	41.7	-39.5	0.0	48.3	259.4	500.0	-5.7
12400.00	V	34.5		8.0	41.7	-39.5	0.0	44.6	170.8	500.0	-9.3
19840.00	H	22.5		2.2	40.4	-28.4	0.0	36.7	68.4	500.0	-17.3
19840.00	V	22.0		2.2	40.4	-28.4	0.0	36.3	65.1	500.0	-17.7
22320.00	H	22.8		2.2	40.6	-29.0	0.0	36.7	68.0	500.0	-17.3
22320.00	V	22.8		2.2	40.6	-29.0	0.0	36.6	67.4	500.0	-17.4

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp + Duty Cycle

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : BLE Tx 2480MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions not in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Peak Detector with 100kHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
2480.00	H	53.2		3.5	33.6	0.0	90.4	32959.1		
2480.00	V	44.7		3.5	33.6	0.0	81.8	12358.8		
9920.00	H	59.1		7.0	39.6	-39.5	66.1	2021.5	5000.0	-7.9
9920.00	V	51.4		7.0	39.6	-39.5	58.4	831.2	5000.0	-15.6
14880.00	H	40.1	*	8.9	42.7	-40.4	51.4	370.9	5000.0	-22.6
14880.00	V	40.0	*	8.9	42.7	-40.4	51.2	364.1	5000.0	-22.8
17360.00	H	37.3	*	9.7	44.2	-39.1	52.1	401.5	5000.0	-21.9
17360.00	V	36.9	*	9.7	44.2	-39.1	51.7	385.2	5000.0	-22.3
24800.00	H	28.3	*	2.2	40.6	-29.2	41.9	125.1	5000.0	-32.0
24800.00	V	28.2	*	2.2	40.6	-29.2	41.8	123.3	5000.0	-32.2

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 903MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions in Restricted Bands
Date : June 24,2019
Test Distance : 3 meters
Notes : Peak Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
2709.00	H	51.6	*	3.7	33.5	-40.4	48.4	264.1	5000.0	-25.5
2709.00	V	52.1	*	3.7	33.5	-40.4	48.9	278.2	5000.0	-25.1
3612.00	H	49.8	*	4.3	34.2	-40.3	48.0	250.8	5000.0	-26.0
3612.00	V	49.9	*	4.3	34.2	-40.3	48.1	252.9	5000.0	-25.9
4515.00	H	49.9	*	4.7	36.0	-40.1	50.5	333.2	5000.0	-23.5
4515.00	V	50.1	*	4.7	36.0	-40.1	50.7	343.3	5000.0	-23.3
5418.00	H	50.0	*	5.1	36.8	-40.2	51.7	385.4	5000.0	-22.3
5418.00	V	50.9	*	5.1	36.8	-40.2	52.6	426.5	5000.0	-21.4
8127.00	H	51.6	*	6.5	38.4	-40.0	56.6	673.3	5000.0	-17.4
8127.00	V	51.3	*	6.5	38.4	-40.0	56.2	645.2	5000.0	-17.8
9030.00	H	50.6	*	6.5	38.9	-39.7	56.3	652.6	5000.0	-17.7
9030.00	V	51.4	*	6.5	38.9	-39.7	57.0	709.8	5000.0	-17.0

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 903MHz
Test Specification : FCC-15.247, RSS-247 Average Radiated Emissions in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Average Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
2709.00	H	36.28	*	3.7	33.5	-40.4	11.0	44.0	159.3	500.0	-9.9
2709.00	V	36.3	*	3.7	33.5	-40.4	11.0	44.1	159.5	500.0	-9.9
3612.00	H	34.1	*	4.3	34.2	-40.3	11.0	43.2	144.2	500.0	-10.8
3612.00	V	34.1	*	4.3	34.2	-40.3	11.0	43.2	144.7	500.0	-10.8
4515.00	H	34.5	*	4.7	36.0	-40.1	11.0	46.0	199.4	500.0	-8.0
4515.00	V	34.6	*	4.7	36.0	-40.1	11.0	46.1	202.2	500.0	-7.9
5418.00	H	34.4	*	5.1	36.8	-40.2	11.0	47.0	224.1	500.0	-7.0
5418.00	V	34.4	*	5.1	36.8	-40.2	11.0	47.0	224.9	500.0	-6.9
8127.00	H	35.8	*	6.5	38.4	-40.0	11.0	51.7	383.5	500.0	-2.3
8127.00	V	35.7	*	6.5	38.4	-40.0	11.0	51.6	382.1	500.0	-2.3
9030.00	H	35.8	*	6.5	38.9	-39.7	11.0	52.4	418.9	500.0	-1.5
9030.00	V	35.9	*	6.5	38.9	-39.7	11.0	52.5	421.4	500.0	-1.5

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp + Duty Cycle

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 903MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions not in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Peak Detector with 100kHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
903.00	H	86.7		2.0	26.3	0.0	115.0	563595.7		
903.00	V	80.3		2.0	26.3	0.0	108.6	269443.5		
1806.00	H	40.5	*	2.9	30.9	-40.9	33.5	47.1	56359.6	-61.6
1806.00	V	40.9	*	2.9	30.9	-40.9	33.8	49.1	56359.6	-61.2
6321.00	H	38.9	*	5.6	38.2	-40.2	42.6	134.8	56359.6	-52.4
6321.00	V	38.9	*	5.6	38.2	-40.2	42.7	135.7	56359.6	-52.4
7224.00	H	38.3	*	6.1	38.1	-40.1	42.5	133.2	56359.6	-52.5
7224.00	V	38.4	*	6.1	38.1	-40.1	42.6	135.0	56359.6	-52.4

