

Seat No. —

King Mongkut's University of Technology Thonburi
Mid-Term Examination of the 2nd/2010 Semester

Course: CPE 454(2) Selected Topic in CPE IV
(Noise Reduction Technique in computer)

Date : Wednesday 22nd December 2010

Time : 1:00 - 4:00 p.m.

For : CPE 3-4 (A-D)

- Instruction:
1. Closed-Book Examination
 2. A calculator is allowed.
 3. A Sc.-Formulae ruler is allowed.
 4. There are 5 problems in 7 pages.
 5. Do all problems for 25% keeping.

Student's Name : _____ (Capital Letter)

Student's ID : _____

Problem 1 _____ (10 marks)
Problem 2 _____ (10 marks)
Problem 3 _____ (10 marks)
Problem 4 _____ (10 marks)
Problem 5 _____ (10 marks)
Total _____ (50 marks)
25% of grand total (100 marks)

Assoc. Prof. Boonruk CHIPPOP
Designer

Problem 1 Explain the following words.

EMC

สำนักหอสมุด

มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี

Three categories of noise sources

The primary methods for combatting interference

Noise coupling channels

สำนักหอสมุด

มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี

EMI

Problem 2

Draw block diagram of MIL-STD-461B

Specification Test Requirements.

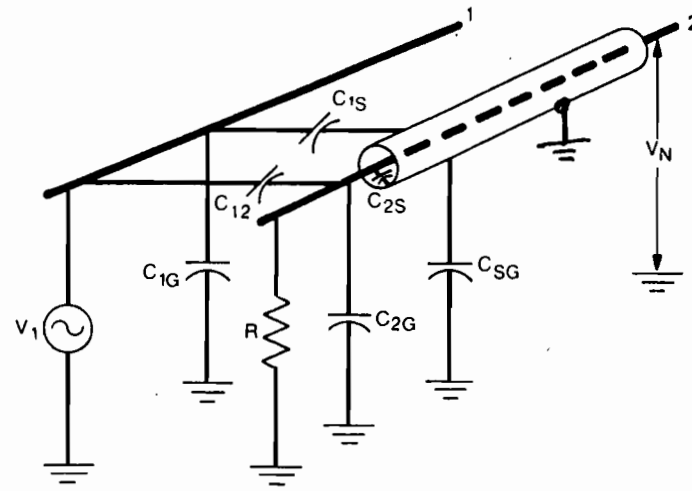
สำนักหอสมุด

ศูนย์เทคโนโลยีพระจอมเกล้าธนบุรี

Problem 3

Find the expression for $V_N(s)$ in figure below.

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PHYSICAL
REPRESENTATION

Problem 4

When both ends of two-wire ^{shielded} conductors are terminated at grounded resistors. How to protect inductive interference ~~from the~~ for the best attenuation? Give the reason. มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี

Problem 5 Explain each graph in figure below.

สำนักหอสมุด
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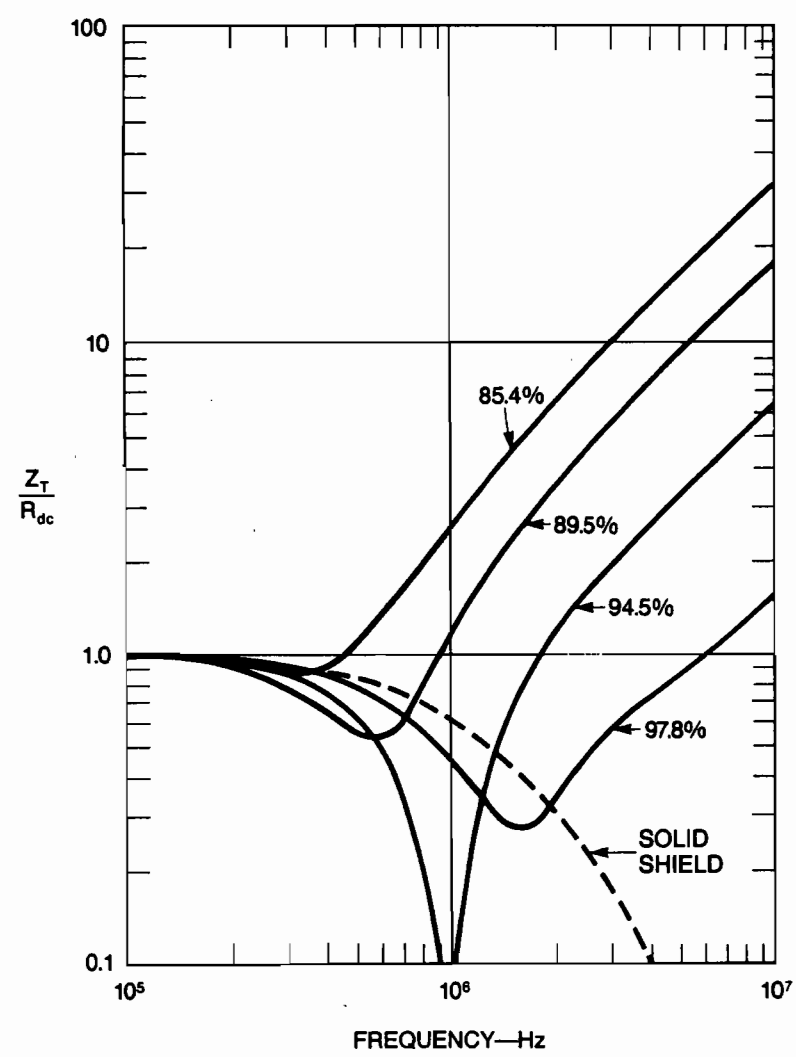


Figure Normalized transfer impedance of a braided-wire shield, as a function of percent braid coverage (from Vance, 1978, © Wiley).