

(19)
(12)

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H05B 3/56

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(11)
(24)

2003 06 25
20-0317436
2003 06 11

(21) 20-2003-0007229
(22) 2003 03 11

(73) 566 가 202

(72) 566 가 202

(74)

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가 :

(54)

가 가 (2); 가 (2)
(10); 가 가 (10); 가 (12)
(14) (12); (20); (12) (10) (20)
(30)

6

233539 , 가 (60)

(40)

(40) , 4b 4c , 4a (60)(70)
(30) , (10)

(20) (14) (2) , 가 가 (4) (2); (2)
(12); (12) (10); 가 가
(10) (12)

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(4)(14)(24)(40) ,

(4)(14)(24)(40) , PVC

(30) 2mm

가 (10) , 6 , 가 가 (20)

, 5 (10) (20)

(30) (10) (20) (30)

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(14) (20) , 가 가 (12)
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(30) 2mm

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1

전자기장인증 시험성적서

접수번호 : EMF - 11

접수일자 : 2003. 1. 25

회 사 명 : 상암 메디텍

대 표 자 : 이 태 하

주 소 : 경기도 김포시 통진면 서암리 650-3

계 품 명 : 발열선

모 델 명 : SA-301

시험규격 : 전자기장 환경인증 시험기준



시 험 결 과

시 험 항 목	시 험 기 준	시 험 결 과
전기장(electric field)	10V/m이하일 것.	적합함(붙임참조)
자기장(magnetic field)	2mG이하일 것.	적합함(붙임참조)

위 신청업체로부터 접수한 시료에 대하여 시험한 성적서임

2003 년 1 월 30 일

한국전기전자시험연구원
품질보증팀장

전자기장 환경인증용	결 재	팀 장	김 영 안
		시험담당	배 기 향

2



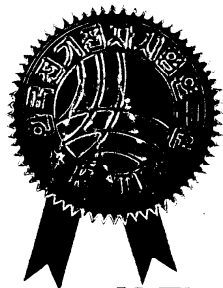
전자기장환경인증서

Electromagnetic Field Certificate

인증번호 : EMF-0301-0015
업체명 : 상암메디텍
대표자 : 이태하
주소 : 경기도 김포시 통진면 서암리 650-3
제품명 : 발열선
모델명 : SA-301
유효기간 : 2003. 01. 30. ~ 2004. 01. 29.



위 업체의 제품은 전기용품에서 발생하는 전기장, 자기장, 전자파의 발생이 우리연구원 "전자기장환경 인증운영요령"에 적합하므로 이에 인증서를 드립니다.



2003년 01월 30일

한국전기전자시험연구원장



측정결과 종합

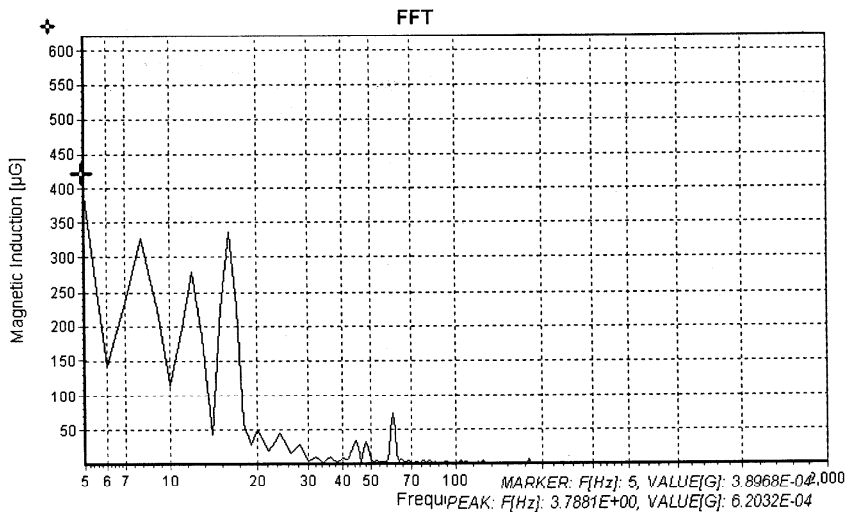
구 분	자기장[uG]	전기장[V/m]	비 고
중앙위치	620.32	5.3649	Peak
상좌위치	593.65	6.5026	"
상우위치	626.28	1.3055	"
하좌위치	609.02	3.4744	"
하우위치	634.94	6.2724	"
평균값	616.84	4.5839	-
<p>시험방법 : 불임과 같이 16m의 발열선을 사각안에 설치한후 시험한 결과임</p>			

