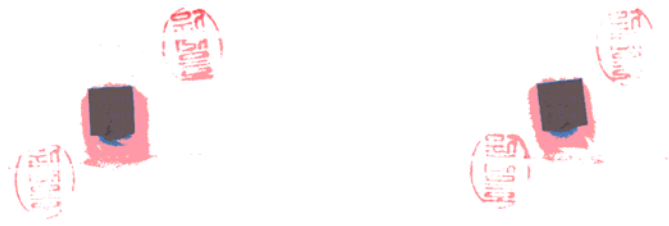




# 시험검사성적서

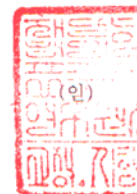
## TEST REPORT

① 의뢰기관 Client	BAN SEOK MATERIAL DEVELOPEMENT CO., LTD.	② 시험번호 Test. No.	98-10342-01
③ 시험대상 Test object	시험명 Test Name	Reflection Loss(S <sub>11</sub> ) Transmission Loss(S <sub>21</sub> )	제작회사및형식 Manufactures & Model
	시험품명 Test item	Electromagnetic Absorbing Materials	시험일자 Test Date
④ 시험환경 Environment	온도 Temperature	23 ± 1 °C	습도 Humidity
⑤ 시험결과 Test Result.			
<p>The test results of the below specimens are attached on the page 1 to 7.</p> <p>1. Test specimen #1(Thickness : 7.44 mm)    2. Test specimen #2(Thickness : 7.42 mm)</p>			
			
<p>* This test result shall not be used for the purpose of advertisement.</p>			

위의 시험검사 결과는 한국표준과학연구원의 국가원기 및 표준기와 소급성이 유지된 표준 계량계측기로서 시험검사한 성적임을 증명함. (We certify that the result as above is based on test using measurement standards traceable to the national primary standards of the Korea Research Institute of Standards and Science.)

본 성적서의 시험결과는 접수된 시험품목에  
한하며 광고 및 신전에 사용할 수 없습니다.

