



**Wojewódzki Inspektorat Ochrony Środowiska w Katowicach**  
**Pracownia Analiz Manualnych, Instrumentalnych, Hydrobiologicznych**  
**oraz Pomiarów Terenowych i Pobierania Próbek**



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AB 480

**SPRAWOZDANIE Z BADAŃ NR 258/2017**

Nr sprawy LC.7071.61.2016  
Porozumienie Nr: 01/2012  
Klient: **WIOŚ w Katowicach, Wydział Monitoringu Środowiska**

**Pomiary monitoringowe poziomów pól elektromagnetycznych  
w przedziale częstotliwości  
100 kHz – 3 GHz  
(składowej elektrycznej E)  
w środowisku,  
wykonane dnia 26 lipca 2016 r.  
na terenie zabudowy mieszkaniowej,  
w  
GLIWICACH  
- Dzielnica Brzezinka,  
województwo śląskie.**

Wyniki badań dotyczą tylko badanego obiektu.

Sprawozdanie z badań nie może być powielone inaczej niż w całości bez pisemnej zgody Kierownika Pracowni.

Laboratorium jest akredytowane przez Polskie Centrum Akredytacji i posiada certyfikat nr AB 480.

Wykonujący badania:

1. Ireneusz Picz – Specjalista	2. Agnieszka Turek – Specjalista
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Osoba autoryzująca sprawozdanie:

Pieczęć i podpis

Zatwierdził:

Pieczęć i podpis

Częstochowa, 07 lutego 2017 r.

## 1. PODSTAWA BADAŃ

Podstawę realizacji przedmiotowych badań monitoringowych poziomów pól elektromagnetycznych w przedziale częstotliwości 100 kHz – 3 GHz w środowisku stanowi Rozporządzenie Ministra Środowiska z dnia 12 listopada 2007 r. w sprawie zakresu i sposobu prowadzenia okresowych badań poziomów pól elektromagnetycznych w środowisku (Dz. U. Nr 221, Poz. 1645) oraz Porozumienie nr 01/2012 Wydziału Monitoringu Środowiska WIOŚ w Katowicach z Laboratorium WIOŚ w Katowicach, Pracownią Analiz w Częstochowie, 42-200 Częstochowa, ul. Rząsawska 24/28, w przedmiocie realizacji ww. badań.

## 2. CEL BADAŃ

Celem badań jest określenie poziomów pól elektromagnetycznych w przedziale częstotliwości 100 kHz – 3 GHz (składowej elektrycznej E) w środowisku, w miejscach dostępnych dla ludności, na terenie obszaru zabudowy mieszkaniowej, położonej w Gliwicach – Dzielnica Brzezinka, w rozumieniu wytycznych Rozporządzenia Ministra Środowiska z dnia 12 listopada 2007 r. (Dz. U. Nr 221, Poz. 1645), w trybie realizacji zadania ustawowego organu Inspekcji Ochrony Środowiska pn. Państwowy Monitoring Środowiska (PMŚ), w myśl art. 123 Ustawy z dnia 27 kwietnia 2001 r. Prawo Ochrony Środowiska (tekst jednolity Dz. U. 2013, Poz. 1232, z późn. zm.) oraz art. 23 ust. 3 pkt 1 Ustawy z dnia 20 lipca 1991 r. o Inspekcji Ochrony Środowiska (Dz. U. 2013, Poz. 686, z późn. zm.), w obszarze województwa śląskiego, 2016 rok.

## 3. ORGANIZACJA BADAŃ

Program Państwowego Monitoringu Środowiska na lata 2016 - 2020, aut. Departamentu Monitoringu i Informacji o Środowisku Głównego Inspektoratu Ochrony Środowiska, wyd. GIOŚ w Warszawie, Warszawa, 2015;

Podsystem Monitoringu Pól Elektromagnetycznych w środowisku, w myśl art. 123 Ustawy z dnia 27 kwietnia 2001 r. Prawo Ochrony Środowiska (tekst jednolity Dz. U. 2013, Poz. 1232, z późn. zm.) oraz art. 23 ust. 3 pkt 1 Ustawy z dnia 20 lipca 1991 r. o Inspekcji Ochrony Środowiska (Dz. U. 2013, Poz. 686, z późn. zm.) w latach 2016 - 2020, w obszarze województwa śląskiego.

## 4. TEREN BADAŃ

Punkt pomiarowy P-2 poziomów pól elektromagnetycznych w środowisku zlokalizowano w granicach administracyjnych miasta Gliwice - Dzielnica Brzezinka, na wysokości h: 2 m n.p.t. przy ul. Łódzkiej. W sąsiedztwie punktu pomiarowego zagospodarowanie terenu stanowi zabudowa mieszkaniowa jednorodzinna oraz tereny niezagospodarowane. Najbliższy budynek mieszkalny przy ul. Żywieckiej, znajduje się w kierunku zachodnim w odległości 25 m od punktu pomiarowego. W dalszej odległości od punktu pomiarowego P-2 w kierunku wschodnim, zlokalizowane są tereny przemysłowe Katowickiej Specjalnej Strefy Ekonomicznej.

W promieniu  $d \leq 300$  m od punktu pomiarowego nie znajdują się żadne instalacje radiokomunikacyjne, radiolokacyjne, radionawigacyjne, emitujące pola elektromagnetyczne do środowiska.

Klasyfikacja rodzaju terenu wg wytycznych przedmiotowego Rozporządzenia:

*Dzielnica (osiedle) miasta o liczbie mieszkańców powyżej 50 tys.*

Nomenklatura jednostki terytorialnej (NTS):

*Gliwice 5.2.24.47.66.01.1*

Formularz nr 4/PB-T/22

Współrzędne geogr. (GPS) punktu pomiarowego poziomów pól elektromagnetycznych w środowisku:

$N 50^{\circ} 19' 06,5''$   
 $E 18^{\circ} 35' 32,0''$ ;

Wysokość lokalizacji punktu pomiarowego:

$h: 2,0 [m]$  n.p.t.;

Odległości punktu pomiarowego od elewacji najbliższych obiektów mieszkalnych terenu zabudowy mieszkaniowej - jednorodzinnej, zlokalizowanych wzdłuż realizowanego przekroju pomiarowego poziomów pól w środowisku:

$l = 25 [m]$  - od elewacji budynku mieszkalnego jednorodzinnego przy ul. Żywieckiej.

Lokalizacja punktu pomiarowego – pas zieleni na wschód od pierwszej linii zabudowy mieszkaniowej przy ul. Żywieckiej i Radomskiej.

## 5. METODYKA BADAŃ

Rozporządzenie Ministra Środowiska z dnia 12 listopada 2007 r. w sprawie zakresu i sposobu prowadzenia okresowych badań poziomów pól elektromagnetycznych w środowisku (Dz. U. Nr 221, Poz. 1645).

## 6. WYPOSAŻENIE POMIAROWE

Pomiarów poziomów pól elektromagnetycznych częstotliwości 100 kHz - 3 GHz (składowej *elektrycznej*) w środowisku dokonano przy użyciu szerokopasmowego miernika natężenia pola elektromagnetycznego Narda Broadband Field Meter NBM-550, prod. Narda Safety Test Solutions GmbH, Niemcy;

Pomiarów oraz analizy widma promieniowania elektromagnetycznego w środowisku dokonano przy pomocy Selektynnego Analizatora Pola Elektromagnetycznego SRM - 3006, wraz z sondą pola, oprzyrządowaniem oraz oprogramowaniem, wg wzoru, prod. Narda Safety Test Solutions GmbH, Niemcy;

Pomiarów warunków meteorologicznych dokonano przy pomocy automatycznej stacji pogodowej KESTREL 5500, Nielsen - Kellerman Co., USA;

Szczegółowe dane identyfikacyjne przyrządów przedstawiono w tabeli poniżej:

**Tabela 1**

<p style="text-align: center;"><b>Pomiary poziomów pól elektromagnetycznych częstotliwości 100 kHz – 3 GHz (składowej <i>elektrycznej</i>) w środowisku</b></p>	<p style="text-align: center;"><b>Pomiary warunków meteorologicznych w środowisku</b></p>
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Przyrząd pomiarowy	Typ: Broadband Field Meter NBM-550 P/N: 2401/01 S/N: B-0507 Producent: Narda Safety Test Solutions GmbH, Niemcy;	Przyrząd pomiarowy	Typ: KESTREL 5500 s. no.: 2131640 Producent: Nielsen - Kellerman Co., USA
Sonda pomiarowa	Typ: EF0391, <i>E-Field</i> P/N: 2402/01 S/N: A-0636 Producent: j.w. Zakres: 100 kHz – 3 GHz Charakterystyka częstotliwościowa czułości: +/- 1 dB (1MHz – 1 GHz) +/- 1,25dB (1GHz – 2,45 GHz)		
Przyrząd Pomiarowy:	Rodzaj/Typ: Selective Radiation Meter Typ: SRM - 3006 P/N: 3006/01 S/N: H-0007 Producent: Narda Safety Test Solutions GmbH, Germany;		
Sonda Pomiarowa:	Typ: Three-Axes-Antenna E-Field P/N: 23501/03 S/N: K-0560 Producent: j.w.		
RF - cable:	Zakres: 27 MHz – 3 GHz		
Measurement principle:	Typ: RF - cable SRM Zakres: 9 kHz - 6 GHz Impedancja: N 50 Ohm Długość, L: 1,5 m P/N: 3602/01 S/N: AA-0583  <i>Spectrum Analysis Mode</i>		
Data i czasokres pomiarów	26-07-2016 r. 10:01:04 – 12:01:04	Wyniki pomiarów:	
		T [°C]	22,5 – 25,2
		RH [ % ]	68,0 – 74,5
Częstotliwość próbkowania	f: 10 sec.	UWAGI: Pogodnie; Brak opadów atmosferycznych	

Gdzie:

- T – temperatura powietrza w [°C];  
 RH – wilgotność względna powietrza w [ % ].

Zastosowany przyrząd pomiarowy poziomów pól elektromagnetycznych oraz sonda pomiarowa pól elektromagnetycznych posiadają stosowne świadectwa wzorcowania, tj.:

- Narda Broadband Field Meter NBM-550, P/N 2401/01, S/N B-0507, wraz z sondami pola - Probe EF0391, *E-Field*, P/N 2402/01, S/N A-0636:
  - Świadectwo Wzorcowania nr: LWiMP/W/2438/15 z dnia 15 października 2015 r., wydane przez Laboratorium Wzorców i Metrologii Pola Elektromagnetycznego (LWiMP) Instytutu Telekomunikacji, Teleinformatyki i Akustyki, Politechniki Wrocławskiej (AP 078);
- Narda Selective Radiation Meter, Basic Unit, SRM-3006, P/N 3006/01, S/N H-0007:
  - *Calibration Certificate No.* 300061-H0007-20141111-249  
Narda STS GmbH, D-72793 Pfullingen, Germany, 2014-11-11;
- Antenna, Three-Axis, E-Filed, 27 MHz to 3 GHz, P/N 3501/03, S/N K-0560:
  - *Calibration Certificate No.* 350103-K0560-141111  
Narda STS GmbH, D-72793 Pfullingen, Germany, 2014-11-11;
- Automatyczna stacja pogodowa KESTREL 5500, Nielsen - Kellerman Co., USA, s. no. 2131640:  
Świadectwa wzorcowania nr:
  - 140/60/LA/P/2016 z dnia 19 maja 2016 r. barometr,
  - 1761/165/LA/TH/2016 z dnia 23 maja 2016 r. termohigrometr,wydane przez Laboratorium Pomiarowe „PLUM” Sp. z o.o., ul. Wspólna 19, Ignatki, 16 – 001 Kleosin (AP 074)
  - 317/A/16 z dnia 20 czerwca 2016 r. anemometr skrzydełkowywydane przez Laboratorium Wzorujące Wentylacyjne Przyrządy Pomiarowe, Instytut Mechaniki Górotworu PAN w Krakowie (AP 118).

Zastosowana sonda pomiarowa poziomów pól posiada sferyczną charakterystykę kierunkową, a w trakcie realizacji badań znajdowała się na wysokości 2 [m] n.p.t., na dielektrycznym statywie, w odległości  $d > 100$  [m] od rzutu anten instalacji radiokomunikacyjnych na powierzchni terenu, zgodnie z wymaganiami przedmiotowego Rozporządzenia.

## **7. INFORMACJE NA TEMAT INSTALACJI RADIOKOMUNIKACYJNYCH, RADIOLOKACYJNYCH, RADIONAWIGACYJNYCH REJONU BADAŃ PÓL ELEKTROMAGNETYCZNYCH \*) (\* - w rozumieniu wymagań przedmiotowego Rozporządzenia)**

Nie dotyczy. W promieniu  $d \leq 300$  m od P-1, nie są zlokalizowane żadne instalacje radiokomunikacyjne, radiolokacyjne, radionawigacyjne, emitujące pola elektromagnetyczne do środowiska.