1
4.5839[V/m] , 3 616.84[uG]
(:10V/m , :2mG)

4-1 , 4-2 4-1
620.32[uG] , 3.7881 Hz

4-1

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 20, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:17:16
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG



4-2

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 20, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:17:16
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	3.7881 Hz	620.32 µG
Peak 2:	16.006 Hz	336.28 µG
Peak 3:	7.9732 Hz	327.71 µG
Peak 4:	11.958 Hz	279.27 µG
Peak 5:	60.006 Hz	73.541 µG
Peak 6:	20 Hz	49.027 µG
Peak 7:	23.961 Hz	44.771 µG
Peak 8:	43.994 Hz	33.949 µG
Peak 9:	48.029 Hz	32.403 µG

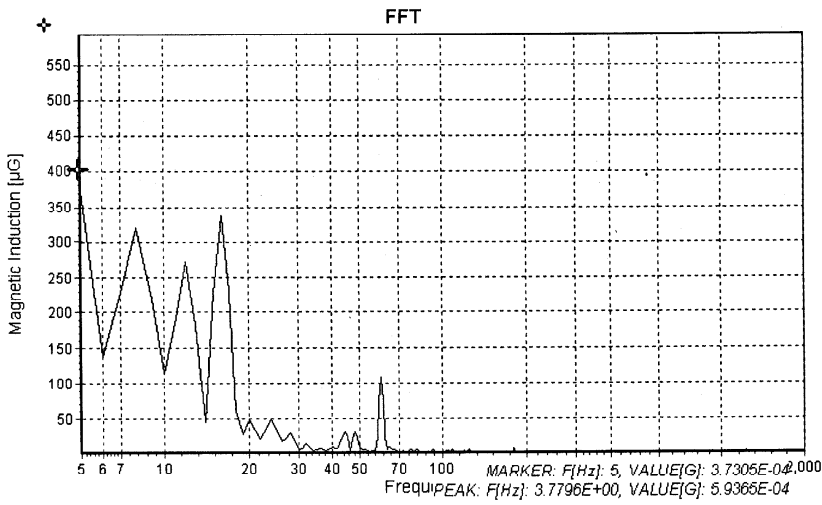
5-1

65[µG], 5-2, 3.7796 Hz, 5-1

593

5-1

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 21, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:23:58
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG



5-2

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 21, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:23:58
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	3.7796 Hz	593.65 µG
Peak 2:	16.005 Hz	336.87 µG
Peak 3:	7.9776 Hz	320.09 µG
Peak 4:	11.956 Hz	273.64 µG
Peak 5:	60.018 Hz	109.35 µG
Peak 6:	23.988 Hz	47.959 µG
Peak 7:	20 Hz	47.276 µG
Peak 8:	43.991 Hz	32.199 µG
Peak 9:	48.018 Hz	31.521 µG