한국표준과학연구원장  
President, Korea Research Institute of Standards and Science



# 시험 검사 결과

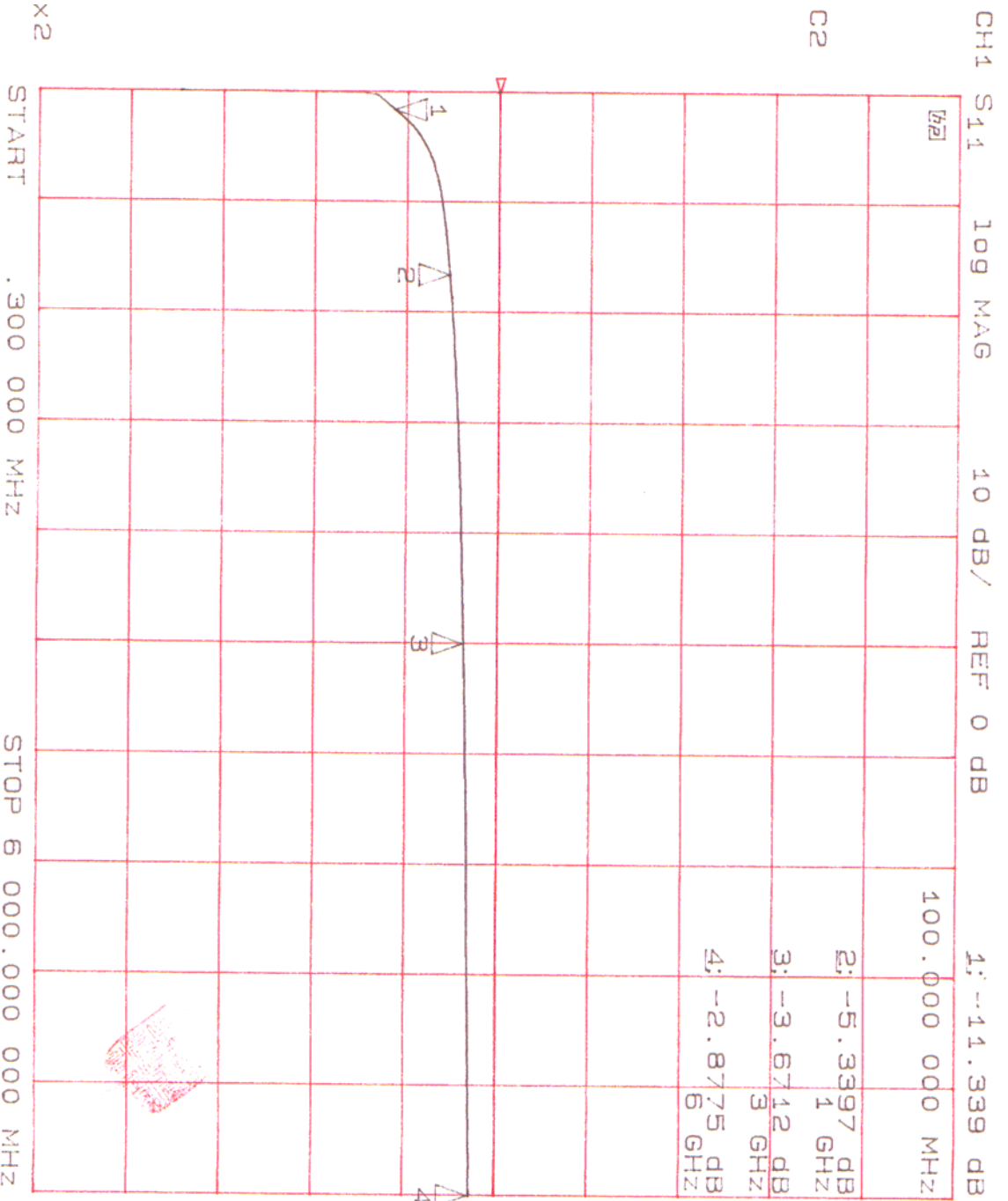
## TEST RESULT

시험번호 98-10342-01  
Test No.

( 7 ) 페이지 중 ( 1 ) 페이지  
page of pages

1. Test Name : Reflection Loss( $S_{11}$ )  
Transmission Loss( $S_{21}$ )
2. Test Item : Electromagnetic Absorbing Materials
3. Used Equipment : - Network Analyzer HP8753C with S-Parameter  
Test Set 85047A  
Plotter HP7475A
4. Test Frequency : 300 kHz - 6 GHz.
5. Test Results : Refer to the graphs attached on the page 2 to 7.

Page 2 : Reflection Loss of Sample #1 (opened)  
Page 3 : Reflection Loss of Sample #1 (shorted)  
Page 4 : Transmission Loss of Sample #1  
Page 5 : Reflection Loss of Sample #2 (opened)  
Page 6 : Reflection Loss of Sample #2 (shorted)  
Page 7 : Transmission Loss of Sample #2



Page 5 of 7 pages  
Sample #2 (opened)

Apr 21, 1998

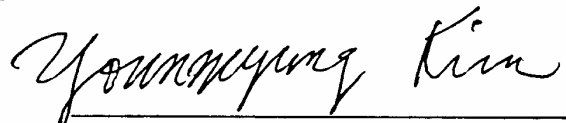
Clarification of Reduction of Electromagnetic Wave by  
Zeropa Gold

The transmission amount ( x ) of electromagnetic wave on 1 GHz frequency through Zeropa Gold is 2.5% calculated from

$$S_{21}(\text{dB}) = 10 \text{Log}x$$

reference from page 4 of Transmission Loss ( S 21 ) test by Korea Research Institute of Standards and Science.

Therefore, Zeropa Gold reduces 97.5% of electromagnetic wave on 1 GHz frequency which is similar to mobile-phone frequency.



by Researcher : Prof., Ph. D. Youn-Myung Kim  
Dept. of Electronics Eng.,  
Engineering College,  
Dan-kook University

A ttachment : Transmission Test by K R I S S