## 8. WYNIKI BADAŃ

**Wyniki pomiarów poziomów pól elektromagnetycznych  
częstotliwości  
100 kHz – 3 GHz  
(składowej *elektrycznej* E)  
w środowisku**

**Tabela 2**

<b>Lp.</b>	<b>Punkt pomiarowy poziomów pól elektromagnetycznych w środowisku</b>	<b>Natężenie pola elektrycznego E **) [V/m]</b>	<b>Niepewność pomiaru U<sub>E 0,95</sub> [V/m]</b>
<b>1.</b>	<b>P-2 ul. Łódzka Dzielnica - Brzezinka Miasto – Gliwice</b>	<b>1,37</b>	<b>± 0,34</b>

*Objaśnienia:*

E \*\*) [V/m] - średnia wartość arytmetyczna wartości skutecznych natężeń pól elektrycznych promieniowania elektromagnetycznego w zakresie częstotliwości 100 kHz – 3 GHz, w danym punkcie obserwacji, w środowisku;

## 9. ZAŁĄCZNIKI

- 1. Raport pomiarowy*
  - w postaci elektronicznej, zarchiwizowany w siedzibie Laboratorium WIOŚ;
- 2. Fotografie rejonu badań, szt. 4.*
- 3. Szkic sytuacyjny rejonu badań.*
- 4. Analiza widma promieniowania elektromagnetycznego, SRM - 3006, Narda STS GmbH, Germany, w przedmiotowym zakresie (Ryc. 1).*

**KONIEC SPRAWOZDANIA**

## Instrument / Site

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Meter		Probe		
Model:	NBM-550	Model:	EF0391	
S/N:	B-0507	S/N:	A-0636	
Calibration Due Date	06/10/2017	Calibration Due Date	06/15/2017	

Site	Coordinates
P-2, ul. Łódzka miasto (powiat) - Gliwice, województwo śląskie.	N 50° 19' 06,5" E 18° 35' 32,0"

Comment
Pomiary monitoringowe poziomów pól elektromagnetycznych w przedziale częstotliwości 100 kHz – 3 GHz (składowej <i>elektrycznej</i> E) w środowisku, wykonane dnia 26 lipca 2016 r. na terenie zabudowy mieszkaniowej, w GLIWICACH - Dzielnica Brzezinka, województwo śląskie. Ryc. Wykres zależności zmian natężenia składowej elektrycznej pola w funkcji czasu, marker - wartość średnia elementarna interwału dT: 10 sec, w przedziale czasokresu obserwacji T: 2.00 h, w środowisku, Program Państwowego Monitoringu Środowiska 2016 rok.

## Measured Values

Timer: Start Time 10:01:04 AM, Period 2h 0' 0", Interval 10s

Index	Date/Time	Zero	Max (E-Field)	Avg (E-Field)	Min (E-Field)
1	07/26/2016 10:01:14 AM		1.389 V/m	1.308 V/m	1.257 V/m
2	07/26/2016 10:01:24 AM		1.403 V/m	1.289 V/m	1.232 V/m
3	07/26/2016 10:01:34 AM		1.389 V/m	1.289 V/m	1.252 V/m
4	07/26/2016 10:01:44 AM		1.354 V/m	1.292 V/m	1.245 V/m
5	07/26/2016 10:01:54 AM		1.504 V/m	1.330 V/m	1.231 V/m
6	07/26/2016 10:02:04 AM		1.385 V/m	1.308 V/m	1.251 V/m
7	07/26/2016 10:02:14 AM		1.446 V/m	1.314 V/m	1.234 V/m
8	07/26/2016 10:02:24 AM		1.398 V/m	1.287 V/m	1.202 V/m
9	07/26/2016 10:02:34 AM		1.478 V/m	1.338 V/m	1.250 V/m
10	07/26/2016 10:02:44 AM		1.541 V/m	1.316 V/m	1.214 V/m
11	07/26/2016 10:02:54 AM		1.447 V/m	1.328 V/m	1.248 V/m
12	07/26/2016 10:03:04 AM		1.524 V/m	1.391 V/m	1.298 V/m
13	07/26/2016 10:03:14 AM		1.500 V/m	1.388 V/m	1.293 V/m
14	07/26/2016 10:03:24 AM		1.488 V/m	1.319 V/m	1.254 V/m
15	07/26/2016 10:03:34 AM		1.594 V/m	1.420 V/m	1.305 V/m
16	07/26/2016 10:03:44 AM		1.635 V/m	1.428 V/m	1.304 V/m
17	07/26/2016 10:03:54 AM		1.499 V/m	1.371 V/m	1.300 V/m
18	07/26/2016 10:04:04 AM		1.433 V/m	1.293 V/m	1.202 V/m
19	07/26/2016 10:04:14 AM		1.513 V/m	1.368 V/m	1.299 V/m
20	07/26/2016 10:04:24 AM		1.537 V/m	1.410 V/m	1.311 V/m
21	07/26/2016 10:04:34 AM		1.523 V/m	1.434 V/m	1.332 V/m
22	07/26/2016 10:04:44 AM		1.639 V/m	1.465 V/m	1.313 V/m
23	07/26/2016 10:04:54 AM		1.585 V/m	1.435 V/m	1.357 V/m
24	07/26/2016 10:05:04 AM		1.606 V/m	1.512 V/m	1.433 V/m
25	07/26/2016 10:05:14 AM		1.587 V/m	1.414 V/m	1.306 V/m
26	07/26/2016 10:05:24 AM		1.573 V/m	1.479 V/m	1.374 V/m
27	07/26/2016 10:05:34 AM		1.574 V/m	1.464 V/m	1.312 V/m
28	07/26/2016 10:05:44 AM		1.538 V/m	1.356 V/m	1.221 V/m
29	07/26/2016 10:05:54 AM		1.427 V/m	1.335 V/m	1.274 V/m
30	07/26/2016 10:06:04 AM		1.489 V/m	1.383 V/m	1.278 V/m
31	07/26/2016 10:06:14 AM		1.535 V/m	1.419 V/m	1.288 V/m
32	07/26/2016 10:06:24 AM		1.578 V/m	1.392 V/m	1.316 V/m
33	07/26/2016 10:06:34 AM		1.662 V/m	1.518 V/m	1.431 V/m
34	07/26/2016 10:06:44 AM		1.565 V/m	1.416 V/m	1.347 V/m
35	07/26/2016 10:06:54 AM		1.638 V/m	1.480 V/m	1.341 V/m
36	07/26/2016 10:07:04 AM		1.622 V/m	1.468 V/m	1.402 V/m
37	07/26/2016 10:07:14 AM		1.630 V/m	1.429 V/m	1.341 V/m
38	07/26/2016 10:07:24 AM		1.582 V/m	1.458 V/m	1.371 V/m
39	07/26/2016 10:07:34 AM		1.526 V/m	1.453 V/m	1.411 V/m
40	07/26/2016 10:07:44 AM		1.611 V/m	1.441 V/m	1.395 V/m
41	07/26/2016 10:07:54 AM		1.534 V/m	1.459 V/m	1.411 V/m
42	07/26/2016 10:08:04 AM		1.633 V/m	1.492 V/m	1.339 V/m
43	07/26/2016 10:08:14 AM		1.460 V/m	1.349 V/m	1.243 V/m
44	07/26/2016 10:08:24 AM		1.465 V/m	1.367 V/m	1.296 V/m
45	07/26/2016 10:08:34 AM		1.555 V/m	1.438 V/m	1.336 V/m
46	07/26/2016 10:08:44 AM		1.601 V/m	1.453 V/m	1.356 V/m
47	07/26/2016 10:08:54 AM		1.744 V/m	1.605 V/m	1.350 V/m
48	07/26/2016 10:09:04 AM		1.595 V/m	1.506 V/m	1.380 V/m
49	07/26/2016 10:09:14 AM		1.630 V/m	1.419 V/m	1.330 V/m
50	07/26/2016 10:09:24 AM		1.501 V/m	1.379 V/m	1.248 V/m
51	07/26/2016 10:09:34 AM		1.559 V/m	1.469 V/m	1.375 V/m
52	07/26/2016 10:09:44 AM		1.681 V/m	1.518 V/m	1.397 V/m
53	07/26/2016 10:09:54 AM		1.675 V/m	1.490 V/m	1.399 V/m
54	07/26/2016 10:10:04 AM		1.566 V/m	1.475 V/m	1.387 V/m
55	07/26/2016 10:10:14 AM		1.582 V/m	1.479 V/m	1.364 V/m
56	07/26/2016 10:10:24 AM		1.717 V/m	1.561 V/m	1.411 V/m
57	07/26/2016 10:10:34 AM		1.697 V/m	1.455 V/m	1.353 V/m



58	07/26/2016 10:10:44 AM	1.539 V/m	1.413 V/m	1.345 V/m
59	07/26/2016 10:10:54 AM	1.609 V/m	1.479 V/m	1.371 V/m
60	07/26/2016 10:11:04 AM	1.561 V/m	1.431 V/m	1.338 V/m
61	07/26/2016 10:11:14 AM	1.558 V/m	1.414 V/m	1.317 V/m
62	07/26/2016 10:11:24 AM	1.574 V/m	1.402 V/m	1.302 V/m
63	07/26/2016 10:11:34 AM	1.601 V/m	1.440 V/m	1.288 V/m
64	07/26/2016 10:11:44 AM	1.696 V/m	1.519 V/m	1.409 V/m
65	07/26/2016 10:11:54 AM	1.660 V/m	1.503 V/m	1.405 V/m
66	07/26/2016 10:12:04 AM	1.687 V/m	1.497 V/m	1.375 V/m
67	07/26/2016 10:12:14 AM	1.741 V/m	1.560 V/m	1.402 V/m
68	07/26/2016 10:12:24 AM	1.697 V/m	1.539 V/m	1.395 V/m
69	07/26/2016 10:12:34 AM	1.766 V/m	1.587 V/m	1.438 V/m
70	07/26/2016 10:12:44 AM	1.643 V/m	1.494 V/m	1.389 V/m
71	07/26/2016 10:12:54 AM	1.602 V/m	1.442 V/m	1.386 V/m
72	07/26/2016 10:13:04 AM	1.600 V/m	1.512 V/m	1.444 V/m
73	07/26/2016 10:13:14 AM	1.694 V/m	1.481 V/m	1.346 V/m
74	07/26/2016 10:13:24 AM	1.540 V/m	1.428 V/m	1.350 V/m
75	07/26/2016 10:13:34 AM	1.617 V/m	1.505 V/m	1.397 V/m
76	07/26/2016 10:13:44 AM	1.702 V/m	1.561 V/m	1.426 V/m
77	07/26/2016 10:13:54 AM	1.599 V/m	1.489 V/m	1.394 V/m
78	07/26/2016 10:14:04 AM	1.583 V/m	1.449 V/m	1.356 V/m
79	07/26/2016 10:14:14 AM	1.639 V/m	1.468 V/m	1.354 V/m
80	07/26/2016 10:14:24 AM	1.610 V/m	1.491 V/m	1.423 V/m
81	07/26/2016 10:14:34 AM	1.530 V/m	1.439 V/m	1.322 V/m
82	07/26/2016 10:14:44 AM	1.640 V/m	1.467 V/m	1.342 V/m
83	07/26/2016 10:14:54 AM	1.566 V/m	1.477 V/m	1.412 V/m
84	07/26/2016 10:15:04 AM	1.586 V/m	1.485 V/m	1.419 V/m
85	07/26/2016 10:15:14 AM	1.587 V/m	1.482 V/m	1.426 V/m
86	07/26/2016 10:15:24 AM	1.573 V/m	1.455 V/m	1.319 V/m
87	07/26/2016 10:15:34 AM	1.597 V/m	1.403 V/m	1.296 V/m
88	07/26/2016 10:15:44 AM	1.560 V/m	1.454 V/m	1.363 V/m
89	07/26/2016 10:15:54 AM	1.629 V/m	1.497 V/m	1.408 V/m
90	07/26/2016 10:16:04 AM	1.735 V/m	1.550 V/m	1.388 V/m
91	07/26/2016 10:16:14 AM	1.682 V/m	1.542 V/m	1.452 V/m
92	07/26/2016 10:16:24 AM	1.603 V/m	1.491 V/m	1.395 V/m
93	07/26/2016 10:16:34 AM	1.694 V/m	1.533 V/m	1.439 V/m
94	07/26/2016 10:16:44 AM	1.618 V/m	1.465 V/m	1.388 V/m
95	07/26/2016 10:16:54 AM	1.634 V/m	1.511 V/m	1.414 V/m
96	07/26/2016 10:17:04 AM	1.725 V/m	1.533 V/m	1.404 V/m
97	07/26/2016 10:17:14 AM	1.609 V/m	1.480 V/m	1.402 V/m
98	07/26/2016 10:17:24 AM	1.625 V/m	1.476 V/m	1.396 V/m
99	07/26/2016 10:17:34 AM	1.599 V/m	1.498 V/m	1.441 V/m
100	07/26/2016 10:17:44 AM	1.640 V/m	1.524 V/m	1.441 V/m
101	07/26/2016 10:17:54 AM	1.706 V/m	1.451 V/m	1.339 V/m
102	07/26/2016 10:18:04 AM	1.670 V/m	1.553 V/m	1.438 V/m
103	07/26/2016 10:18:14 AM	1.689 V/m	1.550 V/m	1.403 V/m
104	07/26/2016 10:18:24 AM	1.637 V/m	1.520 V/m	1.442 V/m
105	07/26/2016 10:18:34 AM	1.667 V/m	1.520 V/m	1.433 V/m
106	07/26/2016 10:18:44 AM	1.620 V/m	1.524 V/m	1.444 V/m
107	07/26/2016 10:18:54 AM	1.604 V/m	1.535 V/m	1.427 V/m
108	07/26/2016 10:19:04 AM	1.602 V/m	1.466 V/m	1.338 V/m
109	07/26/2016 10:19:14 AM	1.580 V/m	1.449 V/m	1.362 V/m
110	07/26/2016 10:19:24 AM	1.568 V/m	1.487 V/m	1.392 V/m
111	07/26/2016 10:19:34 AM	1.552 V/m	1.452 V/m	1.364 V/m
112	07/26/2016 10:19:44 AM	1.652 V/m	1.391 V/m	1.276 V/m
113	07/26/2016 10:19:54 AM	1.521 V/m	1.391 V/m	1.313 V/m
114	07/26/2016 10:20:04 AM	1.672 V/m	1.409 V/m	1.339 V/m
115	07/26/2016 10:20:14 AM	1.445 V/m	1.352 V/m	1.289 V/m
116	07/26/2016 10:20:24 AM	1.510 V/m	1.383 V/m	1.301 V/m
117	07/26/2016 10:20:34 AM	1.519 V/m	1.412 V/m	1.333 V/m
118	07/26/2016 10:20:44 AM	1.620 V/m	1.413 V/m	1.327 V/m
119	07/26/2016 10:20:54 AM	1.552 V/m	1.401 V/m	1.330 V/m
120	07/26/2016 10:21:04 AM	1.537 V/m	1.378 V/m	1.299 V/m