6-1

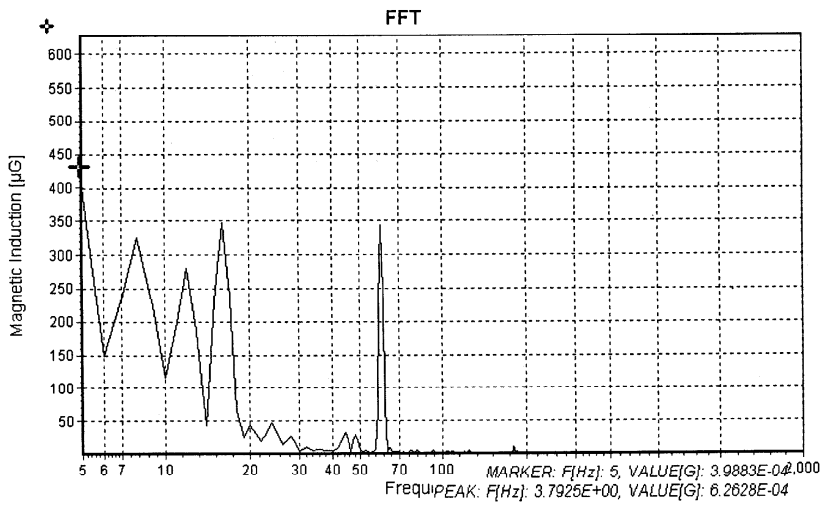
26.28[µG]

6-2 6-1
 3.7925 Hz

6

6-1

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 22, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:25:26
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG



6-2

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 22, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:25:26
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	3.7925 Hz	626.28 μG
Peak 2:	16.011 Hz	345.34 μG
Peak 3:	60.024 Hz	344.43 μG
Peak 4:	7.9666 Hz	325.51 μG
Peak 5:	11.954 Hz	280.96 μG
Peak 6:	23.963 Hz	45.741 μG
Peak 7:	20 Hz	43.093 μG
Peak 8:	43.957 Hz	33.388 μG
Peak 9:	48.031 Hz	30.069 μG

7-1

09.02[uG]

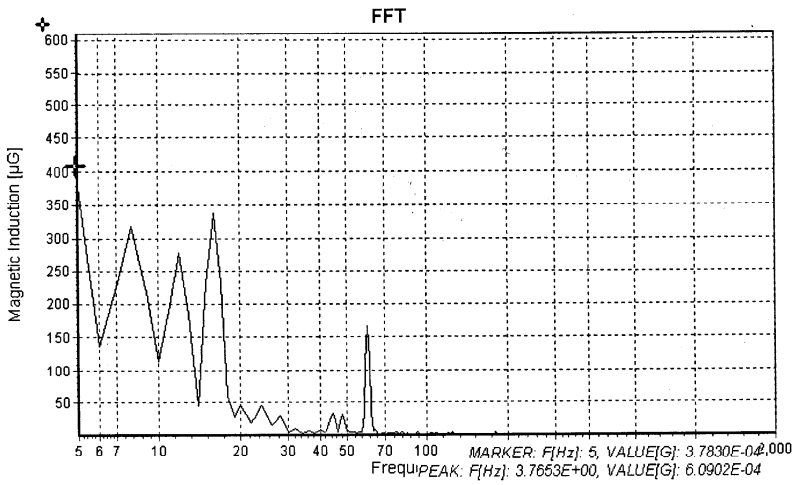
7-2
3.7653 Hz

7-1

6

7-1

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM#: 23, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:26:50
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG



7-2

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM#: 23, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:26:50
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	3.7653 Hz	609.02 μ G
Peak 2:	16.001 Hz	337.35 μ G
Peak 3:	7.9707 Hz	317.41 μ G
Peak 4:	11.953 Hz	278.05 μ G
Peak 5:	60.022 Hz	167.54 μ G
Peak 6:	20 Hz	45.816 μ G
Peak 7:	23.978 Hz	44.851 μ G
Peak 8:	43.989 Hz	33.659 μ G
Peak 9:	48.003 Hz	32.004 μ G

8-1

34.94[uG]