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 909.4MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions in Restricted Bands
Date : June 24,2019
Test Distance : 3 meters
Notes : Peak Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
2728.20	H	51.7	*	3.7	33.6	-40.4	48.6	269.1	5000.0	-25.4
2728.20	V	52.6	*	3.7	33.6	-40.4	49.6	300.6	5000.0	-24.4
3637.60	H	49.7	*	4.3	34.5	-40.3	48.2	256.2	5000.0	-25.8
3637.60	V	50.1	*	4.3	34.5	-40.3	48.6	267.6	5000.0	-25.4
4547.00	H	50.2	*	4.7	36.1	-40.1	50.9	351.3	5000.0	-23.1
4547.00	V	50.5	*	4.7	36.1	-40.1	51.2	363.6	5000.0	-22.8
5456.40	H	49.6	*	5.2	36.8	-40.2	51.4	369.5	5000.0	-22.6
5456.40	V	49.5	*	5.2	36.8	-40.2	51.3	365.6	5000.0	-22.7
7275.20	H	49.3	*	6.1	38.1	-40.1	53.4	469.8	5000.0	-20.5
7275.20	V	49.5	*	6.1	38.1	-40.1	53.7	485.2	5000.0	-20.3
8184.60	H	50.9	*	6.5	38.4	-39.9	55.9	620.2	5000.0	-18.1
8184.60	V	51.3	*	6.5	38.4	-39.9	56.3	653.2	5000.0	-17.7
9094.00	H	51.8	*	6.5	38.9	-39.7	57.5	746.8	5000.0	-16.5
9094.00	V	52.1	*	6.5	38.9	-39.7	57.7	771.3	5000.0	-16.2

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 909.4MHz
Test Specification : FCC-15.247, RSS-247 Average Radiated Emissions in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Average Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
2728.20	H	36.14	*	3.7	33.6	-40.4	11.0	44.0	159.2	500.0	-9.9
2728.20	V	36.2	*	3.7	33.6	-40.4	11.0	44.1	159.6	500.0	-9.9
3637.60	H	34.1	*	4.3	34.5	-40.3	11.0	43.6	150.9	500.0	-10.4
3637.60	V	34.3	*	4.3	34.5	-40.3	11.0	43.7	153.1	500.0	-10.3
4547.00	H	34.7	*	4.7	36.1	-40.1	11.0	46.3	207.6	500.0	-7.6
4547.00	V	34.7	*	4.7	36.1	-40.1	11.0	46.4	208.3	500.0	-7.6
5456.40	H	34.0	*	5.2	36.8	-40.2	11.0	46.7	217.3	500.0	-7.2
5456.40	V	34.1	*	5.2	36.8	-40.2	11.0	46.8	217.6	500.0	-7.2
7275.20	H	33.7	*	6.1	38.1	-40.1	11.0	48.9	277.6	500.0	-5.1
7275.20	V	33.8	*	6.1	38.1	-40.1	11.0	48.9	278.9	500.0	-5.1
8184.60	H	36.0	*	6.5	38.4	-39.9	11.0	52.0	397.7	500.0	-2.0
8184.60	V	36.1	*	6.5	38.4	-39.9	11.0	52.1	400.9	500.0	-1.9
9094.00	H	36.0	*	6.5	38.9	-39.7	11.0	52.7	431.3	500.0	-1.3
9094.00	V	36.1	*	6.5	38.9	-39.7	11.0	52.8	435.7	500.0	-1.2

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp + Duty Cycle

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 909.4MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions not in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Peak Detector with 100kHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
909.40	H	85.3		2.0	26.3	0.0	113.6	478374.5		
909.40	V	78.7		2.0	26.3	0.0	107.0	225044.3		
1818.80	H	40.8		2.9	31.0	-40.9	33.9	49.5	47837.5	-59.7
1818.80	V	41.4		2.9	31.0	-40.9	34.5	53.1	47837.5	-59.1
6365.80	H	39.3	*	5.7	38.1	-40.1	42.9	139.6	47837.5	-50.7
6365.80	V	39.0	*	5.7	38.1	-40.1	42.6	135.6	47837.5	-51.0

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 914.2MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions in Restricted Bands
Date : June 24,2019
Test Distance : 3 meters
Notes : Peak Detector with 1MHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
2742.60	H	52.4	*	3.7	33.7	-40.4	49.4	295.0	5000.0	-24.6
2742.60	V	51.5	*	3.7	33.7	-40.4	48.5	267.2	5000.0	-25.4
3656.80	H	50.2	*	4.3	34.6	-40.3	48.8	275.6	5000.0	-25.2
3656.80	V	49.8	*	4.3	34.6	-40.3	48.4	262.3	5000.0	-25.6
4571.00	H	50.5	*	4.7	36.2	-40.1	51.3	366.0	5000.0	-22.7
4571.00	V	50.9	*	4.7	36.2	-40.1	51.7	383.7	5000.0	-22.3
7313.60	H	49.5	*	6.2	38.1	-40.1	53.7	486.7	5000.0	-20.2
7313.60	V	49.7	*	6.2	38.1	-40.1	54.0	498.6	5000.0	-20.0
8227.80	H	52.0	*	6.5	38.5	-39.9	57.1	715.7	5000.0	-16.9
8227.80	V	51.9	*	6.5	38.5	-39.9	57.0	707.5	5000.0	-17.0
9142.00	H	50.7	*	6.6	38.9	-39.7	56.4	660.5	5000.0	-17.6
9142.00	V	50.7	*	6.6	38.9	-39.7	56.5	665.1	5000.0	-17.5

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 914.2MHz
Test Specification : FCC-15.247, RSS-247 Average Radiated Emissions in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Average Detector with 1MHz Resolution Bandwidth