121	07/26/2016 10:21:14 AM	1.450 V/m	1.348 V/m	1.296 V/m
122	07/26/2016 10:21:24 AM	1.474 V/m	1.351 V/m	1.286 V/m
123	07/26/2016 10:21:34 AM	1.543 V/m	1.408 V/m	1.299 V/m
124	07/26/2016 10:21:44 AM	1.536 V/m	1.417 V/m	1.349 V/m
125	07/26/2016 10:21:54 AM	1.686 V/m	1.547 V/m	1.372 V/m
126	07/26/2016 10:22:04 AM	1.550 V/m	1.398 V/m	1.315 V/m
127	07/26/2016 10:22:14 AM	1.539 V/m	1.407 V/m	1.344 V/m
128	07/26/2016 10:22:24 AM	1.488 V/m	1.419 V/m	1.359 V/m
129	07/26/2016 10:22:34 AM	1.542 V/m	1.423 V/m	1.360 V/m
130	07/26/2016 10:22:44 AM	1.466 V/m	1.386 V/m	1.336 V/m
131	07/26/2016 10:22:54 AM	1.657 V/m	1.428 V/m	1.344 V/m
132	07/26/2016 10:23:04 AM	1.532 V/m	1.394 V/m	1.325 V/m
133	07/26/2016 10:23:14 AM	1.519 V/m	1.401 V/m	1.325 V/m
134	07/26/2016 10:23:24 AM	1.487 V/m	1.376 V/m	1.326 V/m
135	07/26/2016 10:23:34 AM	1.630 V/m	1.441 V/m	1.301 V/m
136	07/26/2016 10:23:44 AM	1.545 V/m	1.436 V/m	1.332 V/m
137	07/26/2016 10:23:54 AM	1.633 V/m	1.485 V/m	1.335 V/m
138	07/26/2016 10:24:04 AM	1.581 V/m	1.460 V/m	1.359 V/m
139	07/26/2016 10:24:14 AM	1.734 V/m	1.544 V/m	1.457 V/m
140	07/26/2016 10:24:24 AM	1.695 V/m	1.520 V/m	1.450 V/m
141	07/26/2016 10:24:34 AM	1.615 V/m	1.421 V/m	1.296 V/m
142	07/26/2016 10:24:44 AM	1.591 V/m	1.412 V/m	1.268 V/m
143	07/26/2016 10:24:54 AM	1.579 V/m	1.411 V/m	1.310 V/m
144	07/26/2016 10:25:04 AM	1.560 V/m	1.421 V/m	1.300 V/m
145	07/26/2016 10:25:14 AM	1.548 V/m	1.374 V/m	1.293 V/m
146	07/26/2016 10:25:24 AM	1.547 V/m	1.384 V/m	1.305 V/m
147	07/26/2016 10:25:34 AM	1.627 V/m	1.417 V/m	1.286 V/m
148	07/26/2016 10:25:44 AM	1.550 V/m	1.388 V/m	1.306 V/m
149	07/26/2016 10:25:54 AM	1.551 V/m	1.397 V/m	1.290 V/m
150	07/26/2016 10:26:04 AM	1.519 V/m	1.397 V/m	1.319 V/m
151	07/26/2016 10:26:14 AM	1.595 V/m	1.422 V/m	1.334 V/m
152	07/26/2016 10:26:24 AM	1.563 V/m	1.405 V/m	1.308 V/m
153	07/26/2016 10:26:34 AM	1.658 V/m	1.425 V/m	1.310 V/m
154	07/26/2016 10:26:44 AM	1.584 V/m	1.430 V/m	1.328 V/m
155	07/26/2016 10:26:54 AM	1.621 V/m	1.489 V/m	1.395 V/m
156	07/26/2016 10:27:04 AM	1.653 V/m	1.521 V/m	1.297 V/m
157	07/26/2016 10:27:14 AM	1.683 V/m	1.442 V/m	1.319 V/m
158	07/26/2016 10:27:24 AM	1.680 V/m	1.518 V/m	1.340 V/m
159	07/26/2016 10:27:34 AM	1.667 V/m	1.542 V/m	1.356 V/m
160	07/26/2016 10:27:44 AM	1.684 V/m	1.571 V/m	1.432 V/m
161	07/26/2016 10:27:54 AM	1.653 V/m	1.430 V/m	1.306 V/m
162	07/26/2016 10:28:04 AM	1.678 V/m	1.533 V/m	1.379 V/m
163	07/26/2016 10:28:14 AM	1.668 V/m	1.539 V/m	1.327 V/m
164	07/26/2016 10:28:24 AM	1.730 V/m	1.604 V/m	1.407 V/m
165	07/26/2016 10:28:34 AM	1.641 V/m	1.523 V/m	1.400 V/m
166	07/26/2016 10:28:44 AM	1.739 V/m	1.620 V/m	1.428 V/m
167	07/26/2016 10:28:54 AM	1.690 V/m	1.580 V/m	1.418 V/m
168	07/26/2016 10:29:04 AM	1.696 V/m	1.600 V/m	1.410 V/m
169	07/26/2016 10:29:14 AM	1.671 V/m	1.557 V/m	1.379 V/m
170	07/26/2016 10:29:24 AM	1.757 V/m	1.526 V/m	1.350 V/m
171	07/26/2016 10:29:34 AM	1.670 V/m	1.561 V/m	1.426 V/m
172	07/26/2016 10:29:44 AM	1.598 V/m	1.459 V/m	1.366 V/m
173	07/26/2016 10:29:54 AM	1.655 V/m	1.484 V/m	1.391 V/m
174	07/26/2016 10:30:04 AM	1.743 V/m	1.493 V/m	1.412 V/m
175	07/26/2016 10:30:14 AM	1.739 V/m	1.600 V/m	1.427 V/m
176	07/26/2016 10:30:24 AM	1.700 V/m	1.518 V/m	1.406 V/m
177	07/26/2016 10:30:34 AM	1.678 V/m	1.485 V/m	1.363 V/m
178	07/26/2016 10:30:44 AM	1.669 V/m	1.470 V/m	1.387 V/m
179	07/26/2016 10:30:54 AM	1.638 V/m	1.439 V/m	1.359 V/m
180	07/26/2016 10:31:04 AM	1.696 V/m	1.463 V/m	1.365 V/m
181	07/26/2016 10:31:14 AM	1.657 V/m	1.511 V/m	1.363 V/m
182	07/26/2016 10:31:24 AM	1.670 V/m	1.468 V/m	1.347 V/m
183	07/26/2016 10:31:34 AM	1.629 V/m	1.404 V/m	1.303 V/m

184	07/26/2016 10:31:44 AM	1.578 V/m	1.393 V/m	1.301 V/m
185	07/26/2016 10:31:54 AM	1.630 V/m	1.392 V/m	1.316 V/m
186	07/26/2016 10:32:04 AM	1.601 V/m	1.430 V/m	1.352 V/m
187	07/26/2016 10:32:14 AM	1.624 V/m	1.415 V/m	1.297 V/m
188	07/26/2016 10:32:24 AM	1.658 V/m	1.421 V/m	1.319 V/m
189	07/26/2016 10:32:34 AM	1.599 V/m	1.419 V/m	1.324 V/m
190	07/26/2016 10:32:44 AM	1.629 V/m	1.450 V/m	1.355 V/m
191	07/26/2016 10:32:54 AM	1.629 V/m	1.438 V/m	1.350 V/m
192	07/26/2016 10:33:04 AM	1.584 V/m	1.433 V/m	1.339 V/m
193	07/26/2016 10:33:14 AM	1.568 V/m	1.459 V/m	1.359 V/m
194	07/26/2016 10:33:24 AM	1.678 V/m	1.512 V/m	1.330 V/m
195	07/26/2016 10:33:34 AM	1.639 V/m	1.469 V/m	1.339 V/m
196	07/26/2016 10:33:44 AM	1.538 V/m	1.414 V/m	1.340 V/m
197	07/26/2016 10:33:54 AM	1.539 V/m	1.430 V/m	1.299 V/m
198	07/26/2016 10:34:04 AM	1.670 V/m	1.465 V/m	1.366 V/m
199	07/26/2016 10:34:14 AM	1.572 V/m	1.399 V/m	1.296 V/m
200	07/26/2016 10:34:24 AM	1.619 V/m	1.392 V/m	1.310 V/m
201	07/26/2016 10:34:34 AM	1.596 V/m	1.388 V/m	1.294 V/m
202	07/26/2016 10:34:44 AM	1.597 V/m	1.430 V/m	1.331 V/m
203	07/26/2016 10:34:54 AM	1.638 V/m	1.464 V/m	1.344 V/m
204	07/26/2016 10:35:04 AM	1.764 V/m	1.525 V/m	1.409 V/m
205	07/26/2016 10:35:14 AM	1.646 V/m	1.475 V/m	1.350 V/m
206	07/26/2016 10:35:24 AM	1.753 V/m	1.534 V/m	1.436 V/m
207	07/26/2016 10:35:34 AM	1.649 V/m	1.499 V/m	1.413 V/m
208	07/26/2016 10:35:44 AM	1.635 V/m	1.465 V/m	1.334 V/m
209	07/26/2016 10:35:54 AM	1.766 V/m	1.480 V/m	1.324 V/m
210	07/26/2016 10:36:04 AM	1.750 V/m	1.555 V/m	1.374 V/m
211	07/26/2016 10:36:14 AM	1.637 V/m	1.448 V/m	1.342 V/m
212	07/26/2016 10:36:24 AM	1.662 V/m	1.518 V/m	1.388 V/m
213	07/26/2016 10:36:34 AM	1.748 V/m	1.553 V/m	1.433 V/m
214	07/26/2016 10:36:44 AM	1.673 V/m	1.445 V/m	1.324 V/m
215	07/26/2016 10:36:54 AM	1.630 V/m	1.409 V/m	1.312 V/m
216	07/26/2016 10:37:04 AM	1.593 V/m	1.428 V/m	1.352 V/m
217	07/26/2016 10:37:14 AM	1.647 V/m	1.418 V/m	1.338 V/m
218	07/26/2016 10:37:24 AM	1.590 V/m	1.397 V/m	1.322 V/m
219	07/26/2016 10:37:34 AM	1.605 V/m	1.424 V/m	1.327 V/m
220	07/26/2016 10:37:44 AM	1.587 V/m	1.381 V/m	1.320 V/m
221	07/26/2016 10:37:54 AM	1.599 V/m	1.397 V/m	1.297 V/m
222	07/26/2016 10:38:04 AM	1.543 V/m	1.355 V/m	1.278 V/m
223	07/26/2016 10:38:14 AM	1.558 V/m	1.395 V/m	1.278 V/m
224	07/26/2016 10:38:24 AM	1.585 V/m	1.431 V/m	1.300 V/m
225	07/26/2016 10:38:34 AM	1.547 V/m	1.404 V/m	1.316 V/m
226	07/26/2016 10:38:44 AM	1.564 V/m	1.452 V/m	1.326 V/m
227	07/26/2016 10:38:54 AM	1.594 V/m	1.418 V/m	1.327 V/m
228	07/26/2016 10:39:04 AM	1.642 V/m	1.480 V/m	1.324 V/m
229	07/26/2016 10:39:14 AM	1.620 V/m	1.454 V/m	1.346 V/m
230	07/26/2016 10:39:24 AM	1.604 V/m	1.475 V/m	1.372 V/m
231	07/26/2016 10:39:34 AM	1.617 V/m	1.453 V/m	1.364 V/m
232	07/26/2016 10:39:44 AM	1.612 V/m	1.434 V/m	1.330 V/m
233	07/26/2016 10:39:54 AM	1.588 V/m	1.371 V/m	1.304 V/m
234	07/26/2016 10:40:04 AM	1.567 V/m	1.404 V/m	1.308 V/m
235	07/26/2016 10:40:14 AM	1.581 V/m	1.405 V/m	1.297 V/m
236	07/26/2016 10:40:24 AM	1.610 V/m	1.438 V/m	1.335 V/m
237	07/26/2016 10:40:34 AM	1.648 V/m	1.443 V/m	1.329 V/m
238	07/26/2016 10:40:44 AM	1.597 V/m	1.441 V/m	1.299 V/m
239	07/26/2016 10:40:54 AM	1.652 V/m	1.456 V/m	1.351 V/m
240	07/26/2016 10:41:04 AM	1.590 V/m	1.417 V/m	1.332 V/m
241	07/26/2016 10:41:14 AM	1.618 V/m	1.430 V/m	1.317 V/m
242	07/26/2016 10:41:24 AM	1.619 V/m	1.421 V/m	1.317 V/m
243	07/26/2016 10:41:34 AM	1.629 V/m	1.437 V/m	1.338 V/m
244	07/26/2016 10:41:44 AM	1.566 V/m	1.406 V/m	1.342 V/m
245	07/26/2016 10:41:54 AM	1.557 V/m	1.409 V/m	1.332 V/m
246	07/26/2016 10:42:04 AM	1.609 V/m	1.412 V/m	1.328 V/m