8-2

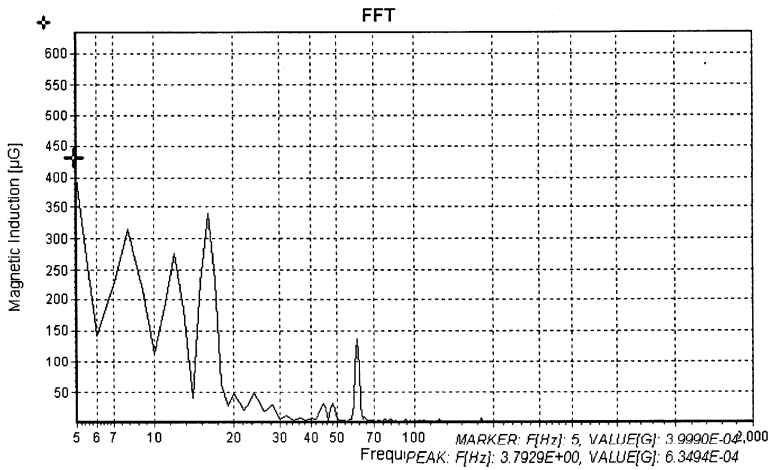
3.7929 Hz

8-1

6

8-1

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 24, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:28:46
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG



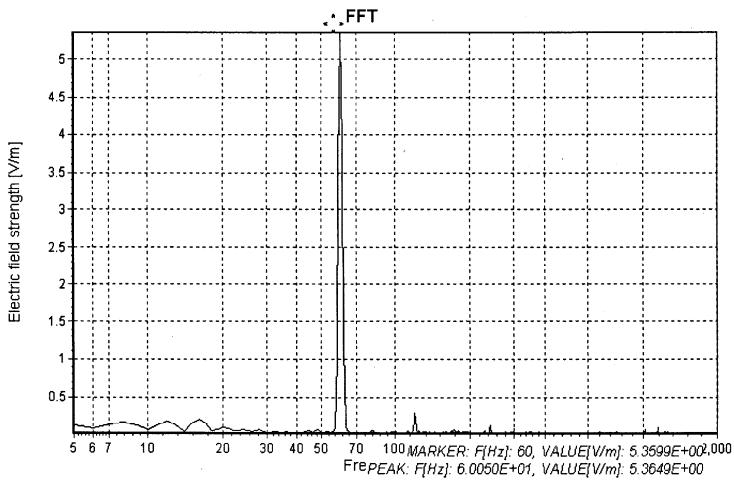
8-2

Device: EFA-300 F-0034, PROBE: EXT_PRB_2, CHN: ALL
 MEM# 24, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 11:28:46
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	3.7929 Hz	634.94 uG
Peak 2:	16.014 Hz	341.36 uG
Peak 3:	7.9687 Hz	315.77 uG
Peak 4:	11.958 Hz	276.35 uG
Peak 5:	60.004 Hz	136.96 uG
Peak 6:	20 Hz	47.859 uG
Peak 7:	24.034 Hz	47.294 uG
Peak 8:	48.014 Hz	32.298 uG
Peak 9:	43.982 Hz	32.007 uG

9-1 , 9-2 9-1 5.
 3649[uG] , 60.05 Hz
 9-1

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM#: 2, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:39:06
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG



9-2

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM#: 2, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:39:06
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG

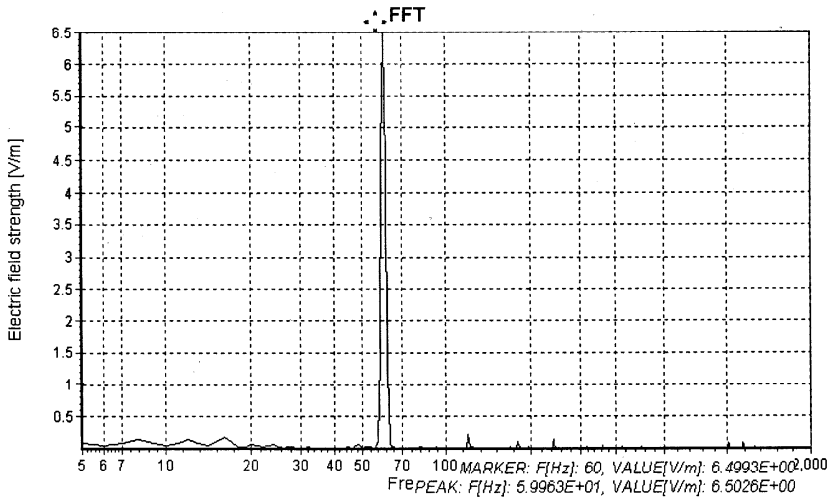
Peaks	Frequency	
Peak 1:	60.05 Hz	5.3649 V/m
Peak 2:	120.11 Hz	301.15 mV/m
Peak 3:	15.993 Hz	213.44 mV/m
Peak 4:	11.928 Hz	176.94 mV/m
Peak 5:	7.9264 Hz	168.63 mV/m
Peak 6:	240.2 Hz	119.83 mV/m
Peak 7:	20.08 Hz	107.7 mV/m
Peak 8:	1.1409 kHz	104.7 mV/m
Peak 9:	300.26 Hz	81.414 mV/m