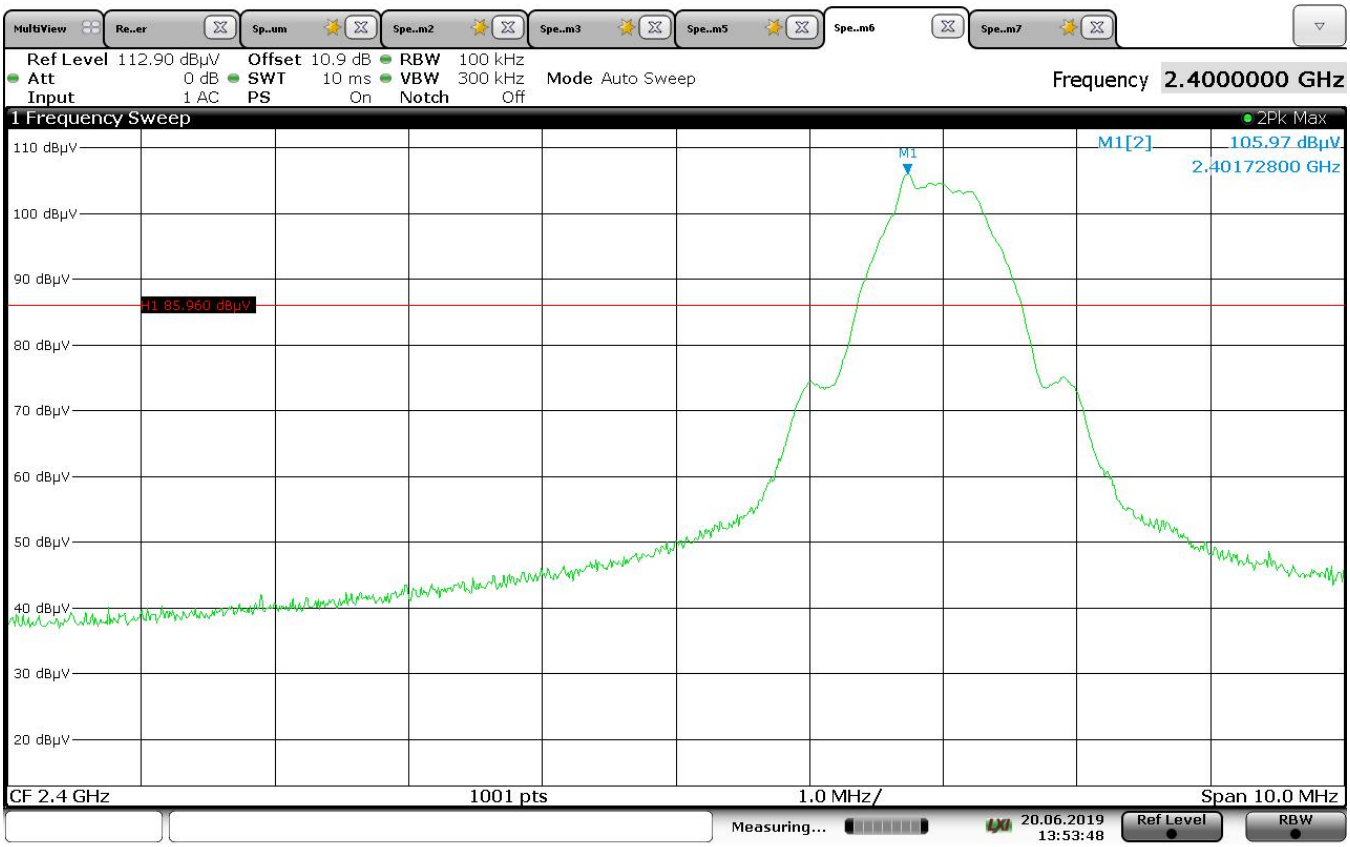
Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
2742.60	H	36.30	*	3.7	33.7	-40.4	11.0	44.3	164.0	500.0	-9.7
2742.60	V	36.3	*	3.7	33.7	-40.4	11.0	44.2	163.1	500.0	-9.7
3656.80	H	34.3	*	4.3	34.6	-40.3	11.0	43.8	155.4	500.0	-10.2
3656.80	V	34.2	*	4.3	34.6	-40.3	11.0	43.8	154.3	500.0	-10.2
4571.00	H	34.7	*	4.7	36.2	-40.1	11.0	46.4	209.9	500.0	-7.5
4571.00	V	34.7	*	4.7	36.2	-40.1	11.0	46.5	210.4	500.0	-7.5
7313.60	H	34.0	*	6.2	38.1	-40.1	11.0	49.2	288.6	500.0	-4.8
7313.60	V	34.0	*	6.2	38.1	-40.1	11.0	49.2	289.2	500.0	-4.8
8227.80	H	36.0	*	6.5	38.5	-39.9	11.0	52.0	400.2	500.0	-1.9
8227.80	V	35.9	*	6.5	38.5	-39.9	11.0	51.9	395.6	500.0	-2.0
9142.00	H	35.9	*	6.6	38.9	-39.7	11.0	52.6	426.0	500.0	-1.4
9142.00	V	36.0	*	6.6	38.9	-39.7	11.0	52.7	429.9	500.0	-1.3

Total (dBuV/m) = Meter Reading + CBL FAC + Ant Fac + Pre Amp + Duty Cycle

Manufacturer : Creative Electronics and Software, Inc.
Test Item : Liquid Level Sensor
Model No. : 100-00
Serial No. : 0009018523
Mode : LoRA Tx 914.2MHz
Test Specification : FCC-15.247, RSS-247 Peak Radiated Emissions not in Restricted Bands
Date : June 24, 2019
Test Distance : 3 meters
Notes : Peak Detector with 100kHz Resolution Bandwidth

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
914.20	H	85.3		2.1	26.3	0.0	113.6	480201.3		
914.20	V	79.2		2.1	26.3	0.0	107.5	237368.6		
1828.40	H	39.9	*	2.9	31.1	-40.8	33.1	45.3	48020.1	-60.5
1828.40	V	40.4	*	2.9	31.1	-40.8	33.6	48.1	48020.1	-60.0
5485.20	H	39.6	*	5.2	36.8	-40.2	41.3	116.4	48020.1	-52.3
5485.20	V	39.0	*	5.2	36.8	-40.2	40.7	108.2	48020.1	-52.9
6399.40	H	39.1	*	5.7	38.0	-40.1	42.6	135.0	48020.1	-51.0
6399.40	V	38.5	*	5.7	38.0	-40.1	42.0	126.0	48020.1	-51.6