247	07/26/2016 10:42:14 AM	1.587 V/m	1.443 V/m	1.348 V/m
248	07/26/2016 10:42:24 AM	1.652 V/m	1.446 V/m	1.336 V/m
249	07/26/2016 10:42:34 AM	1.689 V/m	1.478 V/m	1.372 V/m
250	07/26/2016 10:42:44 AM	1.678 V/m	1.489 V/m	1.384 V/m
251	07/26/2016 10:42:54 AM	1.748 V/m	1.602 V/m	1.439 V/m
252	07/26/2016 10:43:04 AM	1.665 V/m	1.513 V/m	1.378 V/m
253	07/26/2016 10:43:14 AM	1.692 V/m	1.485 V/m	1.326 V/m
254	07/26/2016 10:43:24 AM	1.701 V/m	1.562 V/m	1.374 V/m
255	07/26/2016 10:43:34 AM	1.717 V/m	1.581 V/m	1.412 V/m
256	07/26/2016 10:43:44 AM	1.669 V/m	1.506 V/m	1.325 V/m
257	07/26/2016 10:43:54 AM	1.623 V/m	1.442 V/m	1.325 V/m
258	07/26/2016 10:44:04 AM	1.725 V/m	1.607 V/m	1.491 V/m
259	07/26/2016 10:44:14 AM	1.707 V/m	1.539 V/m	1.432 V/m
260	07/26/2016 10:44:24 AM	1.727 V/m	1.526 V/m	1.404 V/m
261	07/26/2016 10:44:34 AM	1.714 V/m	1.550 V/m	1.463 V/m
262	07/26/2016 10:44:44 AM	1.695 V/m	1.489 V/m	1.367 V/m
263	07/26/2016 10:44:54 AM	1.760 V/m	1.574 V/m	1.467 V/m
264	07/26/2016 10:45:04 AM	1.718 V/m	1.518 V/m	1.394 V/m
265	07/26/2016 10:45:14 AM	1.743 V/m	1.495 V/m	1.399 V/m
266	07/26/2016 10:45:24 AM	1.758 V/m	1.578 V/m	1.399 V/m
267	07/26/2016 10:45:34 AM	1.752 V/m	1.545 V/m	1.391 V/m
268	07/26/2016 10:45:44 AM	1.619 V/m	1.499 V/m	1.364 V/m
269	07/26/2016 10:45:54 AM	1.681 V/m	1.510 V/m	1.393 V/m
270	07/26/2016 10:46:04 AM	1.515 V/m	1.413 V/m	1.339 V/m
271	07/26/2016 10:46:14 AM	1.561 V/m	1.406 V/m	1.301 V/m
272	07/26/2016 10:46:24 AM	1.566 V/m	1.446 V/m	1.360 V/m
273	07/26/2016 10:46:34 AM	1.577 V/m	1.412 V/m	1.285 V/m
274	07/26/2016 10:46:44 AM	1.519 V/m	1.420 V/m	1.265 V/m
275	07/26/2016 10:46:54 AM	1.499 V/m	1.369 V/m	1.300 V/m
276	07/26/2016 10:47:04 AM	1.514 V/m	1.357 V/m	1.250 V/m
277	07/26/2016 10:47:14 AM	1.565 V/m	1.389 V/m	1.268 V/m
278	07/26/2016 10:47:24 AM	1.524 V/m	1.368 V/m	1.284 V/m
279	07/26/2016 10:47:34 AM	1.593 V/m	1.374 V/m	1.279 V/m
280	07/26/2016 10:47:44 AM	1.658 V/m	1.405 V/m	1.268 V/m
281	07/26/2016 10:47:54 AM	1.605 V/m	1.399 V/m	1.302 V/m
282	07/26/2016 10:48:04 AM	1.655 V/m	1.380 V/m	1.255 V/m
283	07/26/2016 10:48:14 AM	1.594 V/m	1.471 V/m	1.336 V/m
284	07/26/2016 10:48:24 AM	1.642 V/m	1.437 V/m	1.307 V/m
285	07/26/2016 10:48:34 AM	1.753 V/m	1.512 V/m	1.280 V/m
286	07/26/2016 10:48:44 AM	1.590 V/m	1.408 V/m	1.291 V/m
287	07/26/2016 10:48:54 AM	1.643 V/m	1.437 V/m	1.300 V/m
288	07/26/2016 10:49:04 AM	1.657 V/m	1.432 V/m	1.332 V/m
289	07/26/2016 10:49:14 AM	1.630 V/m	1.398 V/m	1.269 V/m
290	07/26/2016 10:49:24 AM	1.649 V/m	1.460 V/m	1.295 V/m
291	07/26/2016 10:49:34 AM	1.566 V/m	1.390 V/m	1.270 V/m
292	07/26/2016 10:49:44 AM	1.610 V/m	1.386 V/m	1.267 V/m
293	07/26/2016 10:49:54 AM	1.570 V/m	1.372 V/m	1.263 V/m
294	07/26/2016 10:50:04 AM	1.605 V/m	1.397 V/m	1.274 V/m
295	07/26/2016 10:50:14 AM	1.681 V/m	1.440 V/m	1.299 V/m
296	07/26/2016 10:50:24 AM	1.641 V/m	1.439 V/m	1.367 V/m
297	07/26/2016 10:50:34 AM	1.629 V/m	1.422 V/m	1.306 V/m
298	07/26/2016 10:50:44 AM	1.615 V/m	1.435 V/m	1.301 V/m
299	07/26/2016 10:50:54 AM	1.518 V/m	1.393 V/m	1.308 V/m
300	07/26/2016 10:51:04 AM	1.561 V/m	1.382 V/m	1.302 V/m
301	07/26/2016 10:51:14 AM	1.581 V/m	1.377 V/m	1.288 V/m
302	07/26/2016 10:51:24 AM	1.630 V/m	1.386 V/m	1.279 V/m
303	07/26/2016 10:51:34 AM	1.642 V/m	1.481 V/m	1.346 V/m
304	07/26/2016 10:51:44 AM	1.556 V/m	1.410 V/m	1.340 V/m
305	07/26/2016 10:51:54 AM	1.554 V/m	1.345 V/m	1.251 V/m
306	07/26/2016 10:52:04 AM	1.483 V/m	1.341 V/m	1.255 V/m
307	07/26/2016 10:52:14 AM	1.597 V/m	1.356 V/m	1.271 V/m
308	07/26/2016 10:52:24 AM	1.464 V/m	1.278 V/m	1.216 V/m
309	07/26/2016 10:52:34 AM	1.451 V/m	1.260 V/m	1.207 V/m