10-1
 .5026[uG]

10-2
 59.963 Hz

10-1

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 3, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:42:42
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG



10-2

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 3, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:42:42
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	59.963 Hz	6.5026 V/m
Peak 2:	119.94 Hz	233.25 mV/m
Peak 3:	15.978 Hz	197.69 mV/m
Peak 4:	239.87 Hz	153.59 mV/m
Peak 5:	12.075 Hz	149.83 mV/m
Peak 6:	7.9824 Hz	144.31 mV/m
Peak 7:	179.9 Hz	136.51 mV/m
Peak 8:	1.0194 kHz	112.16 mV/m
Peak 9:	1.1393 kHz	105.28 mV/m

11-1

11-2

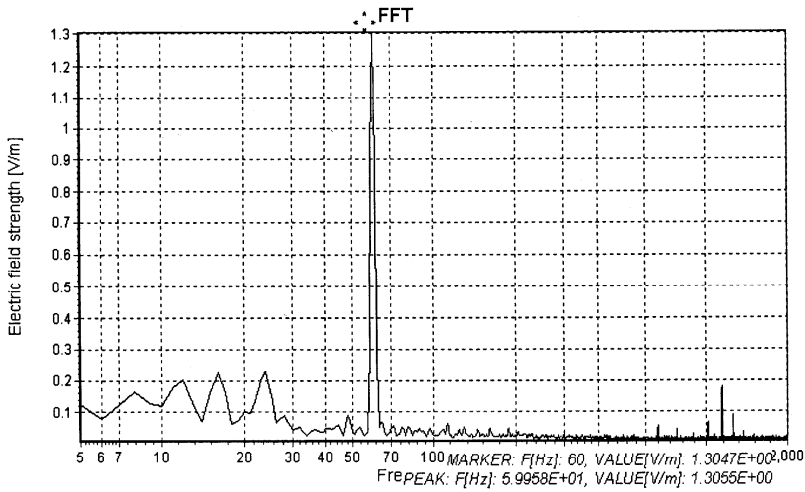
11-1

1.3055[uG]

59.958 Hz

11-1

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 8, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:48:36
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG



11-2

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 8, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:48:36
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[Hz]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	59.958 Hz	1.3055 V/m
Peak 2:	23.737 Hz	233.6 mV/m
Peak 3:	16 Hz	223.21 mV/m
Peak 4:	11.723 Hz	208.85 mV/m
Peak 5:	1.1396 kHz	189.4 mV/m
Peak 6:	8.0283 Hz	163.12 mV/m
Peak 7:	20.342 Hz	100.93 mV/m
Peak 8:	1.2594 kHz	97.828 mV/m
Peak 9:	48.144 Hz	93.029 mV/m