Band Edge Compliance



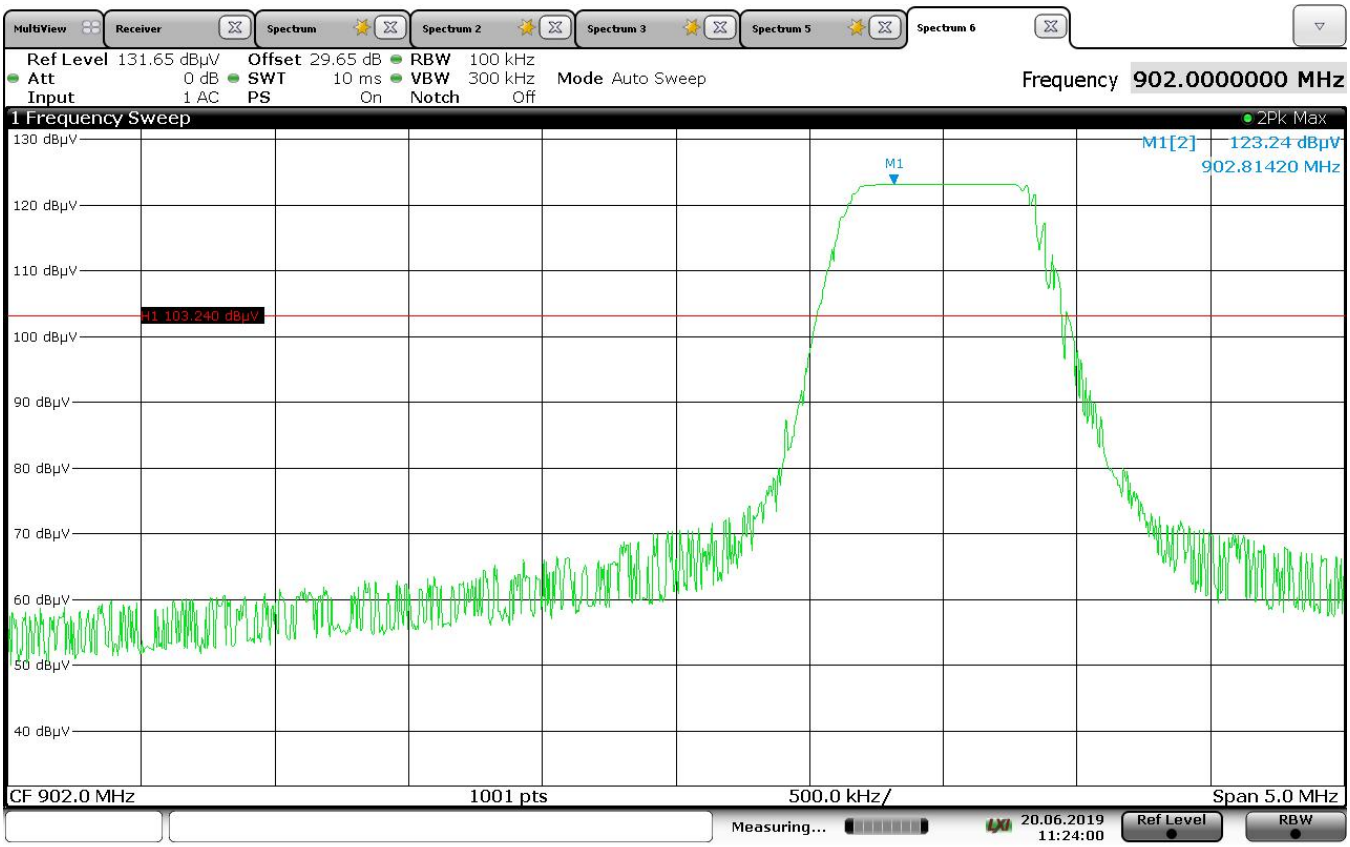
13:53:49 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Low Band Edge Compliance**
Mode	: BLE Tx 2402MHz
Parameters	:
Date	: June 21-25,2019
Notes	:

Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Peak Total dBuV/m at 3m	Peak Total uV/m at 3 m	Peak Limit uV/m at 3 m	Margin (dB)
2483.50	H	22.3	*	3.5	33.6	0.0	59.5	942.1	5000.0	-14.5
2483.50	V	22.1	*	3.5	33.6	0.0	59.3	917.5	5000.0	-14.7

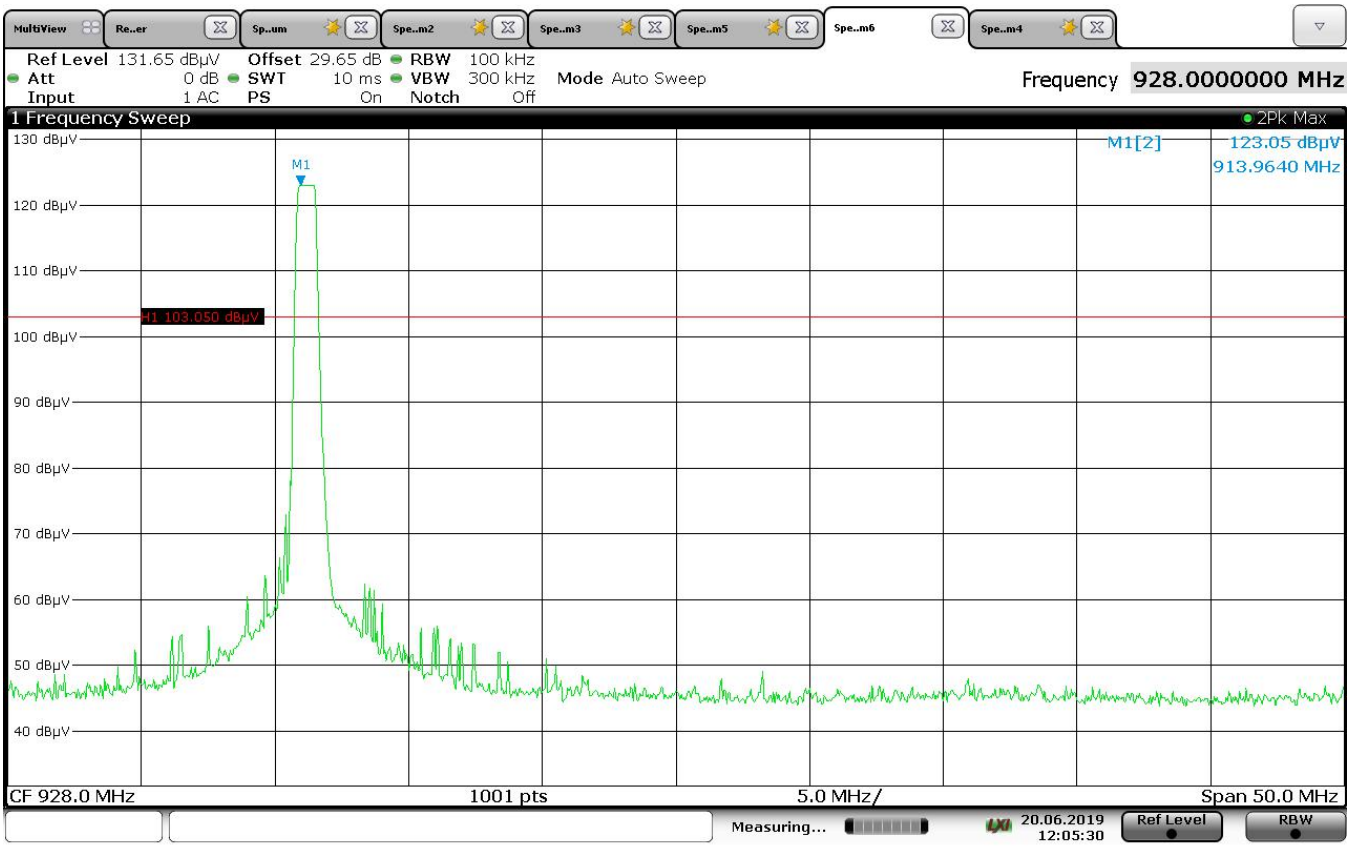
Freq. MHz	Ant Pol	Meter Reading (dBuV)	Ambient	CBL Fac (dB)	Ant Fac (dB/m)	Pre Amp (dB)	Duty Cycle (dB)	Average Total dBuV/m at 3m	Average Total uV/m at 3 m	Average Limit uV/m at 3 m	Margin (dB)
2483.50	H	8.2	*	3.5	33.6	0.0	0.0	45.3	184.3	500.0	-8.7
2483.50	V	8.1	*	3.5	33.6	0.0	0.0	45.3	183.5	500.0	-8.7