310	07/26/2016 10:52:44 AM	1.565 V/m	1.379 V/m	1.245 V/m
311	07/26/2016 10:52:54 AM	1.504 V/m	1.356 V/m	1.257 V/m
312	07/26/2016 10:53:04 AM	1.570 V/m	1.410 V/m	1.285 V/m
313	07/26/2016 10:53:14 AM	1.596 V/m	1.362 V/m	1.278 V/m
314	07/26/2016 10:53:24 AM	1.578 V/m	1.395 V/m	1.298 V/m
315	07/26/2016 10:53:34 AM	1.523 V/m	1.386 V/m	1.311 V/m
316	07/26/2016 10:53:44 AM	1.446 V/m	1.322 V/m	1.239 V/m
317	07/26/2016 10:53:54 AM	1.572 V/m	1.364 V/m	1.272 V/m
318	07/26/2016 10:54:04 AM	1.507 V/m	1.355 V/m	1.301 V/m
319	07/26/2016 10:54:14 AM	1.519 V/m	1.357 V/m	1.265 V/m
320	07/26/2016 10:54:24 AM	1.606 V/m	1.478 V/m	1.330 V/m
321	07/26/2016 10:54:34 AM	1.575 V/m	1.442 V/m	1.357 V/m
322	07/26/2016 10:54:44 AM	1.613 V/m	1.424 V/m	1.309 V/m
323	07/26/2016 10:54:54 AM	1.596 V/m	1.441 V/m	1.269 V/m
324	07/26/2016 10:55:04 AM	1.608 V/m	1.492 V/m	1.291 V/m
325	07/26/2016 10:55:14 AM	1.705 V/m	1.509 V/m	1.290 V/m
326	07/26/2016 10:55:24 AM	1.688 V/m	1.427 V/m	1.276 V/m
327	07/26/2016 10:55:34 AM	1.617 V/m	1.455 V/m	1.250 V/m
328	07/26/2016 10:55:44 AM	1.607 V/m	1.460 V/m	1.350 V/m
329	07/26/2016 10:55:54 AM	1.521 V/m	1.393 V/m	1.246 V/m
330	07/26/2016 10:56:04 AM	1.620 V/m	1.449 V/m	1.318 V/m
331	07/26/2016 10:56:14 AM	1.629 V/m	1.468 V/m	1.394 V/m
332	07/26/2016 10:56:24 AM	1.611 V/m	1.441 V/m	1.296 V/m
333	07/26/2016 10:56:34 AM	1.666 V/m	1.498 V/m	1.378 V/m
334	07/26/2016 10:56:44 AM	1.637 V/m	1.461 V/m	1.392 V/m
335	07/26/2016 10:56:54 AM	1.647 V/m	1.470 V/m	1.414 V/m
336	07/26/2016 10:57:04 AM	1.649 V/m	1.461 V/m	1.401 V/m
337	07/26/2016 10:57:14 AM	1.617 V/m	1.463 V/m	1.360 V/m
338	07/26/2016 10:57:24 AM	1.587 V/m	1.434 V/m	1.389 V/m
339	07/26/2016 10:57:34 AM	1.622 V/m	1.427 V/m	1.367 V/m
340	07/26/2016 10:57:44 AM	1.532 V/m	1.417 V/m	1.368 V/m
341	07/26/2016 10:57:54 AM	1.594 V/m	1.483 V/m	1.393 V/m
342	07/26/2016 10:58:04 AM	1.531 V/m	1.412 V/m	1.338 V/m
343	07/26/2016 10:58:14 AM	1.521 V/m	1.362 V/m	1.270 V/m
344	07/26/2016 10:58:24 AM	1.559 V/m	1.388 V/m	1.244 V/m
345	07/26/2016 10:58:34 AM	1.579 V/m	1.380 V/m	1.297 V/m
346	07/26/2016 10:58:44 AM	1.554 V/m	1.423 V/m	1.321 V/m
347	07/26/2016 10:58:54 AM	1.580 V/m	1.407 V/m	1.286 V/m
348	07/26/2016 10:59:04 AM	1.464 V/m	1.394 V/m	1.299 V/m
349	07/26/2016 10:59:14 AM	1.484 V/m	1.389 V/m	1.233 V/m
350	07/26/2016 10:59:24 AM	1.565 V/m	1.404 V/m	1.340 V/m
351	07/26/2016 10:59:34 AM	1.423 V/m	1.367 V/m	1.283 V/m
352	07/26/2016 10:59:44 AM	1.463 V/m	1.334 V/m	1.245 V/m
353	07/26/2016 10:59:54 AM	1.463 V/m	1.337 V/m	1.235 V/m
354	07/26/2016 11:00:04 AM	1.460 V/m	1.373 V/m	1.256 V/m
355	07/26/2016 11:00:14 AM	1.441 V/m	1.382 V/m	1.283 V/m
356	07/26/2016 11:00:24 AM	1.585 V/m	1.375 V/m	1.300 V/m
357	07/26/2016 11:00:34 AM	1.488 V/m	1.386 V/m	1.297 V/m
358	07/26/2016 11:00:44 AM	1.519 V/m	1.369 V/m	1.286 V/m
359	07/26/2016 11:00:54 AM	1.569 V/m	1.410 V/m	1.333 V/m
360	07/26/2016 11:01:04 AM	1.485 V/m	1.348 V/m	1.253 V/m
361	07/26/2016 11:01:14 AM	1.485 V/m	1.330 V/m	1.262 V/m
362	07/26/2016 11:01:24 AM	1.479 V/m	1.350 V/m	1.269 V/m
363	07/26/2016 11:01:34 AM	1.524 V/m	1.368 V/m	1.279 V/m
364	07/26/2016 11:01:44 AM	1.524 V/m	1.337 V/m	1.218 V/m
365	07/26/2016 11:01:54 AM	1.498 V/m	1.301 V/m	1.215 V/m
366	07/26/2016 11:02:04 AM	1.592 V/m	1.393 V/m	1.278 V/m
367	07/26/2016 11:02:14 AM	1.562 V/m	1.411 V/m	1.331 V/m
368	07/26/2016 11:02:24 AM	1.562 V/m	1.377 V/m	1.285 V/m
369	07/26/2016 11:02:34 AM	1.527 V/m	1.386 V/m	1.305 V/m
370	07/26/2016 11:02:44 AM	1.423 V/m	1.315 V/m	1.217 V/m
371	07/26/2016 11:02:54 AM	1.522 V/m	1.287 V/m	1.212 V/m
372	07/26/2016 11:03:04 AM	1.408 V/m	1.270 V/m	1.191 V/m

373	07/26/2016 11:03:14 AM	1.467 V/m	1.276 V/m	1.187 V/m
374	07/26/2016 11:03:24 AM	1.532 V/m	1.338 V/m	1.248 V/m
375	07/26/2016 11:03:34 AM	1.565 V/m	1.358 V/m	1.230 V/m
376	07/26/2016 11:03:44 AM	1.497 V/m	1.329 V/m	1.232 V/m
377	07/26/2016 11:03:54 AM	1.513 V/m	1.299 V/m	1.201 V/m
378	07/26/2016 11:04:04 AM	1.369 V/m	1.264 V/m	1.180 V/m
379	07/26/2016 11:04:14 AM	1.500 V/m	1.331 V/m	1.218 V/m
380	07/26/2016 11:04:24 AM	1.521 V/m	1.294 V/m	1.196 V/m
381	07/26/2016 11:04:34 AM	1.494 V/m	1.306 V/m	1.155 V/m
382	07/26/2016 11:04:44 AM	1.489 V/m	1.339 V/m	1.225 V/m
383	07/26/2016 11:04:54 AM	1.443 V/m	1.296 V/m	1.204 V/m
384	07/26/2016 11:05:04 AM	1.506 V/m	1.262 V/m	1.171 V/m
385	07/26/2016 11:05:14 AM	1.517 V/m	1.316 V/m	1.232 V/m
386	07/26/2016 11:05:24 AM	1.532 V/m	1.336 V/m	1.197 V/m
387	07/26/2016 11:05:34 AM	1.502 V/m	1.331 V/m	1.190 V/m
388	07/26/2016 11:05:44 AM	1.464 V/m	1.316 V/m	1.203 V/m
389	07/26/2016 11:05:54 AM	1.524 V/m	1.346 V/m	1.252 V/m
390	07/26/2016 11:06:04 AM	1.447 V/m	1.345 V/m	1.284 V/m
391	07/26/2016 11:06:14 AM	1.480 V/m	1.342 V/m	1.246 V/m
392	07/26/2016 11:06:24 AM	1.412 V/m	1.306 V/m	1.231 V/m
393	07/26/2016 11:06:34 AM	1.355 V/m	1.272 V/m	1.215 V/m
394	07/26/2016 11:06:44 AM	1.459 V/m	1.294 V/m	1.190 V/m
395	07/26/2016 11:06:54 AM	1.442 V/m	1.270 V/m	1.186 V/m
396	07/26/2016 11:07:04 AM	1.423 V/m	1.337 V/m	1.228 V/m
397	07/26/2016 11:07:14 AM	1.549 V/m	1.400 V/m	1.284 V/m
398	07/26/2016 11:07:24 AM	1.558 V/m	1.386 V/m	1.277 V/m
399	07/26/2016 11:07:34 AM	1.408 V/m	1.309 V/m	1.259 V/m
400	07/26/2016 11:07:44 AM	1.483 V/m	1.340 V/m	1.247 V/m
401	07/26/2016 11:07:54 AM	1.470 V/m	1.334 V/m	1.241 V/m
402	07/26/2016 11:08:04 AM	1.533 V/m	1.363 V/m	1.284 V/m
403	07/26/2016 11:08:14 AM	1.543 V/m	1.340 V/m	1.258 V/m
404	07/26/2016 11:08:24 AM	1.538 V/m	1.309 V/m	1.184 V/m
405	07/26/2016 11:08:34 AM	1.418 V/m	1.334 V/m	1.259 V/m
406	07/26/2016 11:08:44 AM	1.578 V/m	1.371 V/m	1.254 V/m
407	07/26/2016 11:08:54 AM	1.560 V/m	1.430 V/m	1.362 V/m
408	07/26/2016 11:09:04 AM	1.612 V/m	1.443 V/m	1.336 V/m
409	07/26/2016 11:09:14 AM	1.557 V/m	1.432 V/m	1.338 V/m
410	07/26/2016 11:09:24 AM	1.532 V/m	1.368 V/m	1.285 V/m
411	07/26/2016 11:09:34 AM	1.500 V/m	1.344 V/m	1.228 V/m
412	07/26/2016 11:09:44 AM	1.574 V/m	1.363 V/m	1.267 V/m
413	07/26/2016 11:09:54 AM	1.535 V/m	1.401 V/m	1.282 V/m
414	07/26/2016 11:10:04 AM	1.529 V/m	1.343 V/m	1.182 V/m
415	07/26/2016 11:10:14 AM	1.493 V/m	1.329 V/m	1.222 V/m
416	07/26/2016 11:10:24 AM	1.502 V/m	1.306 V/m	1.225 V/m
417	07/26/2016 11:10:34 AM	1.488 V/m	1.340 V/m	1.206 V/m
418	07/26/2016 11:10:44 AM	1.472 V/m	1.299 V/m	1.193 V/m
419	07/26/2016 11:10:54 AM	1.534 V/m	1.331 V/m	1.203 V/m
420	07/26/2016 11:11:04 AM	1.598 V/m	1.366 V/m	1.225 V/m
421	07/26/2016 11:11:14 AM	1.529 V/m	1.348 V/m	1.218 V/m
422	07/26/2016 11:11:24 AM	1.461 V/m	1.332 V/m	1.195 V/m
423	07/26/2016 11:11:34 AM	1.417 V/m	1.318 V/m	1.214 V/m
424	07/26/2016 11:11:44 AM	1.539 V/m	1.381 V/m	1.267 V/m
425	07/26/2016 11:11:54 AM	1.473 V/m	1.335 V/m	1.207 V/m
426	07/26/2016 11:12:04 AM	1.415 V/m	1.297 V/m	1.186 V/m
427	07/26/2016 11:12:14 AM	1.490 V/m	1.282 V/m	1.188 V/m
428	07/26/2016 11:12:24 AM	1.407 V/m	1.249 V/m	1.166 V/m
429	07/26/2016 11:12:34 AM	1.421 V/m	1.263 V/m	1.170 V/m
430	07/26/2016 11:12:44 AM	1.360 V/m	1.271 V/m	1.191 V/m
431	07/26/2016 11:12:54 AM	1.399 V/m	1.325 V/m	1.254 V/m
432	07/26/2016 11:13:04 AM	1.574 V/m	1.401 V/m	1.247 V/m
433	07/26/2016 11:13:14 AM	1.540 V/m	1.366 V/m	1.295 V/m
434	07/26/2016 11:13:24 AM	1.558 V/m	1.316 V/m	1.198 V/m
435	07/26/2016 11:13:34 AM	1.448 V/m	1.280 V/m	1.176 V/m