12-1

12-2 12-1

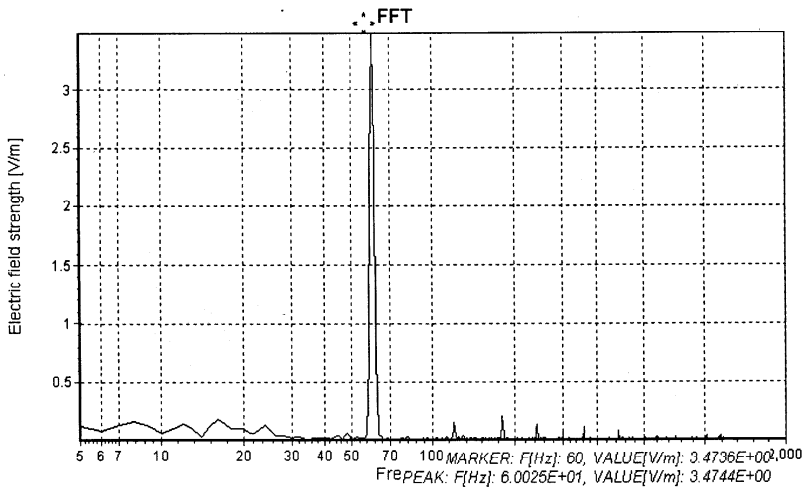
3

.4744[uG]

60.025 Hz

12-1

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 4, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:44:00
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG



12-2

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 4, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:44:00
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	60.025 Hz	3.4744 V/m
Peak 2:	180.07 Hz	209.27 mV/m
Peak 3:	16.153 Hz	186.26 mV/m
Peak 4:	7.9399 Hz	170.78 mV/m
Peak 5:	120.06 Hz	161.01 mV/m
Peak 6:	11.959 Hz	148.89 mV/m
Peak 7:	240.05 Hz	136.15 mV/m
Peak 8:	23.846 Hz	132.46 mV/m
Peak 9:	360.07 Hz	118.2 mV/m

13-1

13-2

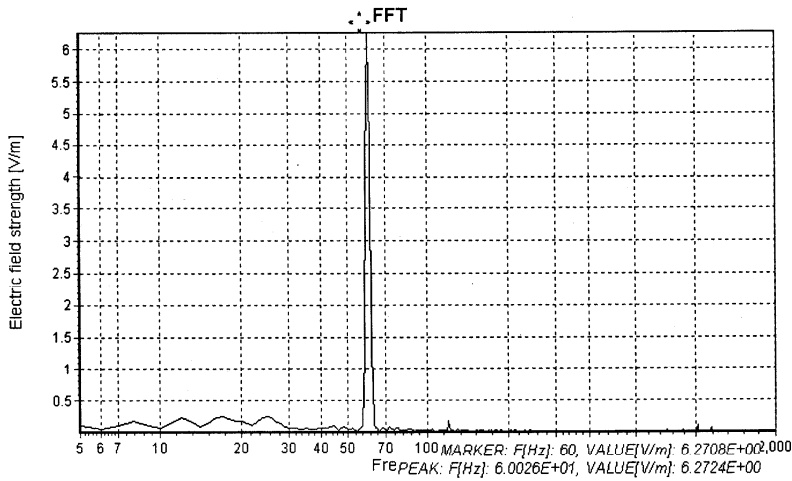
13-1

6.2724[uG]

60.026 Hz

13-1

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 7, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:47:03
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG



13-2

Device: EFA-300 F-0034, PROBE: EF_PRB, CHN: ALL
 MEM# 7, D: V, MODE: FFT
 DATE/TIME: 2003-01-25/오전 10:47:03
 F_RANGE: 5Hz..2KHz, MAX: LIVE, VALID: OK, DF[HZ]: 1, DET: AVG

Peaks	Frequency	
Peak 1:	60.026 Hz	6.2724 V/m
Peak 2:	16.915 Hz	264.8 mV/m
Peak 3:	24.85 Hz	250.89 mV/m
Peak 4:	12.062 Hz	243.8 mV/m
Peak 5:	120.03 Hz	179.67 mV/m
Peak 6:	7.9253 Hz	171.66 mV/m
Peak 7:	1.0203 kHz	136.52 mV/m
Peak 8:	43.882 Hz	127.51 mV/m
Peak 9:	48.029 Hz	111.26 mV/m

, 가 , 가

(57)

1.