Manufacturer : Creative Electronics and Software, Inc.
Model Number : 100-00
Serial Number : 0009018523
Test : **High Band Edge Compliance**
Mode : BLE Tx 2480MHz
Parameters :
Date : June 21-25,2019
Notes :



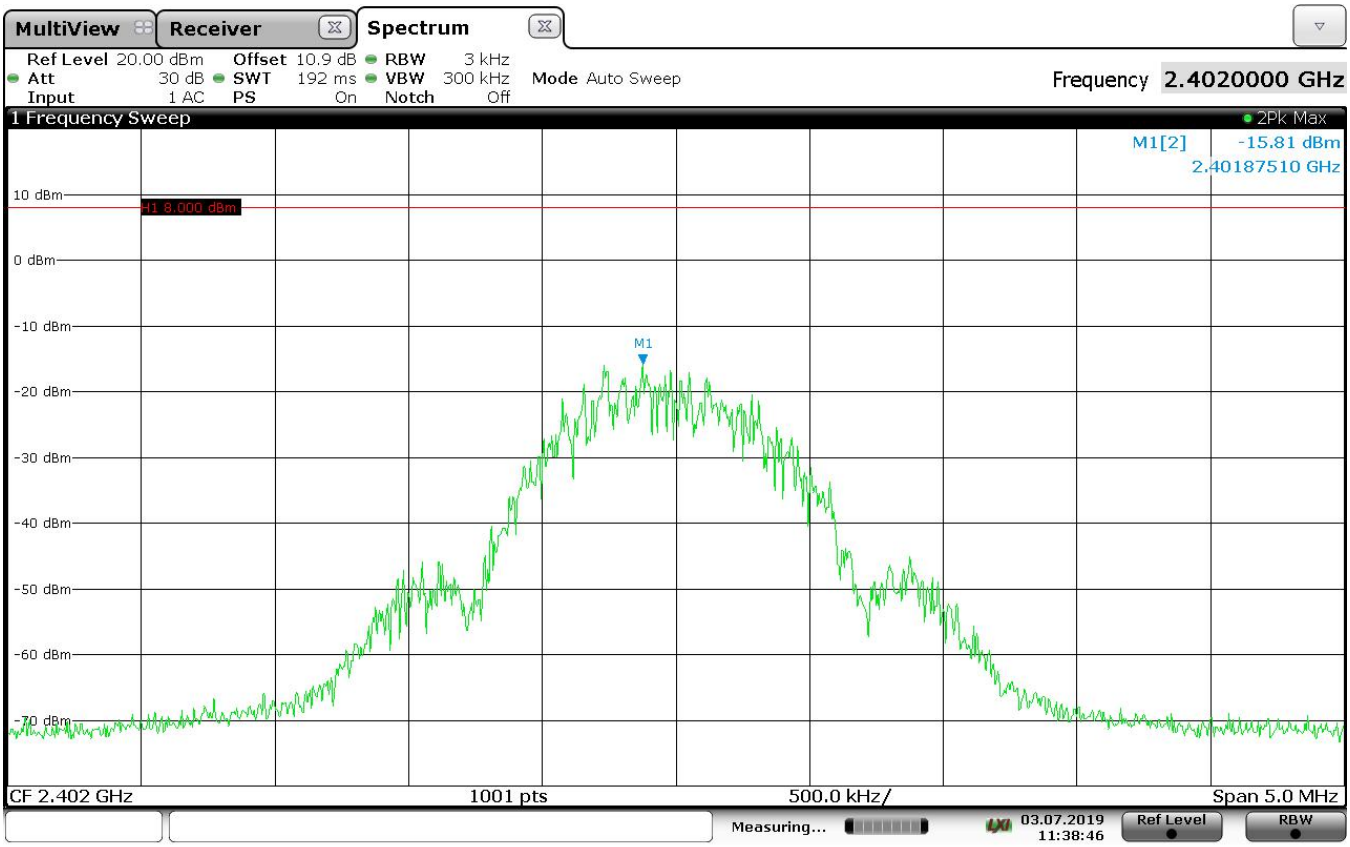
11:24:01 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Low Band Edge Compliance**
Mode	: LoRA Tx 903MHz
Parameters	:
Date	: June 21-25,2019
Notes	: SF8