436	07/26/2016 11:13:44 AM	1.461 V/m	1.325 V/m	1.170 V/m
437	07/26/2016 11:13:54 AM	1.467 V/m	1.319 V/m	1.219 V/m
438	07/26/2016 11:14:04 AM	1.478 V/m	1.312 V/m	1.196 V/m
439	07/26/2016 11:14:14 AM	1.366 V/m	1.254 V/m	1.189 V/m
440	07/26/2016 11:14:24 AM	1.469 V/m	1.303 V/m	1.197 V/m
441	07/26/2016 11:14:34 AM	1.412 V/m	1.311 V/m	1.230 V/m
442	07/26/2016 11:14:44 AM	1.459 V/m	1.324 V/m	1.195 V/m
443	07/26/2016 11:14:54 AM	1.447 V/m	1.290 V/m	1.184 V/m
444	07/26/2016 11:15:04 AM	1.415 V/m	1.275 V/m	1.187 V/m
445	07/26/2016 11:15:14 AM	1.450 V/m	1.299 V/m	1.228 V/m
446	07/26/2016 11:15:24 AM	1.455 V/m	1.319 V/m	1.232 V/m
447	07/26/2016 11:15:34 AM	1.505 V/m	1.323 V/m	1.226 V/m
448	07/26/2016 11:15:44 AM	1.487 V/m	1.351 V/m	1.258 V/m
449	07/26/2016 11:15:54 AM	1.469 V/m	1.333 V/m	1.206 V/m
450	07/26/2016 11:16:04 AM	1.490 V/m	1.345 V/m	1.221 V/m
451	07/26/2016 11:16:14 AM	1.413 V/m	1.311 V/m	1.223 V/m
452	07/26/2016 11:16:24 AM	1.506 V/m	1.332 V/m	1.256 V/m
453	07/26/2016 11:16:34 AM	1.377 V/m	1.285 V/m	1.228 V/m
454	07/26/2016 11:16:44 AM	1.394 V/m	1.315 V/m	1.218 V/m
455	07/26/2016 11:16:54 AM	1.457 V/m	1.319 V/m	1.238 V/m
456	07/26/2016 11:17:04 AM	1.502 V/m	1.389 V/m	1.280 V/m
457	07/26/2016 11:17:14 AM	1.447 V/m	1.327 V/m	1.191 V/m
458	07/26/2016 11:17:24 AM	1.468 V/m	1.280 V/m	1.168 V/m
459	07/26/2016 11:17:34 AM	1.545 V/m	1.344 V/m	1.201 V/m
460	07/26/2016 11:17:44 AM	1.526 V/m	1.296 V/m	1.170 V/m
461	07/26/2016 11:17:54 AM	1.533 V/m	1.273 V/m	1.162 V/m
462	07/26/2016 11:18:04 AM	1.437 V/m	1.330 V/m	1.224 V/m
463	07/26/2016 11:18:14 AM	1.482 V/m	1.335 V/m	1.229 V/m
464	07/26/2016 11:18:24 AM	1.460 V/m	1.310 V/m	1.211 V/m
465	07/26/2016 11:18:34 AM	1.561 V/m	1.337 V/m	1.170 V/m
466	07/26/2016 11:18:44 AM	1.409 V/m	1.286 V/m	1.175 V/m
467	07/26/2016 11:18:54 AM	1.536 V/m	1.355 V/m	1.229 V/m
468	07/26/2016 11:19:04 AM	1.396 V/m	1.303 V/m	1.206 V/m
469	07/26/2016 11:19:14 AM	1.404 V/m	1.313 V/m	1.248 V/m
470	07/26/2016 11:19:24 AM	1.391 V/m	1.275 V/m	1.174 V/m
471	07/26/2016 11:19:34 AM	1.411 V/m	1.310 V/m	1.209 V/m
472	07/26/2016 11:19:44 AM	1.559 V/m	1.392 V/m	1.242 V/m
473	07/26/2016 11:19:54 AM	1.522 V/m	1.383 V/m	1.278 V/m
474	07/26/2016 11:20:04 AM	1.436 V/m	1.320 V/m	1.182 V/m
475	07/26/2016 11:20:14 AM	1.583 V/m	1.375 V/m	1.240 V/m
476	07/26/2016 11:20:24 AM	1.535 V/m	1.363 V/m	1.265 V/m
477	07/26/2016 11:20:34 AM	1.510 V/m	1.357 V/m	1.268 V/m
478	07/26/2016 11:20:44 AM	1.519 V/m	1.329 V/m	1.252 V/m
479	07/26/2016 11:20:54 AM	1.534 V/m	1.316 V/m	1.246 V/m
480	07/26/2016 11:21:04 AM	1.575 V/m	1.358 V/m	1.190 V/m
481	07/26/2016 11:21:14 AM	1.456 V/m	1.276 V/m	1.164 V/m
482	07/26/2016 11:21:24 AM	1.377 V/m	1.284 V/m	1.175 V/m
483	07/26/2016 11:21:34 AM	1.432 V/m	1.293 V/m	1.210 V/m
484	07/26/2016 11:21:44 AM	1.482 V/m	1.266 V/m	1.189 V/m
485	07/26/2016 11:21:54 AM	1.338 V/m	1.251 V/m	1.185 V/m
486	07/26/2016 11:22:04 AM	1.440 V/m	1.327 V/m	1.259 V/m
487	07/26/2016 11:22:14 AM	1.468 V/m	1.308 V/m	1.193 V/m
488	07/26/2016 11:22:24 AM	1.394 V/m	1.273 V/m	1.166 V/m
489	07/26/2016 11:22:34 AM	1.426 V/m	1.289 V/m	1.168 V/m
490	07/26/2016 11:22:44 AM	1.578 V/m	1.313 V/m	1.182 V/m
491	07/26/2016 11:22:54 AM	1.366 V/m	1.256 V/m	1.192 V/m
492	07/26/2016 11:23:04 AM	1.358 V/m	1.264 V/m	1.179 V/m
493	07/26/2016 11:23:14 AM	1.503 V/m	1.349 V/m	1.215 V/m
494	07/26/2016 11:23:24 AM	1.476 V/m	1.300 V/m	1.197 V/m
495	07/26/2016 11:23:34 AM	1.478 V/m	1.352 V/m	1.212 V/m
496	07/26/2016 11:23:44 AM	1.362 V/m	1.257 V/m	1.188 V/m
497	07/26/2016 11:23:54 AM	1.474 V/m	1.368 V/m	1.257 V/m
498	07/26/2016 11:24:04 AM	1.473 V/m	1.363 V/m	1.210 V/m

499	07/26/2016 11:24:14 AM	1.425 V/m	1.326 V/m	1.242 V/m
500	07/26/2016 11:24:24 AM	1.380 V/m	1.251 V/m	1.165 V/m
501	07/26/2016 11:24:34 AM	1.518 V/m	1.376 V/m	1.278 V/m
502	07/26/2016 11:24:44 AM	1.384 V/m	1.254 V/m	1.201 V/m
503	07/26/2016 11:24:54 AM	1.446 V/m	1.329 V/m	1.222 V/m
504	07/26/2016 11:25:04 AM	1.301 V/m	1.228 V/m	1.178 V/m
505	07/26/2016 11:25:14 AM	1.429 V/m	1.271 V/m	1.198 V/m
506	07/26/2016 11:25:24 AM	1.456 V/m	1.334 V/m	1.240 V/m
507	07/26/2016 11:25:34 AM	1.589 V/m	1.434 V/m	1.301 V/m
508	07/26/2016 11:25:44 AM	1.492 V/m	1.339 V/m	1.231 V/m
509	07/26/2016 11:25:54 AM	1.569 V/m	1.319 V/m	1.207 V/m
510	07/26/2016 11:26:04 AM	1.627 V/m	1.421 V/m	1.319 V/m
511	07/26/2016 11:26:14 AM	1.514 V/m	1.351 V/m	1.258 V/m
512	07/26/2016 11:26:24 AM	1.519 V/m	1.376 V/m	1.284 V/m
513	07/26/2016 11:26:34 AM	1.467 V/m	1.326 V/m	1.171 V/m
514	07/26/2016 11:26:44 AM	1.552 V/m	1.426 V/m	1.207 V/m
515	07/26/2016 11:26:54 AM	1.372 V/m	1.302 V/m	1.200 V/m
516	07/26/2016 11:27:04 AM	1.437 V/m	1.306 V/m	1.216 V/m
517	07/26/2016 11:27:14 AM	1.461 V/m	1.365 V/m	1.306 V/m
518	07/26/2016 11:27:24 AM	1.444 V/m	1.290 V/m	1.209 V/m
519	07/26/2016 11:27:34 AM	1.562 V/m	1.324 V/m	1.167 V/m
520	07/26/2016 11:27:44 AM	1.394 V/m	1.247 V/m	1.159 V/m
521	07/26/2016 11:27:54 AM	1.498 V/m	1.318 V/m	1.235 V/m
522	07/26/2016 11:28:04 AM	1.398 V/m	1.269 V/m	1.200 V/m
523	07/26/2016 11:28:14 AM	1.438 V/m	1.295 V/m	1.148 V/m
524	07/26/2016 11:28:24 AM	1.421 V/m	1.246 V/m	1.170 V/m
525	07/26/2016 11:28:34 AM	1.345 V/m	1.233 V/m	1.175 V/m
526	07/26/2016 11:28:44 AM	1.353 V/m	1.287 V/m	1.208 V/m
527	07/26/2016 11:28:54 AM	1.436 V/m	1.321 V/m	1.223 V/m
528	07/26/2016 11:29:04 AM	1.475 V/m	1.278 V/m	1.172 V/m
529	07/26/2016 11:29:14 AM	1.461 V/m	1.346 V/m	1.234 V/m
530	07/26/2016 11:29:24 AM	1.434 V/m	1.302 V/m	1.197 V/m
531	07/26/2016 11:29:34 AM	1.496 V/m	1.331 V/m	1.242 V/m
532	07/26/2016 11:29:44 AM	1.487 V/m	1.292 V/m	1.206 V/m
533	07/26/2016 11:29:54 AM	1.511 V/m	1.335 V/m	1.187 V/m
534	07/26/2016 11:30:04 AM	1.543 V/m	1.331 V/m	1.203 V/m
535	07/26/2016 11:30:14 AM	1.529 V/m	1.297 V/m	1.211 V/m
536	07/26/2016 11:30:24 AM	1.601 V/m	1.355 V/m	1.238 V/m
537	07/26/2016 11:30:34 AM	1.470 V/m	1.366 V/m	1.246 V/m
538	07/26/2016 11:30:44 AM	1.358 V/m	1.244 V/m	1.167 V/m
539	07/26/2016 11:30:54 AM	1.345 V/m	1.252 V/m	1.160 V/m
540	07/26/2016 11:31:04 AM	1.333 V/m	1.277 V/m	1.202 V/m
541	07/26/2016 11:31:14 AM	1.383 V/m	1.300 V/m	1.232 V/m
542	07/26/2016 11:31:24 AM	1.367 V/m	1.263 V/m	1.167 V/m
543	07/26/2016 11:31:34 AM	1.317 V/m	1.248 V/m	1.168 V/m
544	07/26/2016 11:31:44 AM	1.338 V/m	1.256 V/m	1.193 V/m
545	07/26/2016 11:31:54 AM	1.438 V/m	1.252 V/m	1.170 V/m
546	07/26/2016 11:32:04 AM	1.536 V/m	1.356 V/m	1.241 V/m
547	07/26/2016 11:32:14 AM	1.397 V/m	1.303 V/m	1.227 V/m
548	07/26/2016 11:32:24 AM	1.386 V/m	1.277 V/m	1.217 V/m
549	07/26/2016 11:32:34 AM	1.340 V/m	1.267 V/m	1.200 V/m
550	07/26/2016 11:32:44 AM	1.335 V/m	1.286 V/m	1.224 V/m
551	07/26/2016 11:32:54 AM	1.326 V/m	1.253 V/m	1.207 V/m
552	07/26/2016 11:33:04 AM	1.397 V/m	1.243 V/m	1.167 V/m
553	07/26/2016 11:33:14 AM	1.534 V/m	1.299 V/m	1.173 V/m
554	07/26/2016 11:33:24 AM	1.415 V/m	1.259 V/m	1.187 V/m
555	07/26/2016 11:33:34 AM	1.459 V/m	1.276 V/m	1.178 V/m
556	07/26/2016 11:33:44 AM	1.416 V/m	1.250 V/m	1.178 V/m
557	07/26/2016 11:33:54 AM	1.497 V/m	1.349 V/m	1.227 V/m
558	07/26/2016 11:34:04 AM	1.408 V/m	1.270 V/m	1.215 V/m
559	07/26/2016 11:34:14 AM	1.471 V/m	1.235 V/m	1.161 V/m
560	07/26/2016 11:34:24 AM	1.312 V/m	1.233 V/m	1.185 V/m
561	07/26/2016 11:34:34 AM	1.411 V/m	1.254 V/m	1.171 V/m