가 가 (2) , (2) , (2)
 (4) (10);

가 가 (12) , (12) ,
 (12) (14) (20);

(10) (20)

(30)

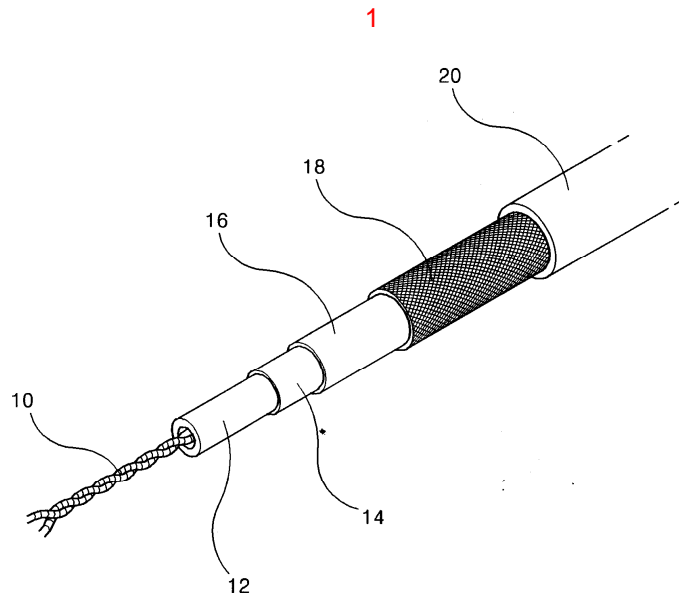
2.

1 , (10) (20) (30) ,
(40)

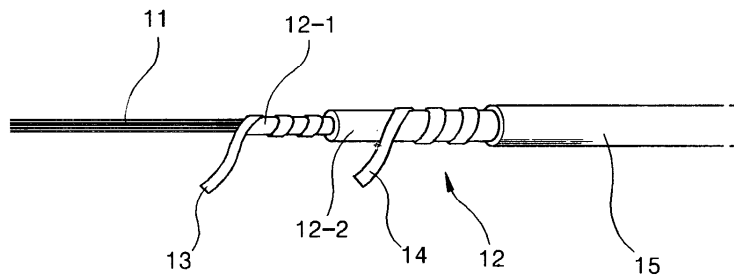
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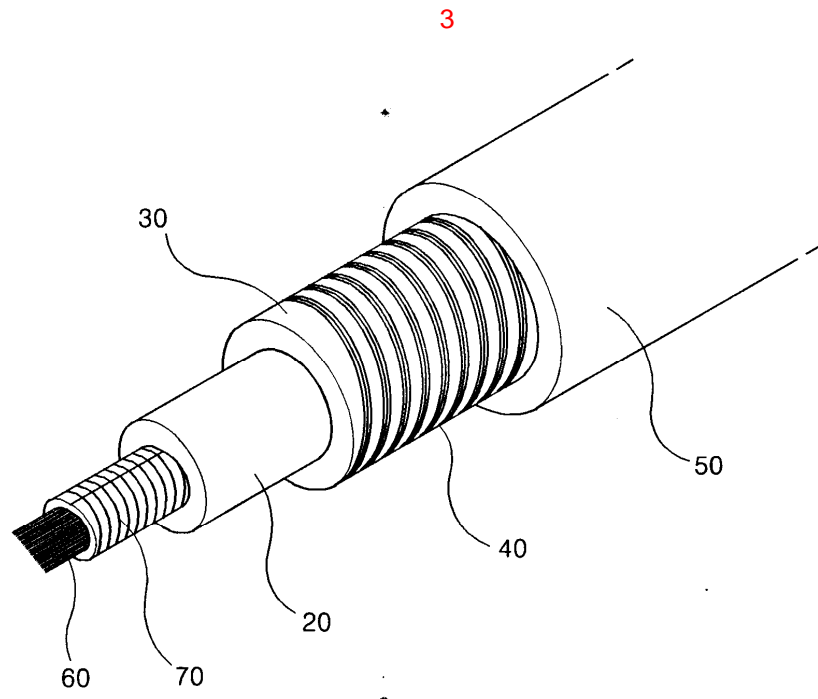
1 , (30) ,