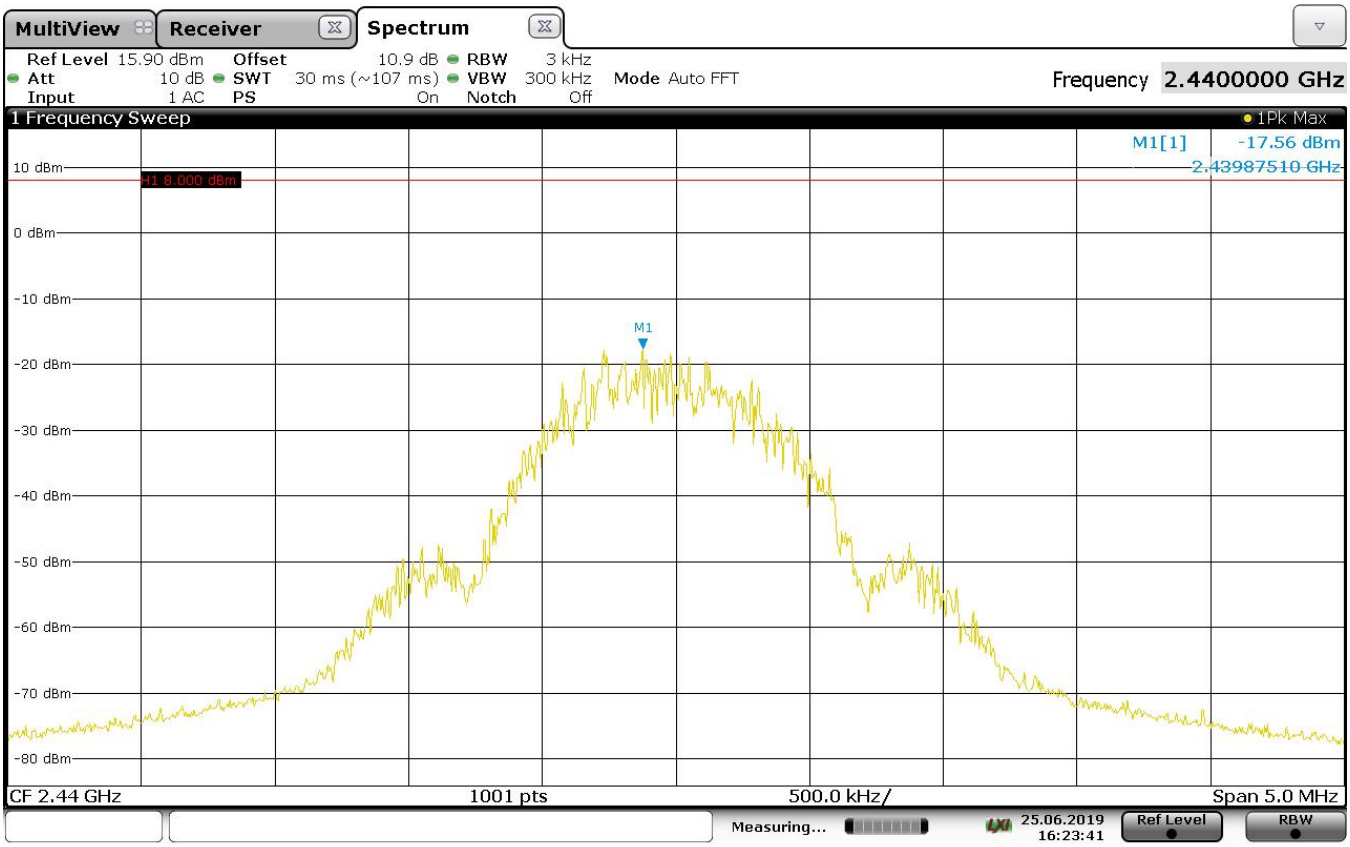
12:05:31 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Low Band Edge Compliance**
Mode	: LoRA Tx 914.2MHz
Parameters	:
Date	: June 21-25,2019
Notes	: SF8



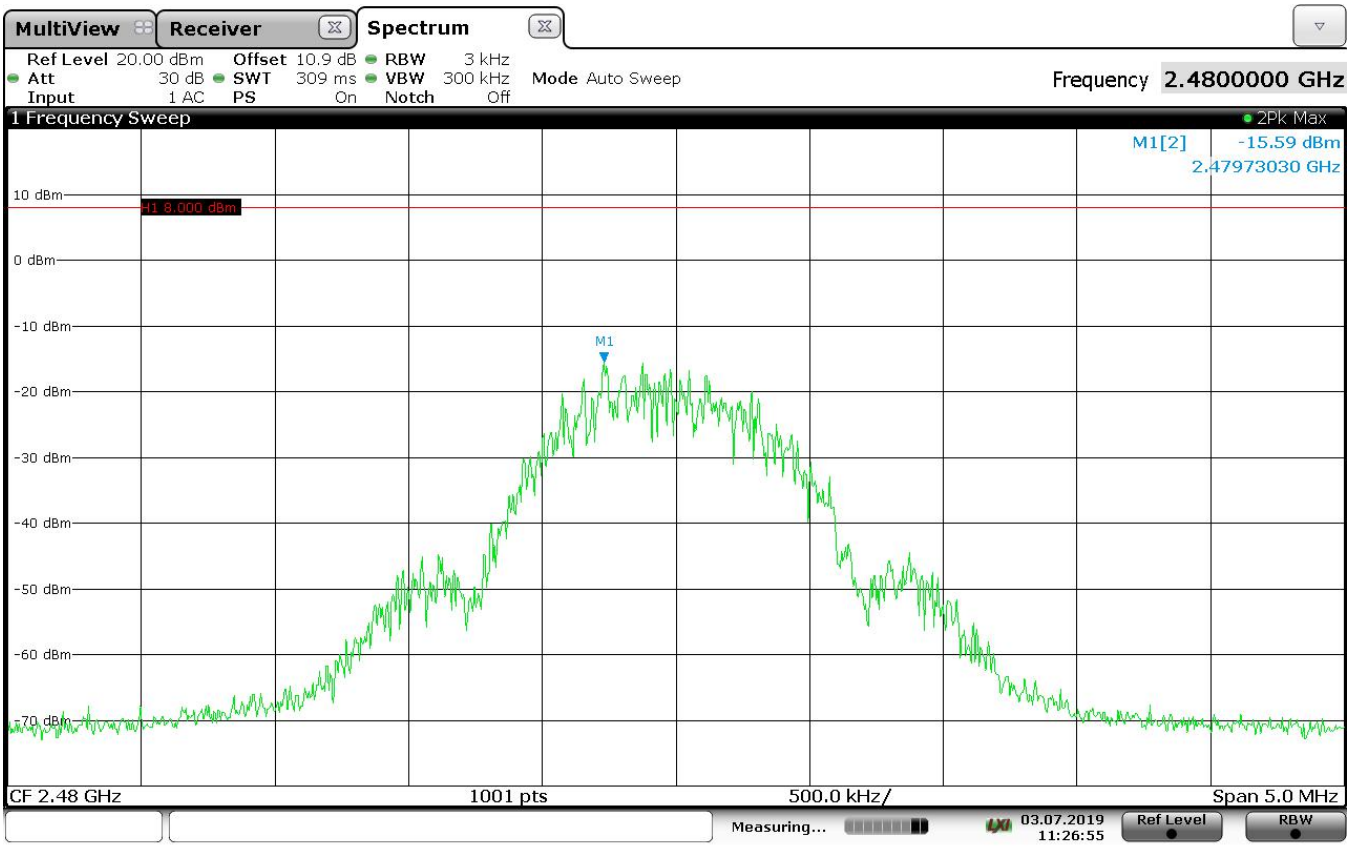
11:38:47 03.07.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Power Spectral Density**
Mode	: BLE Tx 2402MHz
Parameters	: PSD = -15.81dBm
Date	: July 3,2019
Notes	:



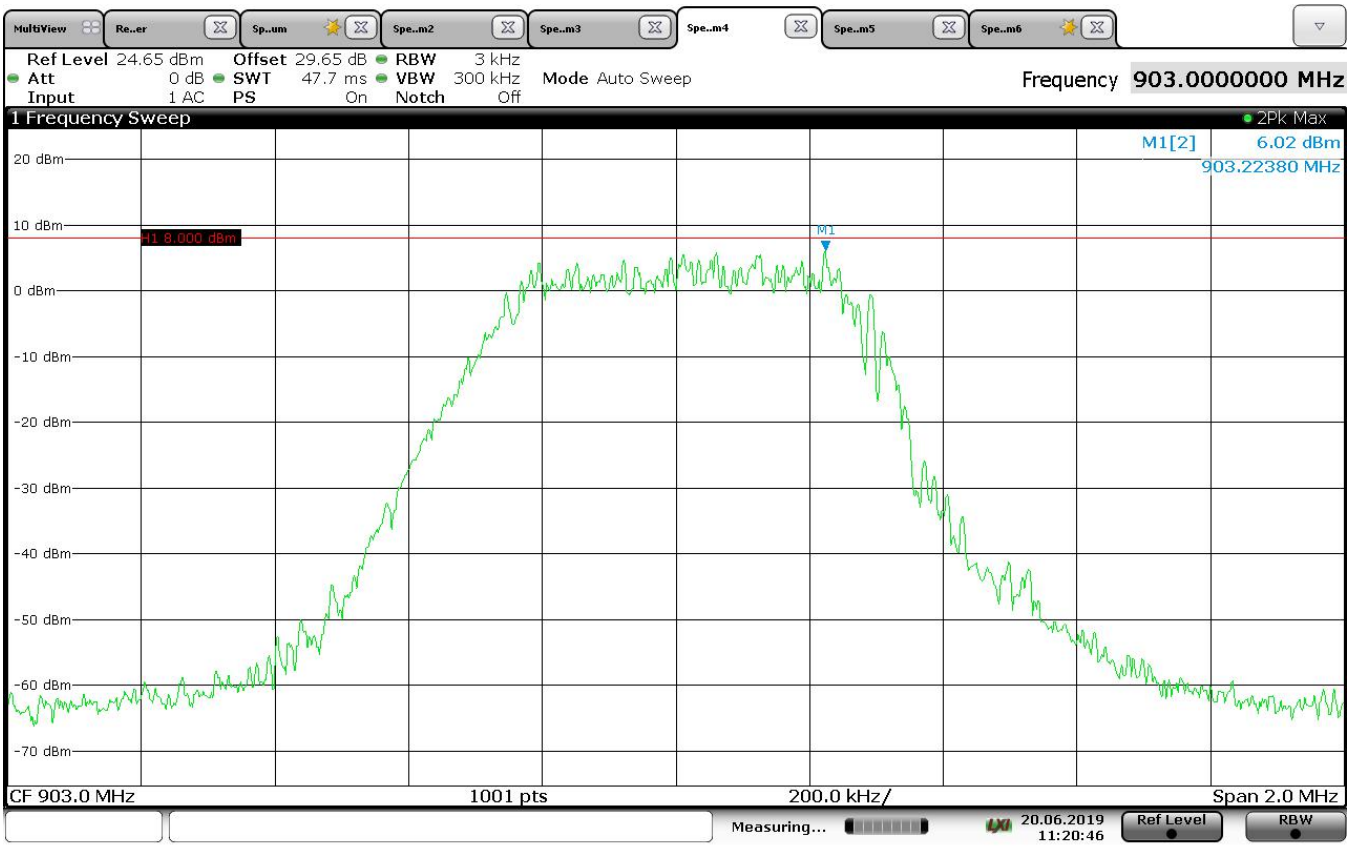
16:23:42 25.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Power Spectral Density**
Mode	: BLE Tx 2440MHz
Parameters	: PSD = -17.56dBm
Date	: June 21-25,2019
Notes	: SF8



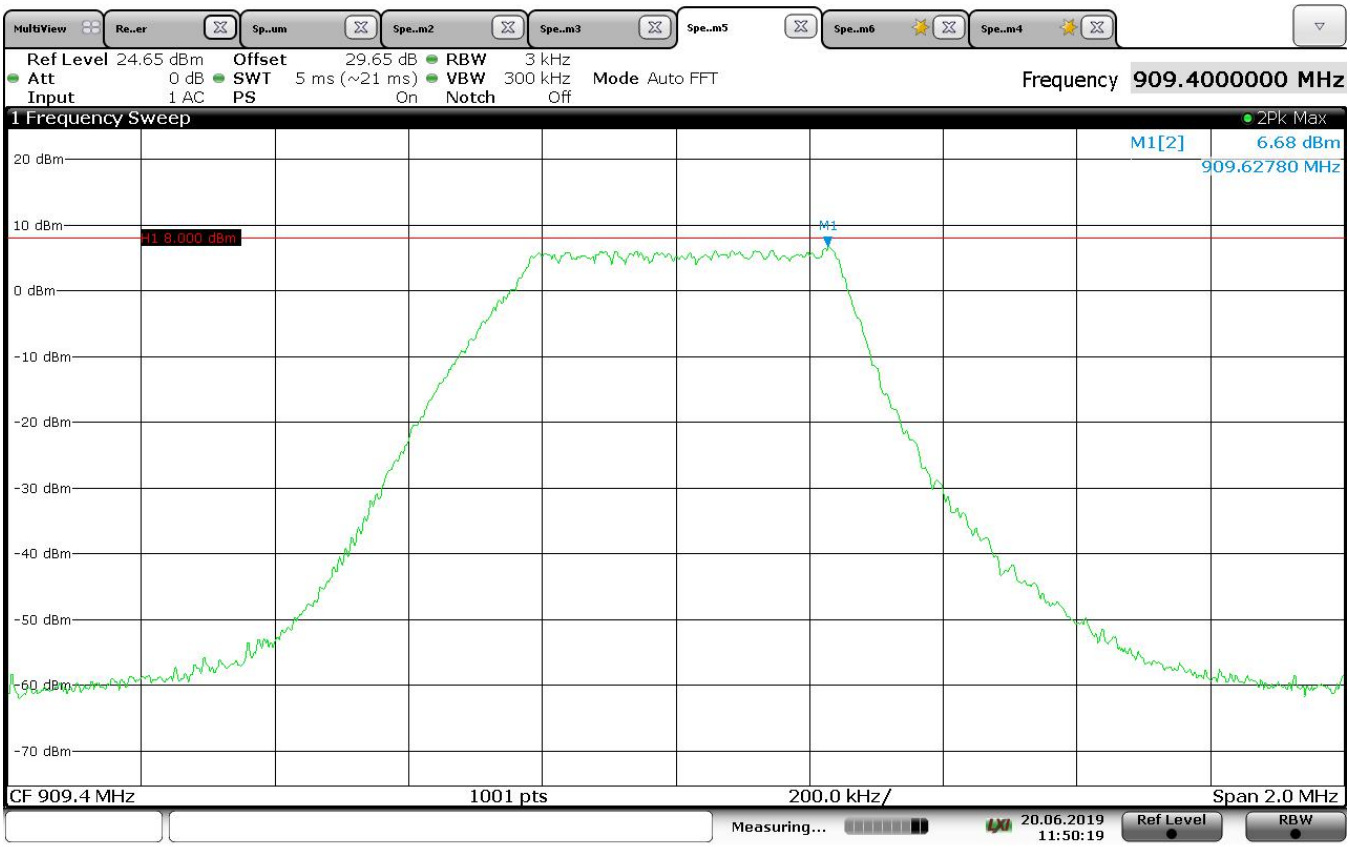
11:26:56 03.07.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Power Spectral Density**
Mode	: BLE Tx 2480MHz
Parameters	: PSD = -15.59dBm
Date	: June 21-25,2019
Notes	: SF8