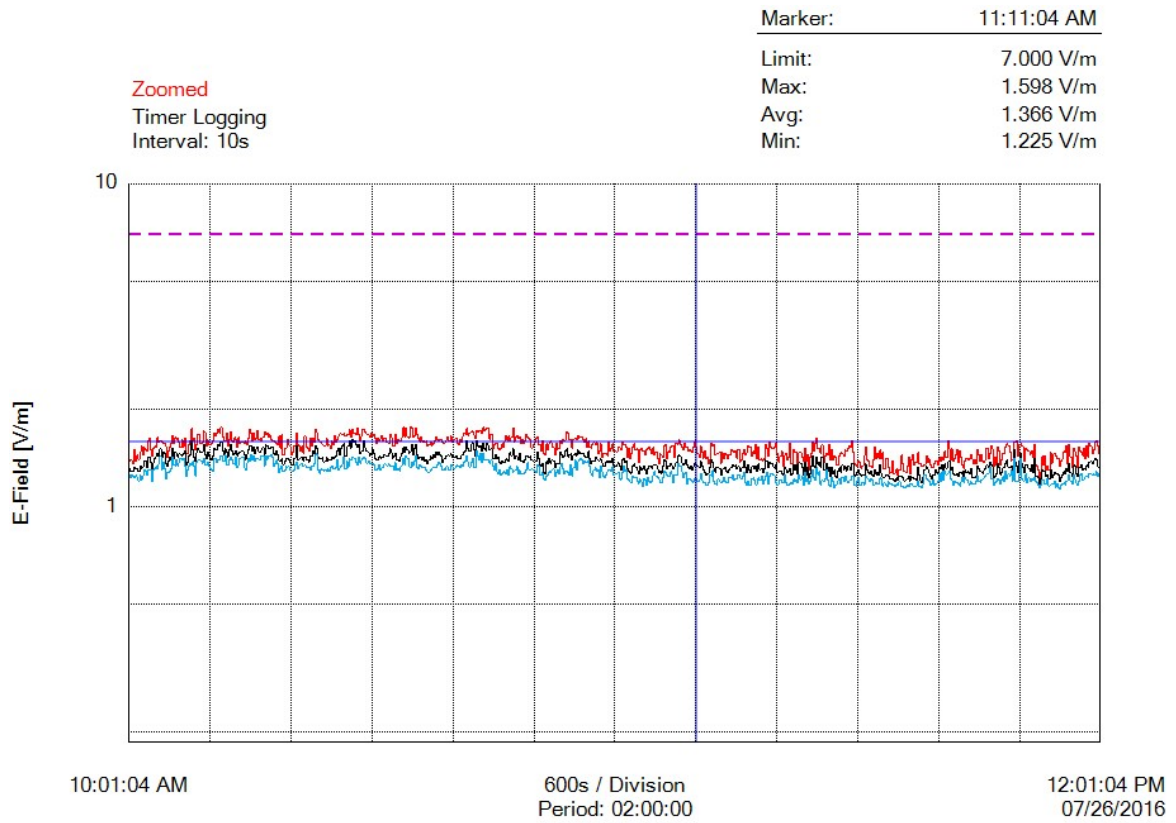


562	07/26/2016 11:34:44 AM	1.409 V/m	1.256 V/m	1.157 V/m
563	07/26/2016 11:34:54 AM	1.326 V/m	1.245 V/m	1.193 V/m
564	07/26/2016 11:35:04 AM	1.270 V/m	1.218 V/m	1.175 V/m
565	07/26/2016 11:35:14 AM	1.274 V/m	1.224 V/m	1.182 V/m
566	07/26/2016 11:35:24 AM	1.384 V/m	1.224 V/m	1.169 V/m
567	07/26/2016 11:35:34 AM	1.270 V/m	1.205 V/m	1.162 V/m
568	07/26/2016 11:35:44 AM	1.272 V/m	1.200 V/m	1.159 V/m
569	07/26/2016 11:35:54 AM	1.306 V/m	1.228 V/m	1.173 V/m
570	07/26/2016 11:36:04 AM	1.253 V/m	1.207 V/m	1.168 V/m
571	07/26/2016 11:36:14 AM	1.299 V/m	1.241 V/m	1.194 V/m
572	07/26/2016 11:36:24 AM	1.299 V/m	1.245 V/m	1.190 V/m
573	07/26/2016 11:36:34 AM	1.445 V/m	1.247 V/m	1.154 V/m
574	07/26/2016 11:36:44 AM	1.358 V/m	1.229 V/m	1.157 V/m
575	07/26/2016 11:36:54 AM	1.287 V/m	1.203 V/m	1.145 V/m
576	07/26/2016 11:37:04 AM	1.272 V/m	1.213 V/m	1.156 V/m
577	07/26/2016 11:37:14 AM	1.331 V/m	1.219 V/m	1.169 V/m
578	07/26/2016 11:37:24 AM	1.426 V/m	1.246 V/m	1.152 V/m
579	07/26/2016 11:37:34 AM	1.265 V/m	1.203 V/m	1.174 V/m
580	07/26/2016 11:37:44 AM	1.391 V/m	1.239 V/m	1.181 V/m
581	07/26/2016 11:37:54 AM	1.446 V/m	1.236 V/m	1.162 V/m
582	07/26/2016 11:38:04 AM	1.350 V/m	1.219 V/m	1.153 V/m
583	07/26/2016 11:38:14 AM	1.377 V/m	1.225 V/m	1.153 V/m
584	07/26/2016 11:38:24 AM	1.370 V/m	1.214 V/m	1.162 V/m
585	07/26/2016 11:38:34 AM	1.470 V/m	1.321 V/m	1.196 V/m
586	07/26/2016 11:38:44 AM	1.360 V/m	1.251 V/m	1.154 V/m
587	07/26/2016 11:38:54 AM	1.362 V/m	1.204 V/m	1.152 V/m
588	07/26/2016 11:39:04 AM	1.336 V/m	1.185 V/m	1.142 V/m
589	07/26/2016 11:39:14 AM	1.341 V/m	1.239 V/m	1.173 V/m
590	07/26/2016 11:39:24 AM	1.349 V/m	1.301 V/m	1.255 V/m
591	07/26/2016 11:39:34 AM	1.442 V/m	1.331 V/m	1.224 V/m
592	07/26/2016 11:39:44 AM	1.370 V/m	1.310 V/m	1.212 V/m
593	07/26/2016 11:39:54 AM	1.407 V/m	1.274 V/m	1.197 V/m
594	07/26/2016 11:40:04 AM	1.350 V/m	1.242 V/m	1.166 V/m
595	07/26/2016 11:40:14 AM	1.320 V/m	1.220 V/m	1.177 V/m
596	07/26/2016 11:40:24 AM	1.328 V/m	1.258 V/m	1.207 V/m
597	07/26/2016 11:40:34 AM	1.356 V/m	1.257 V/m	1.170 V/m
598	07/26/2016 11:40:44 AM	1.383 V/m	1.296 V/m	1.177 V/m
599	07/26/2016 11:40:54 AM	1.388 V/m	1.270 V/m	1.184 V/m
600	07/26/2016 11:41:04 AM	1.347 V/m	1.281 V/m	1.203 V/m
601	07/26/2016 11:41:14 AM	1.418 V/m	1.324 V/m	1.269 V/m
602	07/26/2016 11:41:24 AM	1.388 V/m	1.306 V/m	1.194 V/m
603	07/26/2016 11:41:34 AM	1.422 V/m	1.349 V/m	1.283 V/m
604	07/26/2016 11:41:44 AM	1.399 V/m	1.290 V/m	1.206 V/m
605	07/26/2016 11:41:54 AM	1.487 V/m	1.354 V/m	1.290 V/m
606	07/26/2016 11:42:04 AM	1.420 V/m	1.316 V/m	1.258 V/m
607	07/26/2016 11:42:14 AM	1.599 V/m	1.374 V/m	1.270 V/m
608	07/26/2016 11:42:24 AM	1.513 V/m	1.388 V/m	1.292 V/m
609	07/26/2016 11:42:34 AM	1.393 V/m	1.294 V/m	1.218 V/m
610	07/26/2016 11:42:44 AM	1.510 V/m	1.328 V/m	1.206 V/m
611	07/26/2016 11:42:54 AM	1.388 V/m	1.264 V/m	1.171 V/m
612	07/26/2016 11:43:04 AM	1.404 V/m	1.254 V/m	1.195 V/m
613	07/26/2016 11:43:14 AM	1.455 V/m	1.257 V/m	1.189 V/m
614	07/26/2016 11:43:24 AM	1.503 V/m	1.271 V/m	1.187 V/m
615	07/26/2016 11:43:34 AM	1.377 V/m	1.239 V/m	1.176 V/m
616	07/26/2016 11:43:44 AM	1.489 V/m	1.279 V/m	1.161 V/m
617	07/26/2016 11:43:54 AM	1.417 V/m	1.269 V/m	1.195 V/m
618	07/26/2016 11:44:04 AM	1.346 V/m	1.284 V/m	1.239 V/m
619	07/26/2016 11:44:14 AM	1.315 V/m	1.235 V/m	1.192 V/m
620	07/26/2016 11:44:24 AM	1.391 V/m	1.298 V/m	1.235 V/m
621	07/26/2016 11:44:34 AM	1.416 V/m	1.272 V/m	1.213 V/m
622	07/26/2016 11:44:44 AM	1.395 V/m	1.287 V/m	1.183 V/m
623	07/26/2016 11:44:54 AM	1.404 V/m	1.264 V/m	1.171 V/m
624	07/26/2016 11:45:04 AM	1.451 V/m	1.317 V/m	1.194 V/m

625	07/26/2016 11:45:14 AM	1.405 V/m	1.226 V/m	1.178 V/m
626	07/26/2016 11:45:24 AM	1.360 V/m	1.237 V/m	1.175 V/m
627	07/26/2016 11:45:34 AM	1.399 V/m	1.228 V/m	1.175 V/m
628	07/26/2016 11:45:44 AM	1.358 V/m	1.246 V/m	1.203 V/m
629	07/26/2016 11:45:54 AM	1.507 V/m	1.341 V/m	1.238 V/m
630	07/26/2016 11:46:04 AM	1.454 V/m	1.309 V/m	1.196 V/m
631	07/26/2016 11:46:14 AM	1.382 V/m	1.283 V/m	1.193 V/m
632	07/26/2016 11:46:24 AM	1.450 V/m	1.282 V/m	1.209 V/m
633	07/26/2016 11:46:34 AM	1.381 V/m	1.269 V/m	1.219 V/m
634	07/26/2016 11:46:44 AM	1.374 V/m	1.295 V/m	1.226 V/m
635	07/26/2016 11:46:54 AM	1.392 V/m	1.314 V/m	1.245 V/m
636	07/26/2016 11:47:04 AM	1.518 V/m	1.348 V/m	1.261 V/m
637	07/26/2016 11:47:14 AM	1.405 V/m	1.319 V/m	1.271 V/m
638	07/26/2016 11:47:24 AM	1.462 V/m	1.375 V/m	1.323 V/m
639	07/26/2016 11:47:34 AM	1.546 V/m	1.349 V/m	1.224 V/m
640	07/26/2016 11:47:44 AM	1.509 V/m	1.333 V/m	1.220 V/m
641	07/26/2016 11:47:54 AM	1.329 V/m	1.233 V/m	1.164 V/m
642	07/26/2016 11:48:04 AM	1.429 V/m	1.247 V/m	1.189 V/m
643	07/26/2016 11:48:14 AM	1.349 V/m	1.263 V/m	1.203 V/m
644	07/26/2016 11:48:24 AM	1.533 V/m	1.355 V/m	1.223 V/m
645	07/26/2016 11:48:34 AM	1.491 V/m	1.321 V/m	1.213 V/m
646	07/26/2016 11:48:44 AM	1.349 V/m	1.260 V/m	1.178 V/m
647	07/26/2016 11:48:54 AM	1.401 V/m	1.281 V/m	1.212 V/m
648	07/26/2016 11:49:04 AM	1.467 V/m	1.319 V/m	1.240 V/m
649	07/26/2016 11:49:14 AM	1.457 V/m	1.324 V/m	1.197 V/m
650	07/26/2016 11:49:24 AM	1.535 V/m	1.361 V/m	1.289 V/m
651	07/26/2016 11:49:34 AM	1.569 V/m	1.392 V/m	1.216 V/m
652	07/26/2016 11:49:44 AM	1.546 V/m	1.329 V/m	1.261 V/m
653	07/26/2016 11:49:54 AM	1.482 V/m	1.323 V/m	1.244 V/m
654	07/26/2016 11:50:04 AM	1.390 V/m	1.334 V/m	1.295 V/m
655	07/26/2016 11:50:14 AM	1.400 V/m	1.291 V/m	1.204 V/m
656	07/26/2016 11:50:24 AM	1.585 V/m	1.506 V/m	1.415 V/m
657	07/26/2016 11:50:34 AM	1.586 V/m	1.372 V/m	1.195 V/m
658	07/26/2016 11:50:44 AM	1.602 V/m	1.333 V/m	1.196 V/m
659	07/26/2016 11:50:54 AM	1.439 V/m	1.279 V/m	1.201 V/m
660	07/26/2016 11:51:04 AM	1.557 V/m	1.392 V/m	1.251 V/m
661	07/26/2016 11:51:14 AM	1.566 V/m	1.466 V/m	1.414 V/m
662	07/26/2016 11:51:24 AM	1.537 V/m	1.357 V/m	1.224 V/m
663	07/26/2016 11:51:34 AM	1.536 V/m	1.323 V/m	1.202 V/m
664	07/26/2016 11:51:44 AM	1.381 V/m	1.273 V/m	1.204 V/m
665	07/26/2016 11:51:54 AM	1.516 V/m	1.349 V/m	1.264 V/m
666	07/26/2016 11:52:04 AM	1.498 V/m	1.353 V/m	1.188 V/m
667	07/26/2016 11:52:14 AM	1.482 V/m	1.314 V/m	1.230 V/m
668	07/26/2016 11:52:24 AM	1.453 V/m	1.289 V/m	1.196 V/m
669	07/26/2016 11:52:34 AM	1.488 V/m	1.353 V/m	1.220 V/m
670	07/26/2016 11:52:44 AM	1.422 V/m	1.271 V/m	1.208 V/m
671	07/26/2016 11:52:54 AM	1.557 V/m	1.413 V/m	1.231 V/m
672	07/26/2016 11:53:04 AM	1.335 V/m	1.245 V/m	1.200 V/m
673	07/26/2016 11:53:14 AM	1.343 V/m	1.242 V/m	1.190 V/m
674	07/26/2016 11:53:24 AM	1.299 V/m	1.234 V/m	1.170 V/m
675	07/26/2016 11:53:34 AM	1.210 V/m	1.173 V/m	1.145 V/m
676	07/26/2016 11:53:44 AM	1.283 V/m	1.226 V/m	1.163 V/m
677	07/26/2016 11:53:54 AM	1.431 V/m	1.301 V/m	1.208 V/m
678	07/26/2016 11:54:04 AM	1.343 V/m	1.287 V/m	1.214 V/m
679	07/26/2016 11:54:14 AM	1.440 V/m	1.294 V/m	1.178 V/m
680	07/26/2016 11:54:24 AM	1.302 V/m	1.238 V/m	1.180 V/m
681	07/26/2016 11:54:34 AM	1.336 V/m	1.255 V/m	1.224 V/m
682	07/26/2016 11:54:44 AM	1.295 V/m	1.219 V/m	1.158 V/m
683	07/26/2016 11:54:54 AM	1.472 V/m	1.301 V/m	1.169 V/m
684	07/26/2016 11:55:04 AM	1.365 V/m	1.227 V/m	1.178 V/m
685	07/26/2016 11:55:14 AM	1.453 V/m	1.254 V/m	1.176 V/m
686	07/26/2016 11:55:24 AM	1.460 V/m	1.281 V/m	1.198 V/m
687	07/26/2016 11:55:34 AM	1.435 V/m	1.265 V/m	1.150 V/m