2mm

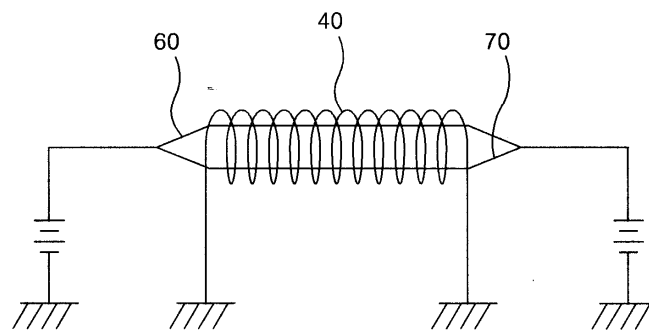


2

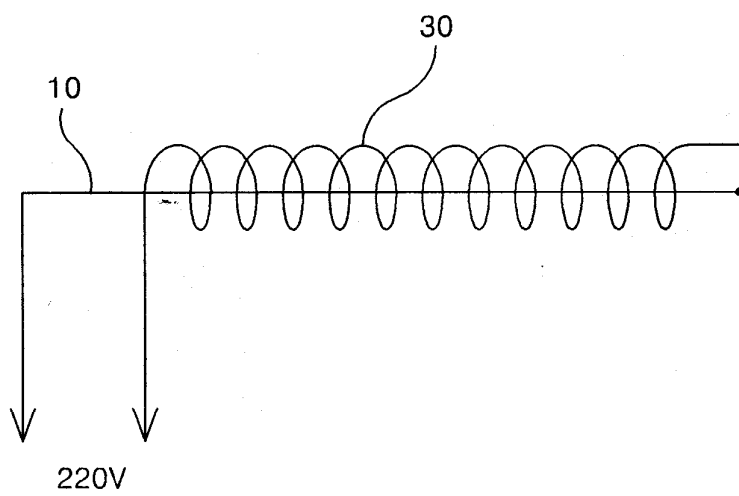




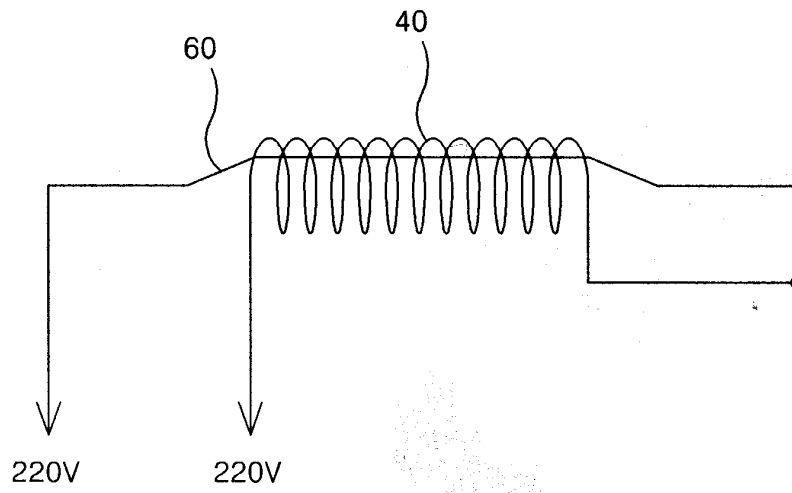
4a



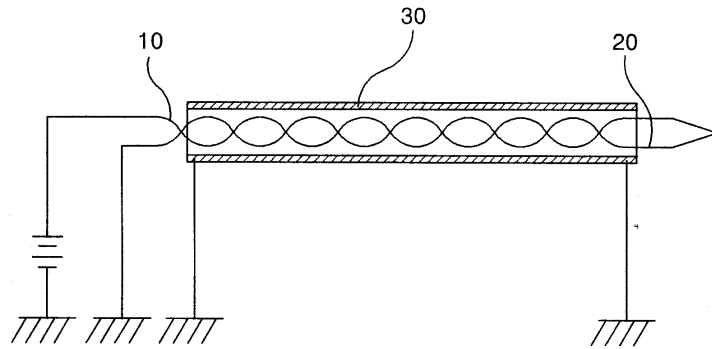
4b



4c



5



6