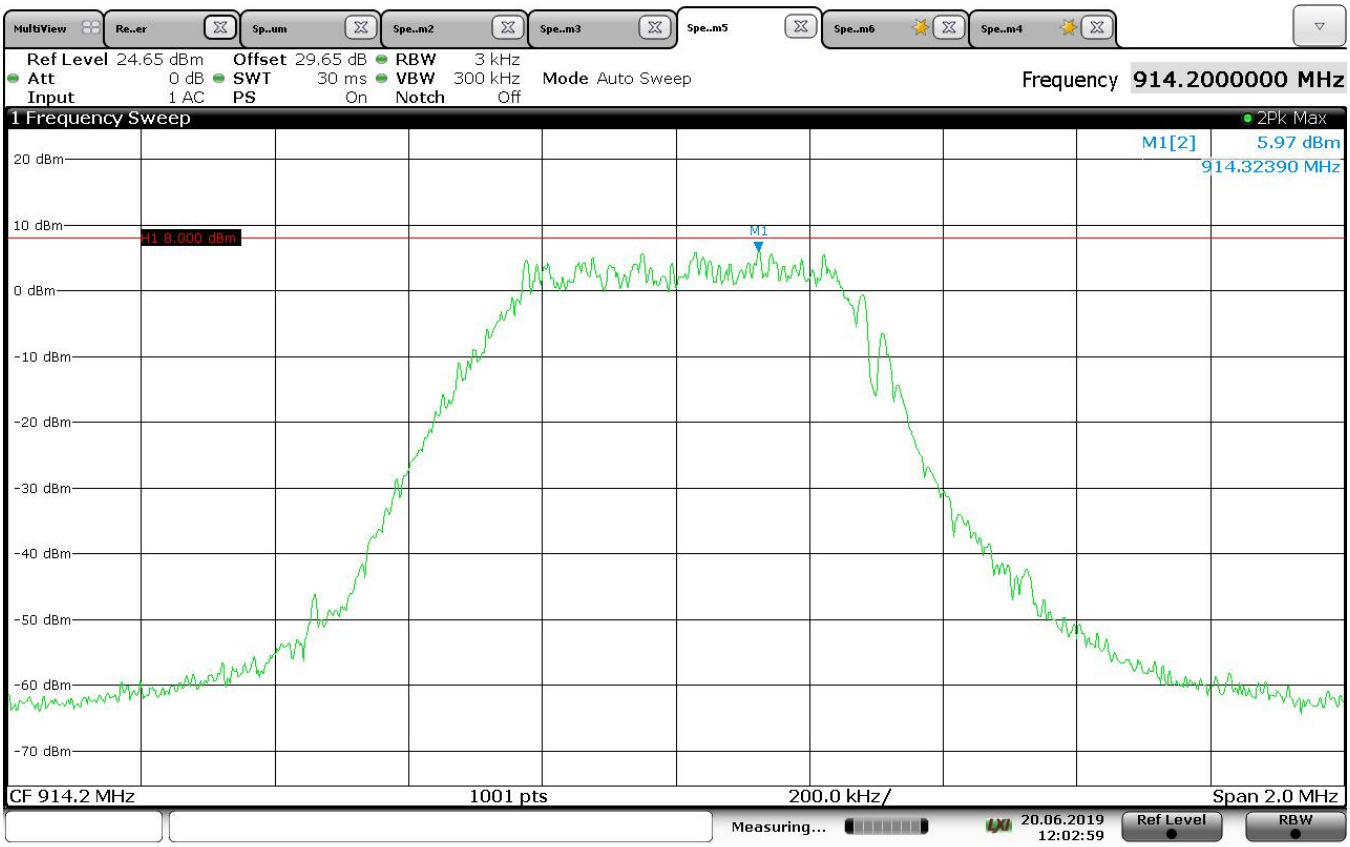
11:20:47 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Power Spectral Density**
Mode	: LoRA Tx 903MHz
Parameters	: PSD = 6.02dBm
Date	: June 21-25,2019
Notes	: SF8



11:50:19 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Power Spectral Density**
Mode	: LoRA Tx 909.4MHz
Parameters	: PSD = 6.68
Date	: June 21-25,2019
Notes	: SF8



12:03:00 20.06.2019

Manufacturer	: Creative Electronics and Software, Inc.
Model Number	: 100-00
Serial Number	: 0009018523
Test	: **Power Spectral Density**
Mode	: LoRA Tx 914.2MHz
Parameters	: PSD = 5.97
Date	: June 21-25,2019
Notes	: SF8