688	07/26/2016 11:55:44 AM	1.410 V/m	1.270 V/m	1.178 V/m
689	07/26/2016 11:55:54 AM	1.413 V/m	1.252 V/m	1.146 V/m
690	07/26/2016 11:56:04 AM	1.331 V/m	1.197 V/m	1.139 V/m
691	07/26/2016 11:56:14 AM	1.385 V/m	1.233 V/m	1.168 V/m
692	07/26/2016 11:56:24 AM	1.406 V/m	1.258 V/m	1.179 V/m
693	07/26/2016 11:56:34 AM	1.483 V/m	1.283 V/m	1.185 V/m
694	07/26/2016 11:56:44 AM	1.471 V/m	1.262 V/m	1.169 V/m
695	07/26/2016 11:56:54 AM	1.548 V/m	1.311 V/m	1.200 V/m
696	07/26/2016 11:57:04 AM	1.357 V/m	1.285 V/m	1.208 V/m
697	07/26/2016 11:57:14 AM	1.560 V/m	1.362 V/m	1.258 V/m
698	07/26/2016 11:57:24 AM	1.425 V/m	1.274 V/m	1.201 V/m
699	07/26/2016 11:57:34 AM	1.319 V/m	1.243 V/m	1.179 V/m
700	07/26/2016 11:57:44 AM	1.519 V/m	1.330 V/m	1.256 V/m
701	07/26/2016 11:57:54 AM	1.484 V/m	1.344 V/m	1.216 V/m
702	07/26/2016 11:58:04 AM	1.439 V/m	1.262 V/m	1.184 V/m
703	07/26/2016 11:58:14 AM	1.327 V/m	1.241 V/m	1.165 V/m
704	07/26/2016 11:58:24 AM	1.529 V/m	1.322 V/m	1.195 V/m
705	07/26/2016 11:58:34 AM	1.492 V/m	1.320 V/m	1.248 V/m
706	07/26/2016 11:58:44 AM	1.472 V/m	1.348 V/m	1.261 V/m
707	07/26/2016 11:58:54 AM	1.442 V/m	1.298 V/m	1.210 V/m
708	07/26/2016 11:59:04 AM	1.522 V/m	1.318 V/m	1.215 V/m
709	07/26/2016 11:59:14 AM	1.411 V/m	1.306 V/m	1.239 V/m
710	07/26/2016 11:59:24 AM	1.549 V/m	1.344 V/m	1.246 V/m
711	07/26/2016 11:59:34 AM	1.429 V/m	1.327 V/m	1.236 V/m
712	07/26/2016 11:59:44 AM	1.576 V/m	1.374 V/m	1.270 V/m
713	07/26/2016 11:59:54 AM	1.537 V/m	1.383 V/m	1.264 V/m
714	07/26/2016 12:00:04 PM	1.456 V/m	1.359 V/m	1.253 V/m
715	07/26/2016 12:00:14 PM	1.497 V/m	1.388 V/m	1.264 V/m
716	07/26/2016 12:00:24 PM	1.585 V/m	1.413 V/m	1.257 V/m
717	07/26/2016 12:00:34 PM	1.602 V/m	1.401 V/m	1.283 V/m
718	07/26/2016 12:00:44 PM	1.541 V/m	1.330 V/m	1.246 V/m
719	07/26/2016 12:00:54 PM	1.465 V/m	1.328 V/m	1.270 V/m
720	07/26/2016 12:01:04 PM	1.539 V/m	1.335 V/m	1.251 V/m

Graph



## Parameters

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Number of Sub Indices	720
Storing Date	07/26/2016
Storing Time	10:01:04 AM
Dataset Type	TIM
Voice Comment Available	NO
Dataset Fine Type	T1
GPS Flag	DIFF
Device Product Name	NBM-550
Device Serial Number	B-0507
Device Cal Due Date	06/10/2017
Probe Product Name	EF0391
Probe Serial Number	A-0636
Probe Cal Due Date	06/15/2017
Probe Field Type	E
Probe Connection Type	A
Probe Lower Frequency Limit A	100 kHz
Probe Upper Frequency Limit A	3 GHz
Probe Lower Frequency Limit B	100 kHz
Probe Upper Frequency Limit B	3 GHz
Probe Emin A	185.0 mV/m
Probe Emax A	300.0 V/m
Probe Emin B	185.0 mV/m
Probe Emax B	300.0 V/m
Shaped Probe	NO
Standard ID	1
Standard Name	FCC 1997 Occupational
Apply Standard	OFF
Frequency	100 kHz
Apply Correction Frequency	OFF
Eref_E(f)	614.0 V/m
Eref_H(f)	614.5 V/m
Combi Probe Use	E_H
Unit	V/m
Results Format	FIXED
Auto-Zero Interval	OFF
Result Type	-
Averaging Time	-
Average Progress	-
Spatial AVG Mode	-
Store Condition	-
Storing Range	-
Cond. Stop Time	-
Upper Threshold	-
Lower Threshold	-
Timer Interval	10 sec
Timer Duration	02:00:00
History Time Scale	-
Time progress of current segment	-

FOTOGRAFIE REJONU BADAŃ:



Fot. 2. Rejon badań, widok w kierunku południowo – wschodnim



Fot. 3. Rejon badań, widok w kierunku północno-wschodnim



Fot. 3. Rejon badań, widok w kierunku południowo-wschodnim



Fot. 4. Przyrząd pomiarowy w trakcie wykonywanego badania



Oznaczenia:

- P-2 – punkt pomiarowy poziomów pól elektromagnetycznych w środowisku

**Ryc. Szkic sytuacyjny rejonu badań.**



**Analiza widma promieniowania  
elektromagnetycznego  
w środowisku**

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**Wyniki pomiarów i analiz widma pól elektromagnetycznych w zakresie częstotliwości od 27 MHz do 3 GHz, składowej elektrycznej  $E$ , V/m, w punkcie pomiarowym P-2 Gliwice Brzezinka:**

1.  $E$ , V/m, wartość maksymalna określona w paśmie częstotliwości 27 MHz - 3 GHz

$$E = 377,7 \text{ mV/m}, (N)^*$$

na poziomie częstotliwości  $f$ : 1 842,604 MHz  
(Ryc. 1: **Marker A**);

2.  $E$ , V/m, scałkowana wartość szerokopasmowa (wraz z szumami),  
w paśmie częstotliwości 27 MHz - 3 GHz

$$E = 1,320 \text{ V/m}; (N)^*$$

3.  $E$ , V/m, wartość maksymalna określona w paśmie częstotliwości 27 MHz - 108 MHz,

$$E = 6,401 \text{ mV/m}; (N)^*$$

4.  $E$ , V/m, scałkowana wartość szerokopasmowa (wraz z szumami),  
w paśmie częstotliwości 27 MHz - 108 MHz,

$$E = 51,17 \text{ mV/m}; (N)^*$$

5.  $E$ , V/m, wartość maksymalna określona w paśmie częstotliwości 108 MHz - 450 MHz,

$$E = 3,961 \text{ mV/m}; (N)^*$$

6.  $E$ , V/m, scałkowana wartość szerokopasmowa (wraz z szumami),  
w paśmie częstotliwości 108 MHz - 450 MHz,

$$E = 41,79 \text{ mV/m}; (N)^*$$

7.  $E$ , V/m, wartość maksymalna określona w paśmie częstotliwości 450 MHz - 850 MHz,

$$E = 60,53 \text{ mV/m}; (N)^*$$

8.  $E$ , V/m, scałkowana wartość szerokopasmowa (wraz z szumami),  
w paśmie częstotliwości 450 MHz - 850 MHz,

$$E = 171,9 \text{ mV/m}; (N)^*$$

9.  $E$ , V/m, wartość maksymalna określona w paśmie częstotliwości 850 MHz - 3 GHz,

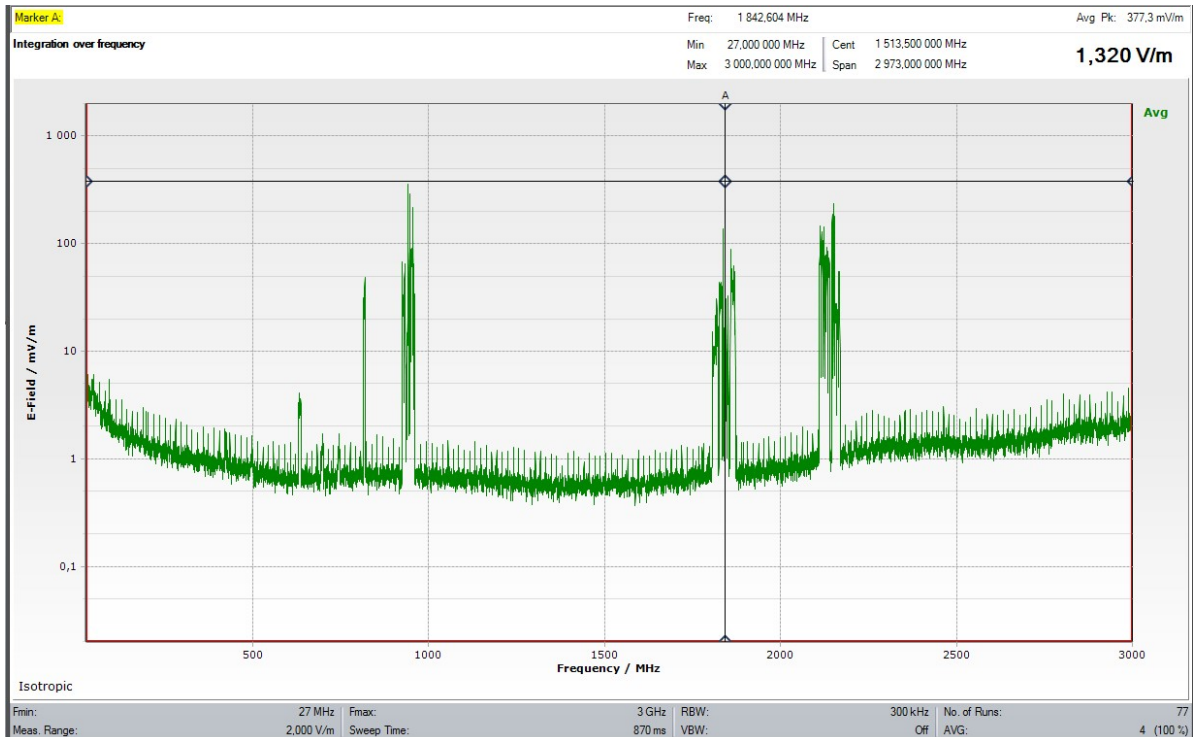
$$E = 391,7 \text{ mV/m}; (N)^*$$

10.  $E$ , V/m, scałkowana wartość szerokopasmowa (wraz z szumami),  
w paśmie częstotliwości 850 MHz - 3 GHz,

$$E = 1,237 \text{ V/m}; (N)^*$$

Objaśnienia:

\*) Oznaczenie symboliczne,  $N$  - status wyniku badania: wynik badania spoza zakresu akredytacji.



**Ryc. 1.** SRM - 3006, Narda STS GmbH, Germany, Analiza widma promieniowania elektromagnetycznego w środowisku, punkt pomiarowy **P-2 Gliwice Brzezinka**.

## INTERPRETACJE I WNIOSKI

W rejonie przedmiotowych pomiarów w badanym zakresie częstotliwości od 27 MHz do 3 GHz dominującymi źródłami PEM wysokiej częstotliwości, są satelity bazowe telefonii komórkowych, pracujące w pasmach: 800, 900, 1800, 2100 MHz. Maksymalne poziomy w pasmie telefonii ruchomej osiągają 5% wartości dopuszczalnej (7 V/m) dla tego zakresu częstotliwości. Poza telefonią mobilną zarejestrowano sygnały cyfrowej telewizji naziemnej DVB-T.