**반도체소자 측정 및 분석기법 HW 1**

EE

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**1.4**

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,

In this problem, the sample is laterally and vertically infinte. Therefore, the equation doesn’t have correction factors.

**1.5**

,

,

In this problem, the sample is laterally and vertically infinte. Therefore, the equation doesn’t have correction factors.

**1.7**

In this problem, the contact is circular. Therefore, .

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Contact** | **DUT** | **R** |  |
| ***M*** | 6.28E-04 | 6.37E+01 |  |  |
| 6.28E-04 | 1.27E+02 |  |  |
| ***M-1*** | 3.18E+03 | -1.59E+03 | 3.18E+02 | 2.02E+04 |
| -1.57E-02 | 1.57E-02 | 6.24E+02 | 4.80E+00 |

**1.15**

,

1. (a)

(b)

(c)

  

  

**1.16**

For arbitrarily shaped van der Pauw sample,

**1.24**

**1.25**

(a)

(b)

**2.3**

(a) ,

(b) Given,

, solve this equation for .

(c)

**2.4**

**2.16**

True capacitance to be measured for Q≥5

At the 107 Hz,