

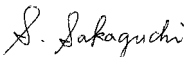
Technical Data of Ceramic Resonator

MURATA Part No.: CSBLA1M00J58-B0

Applied to M34552M8-XXXFP

**TOYAMA MURATA MANUFACTURING CO., LTD.**

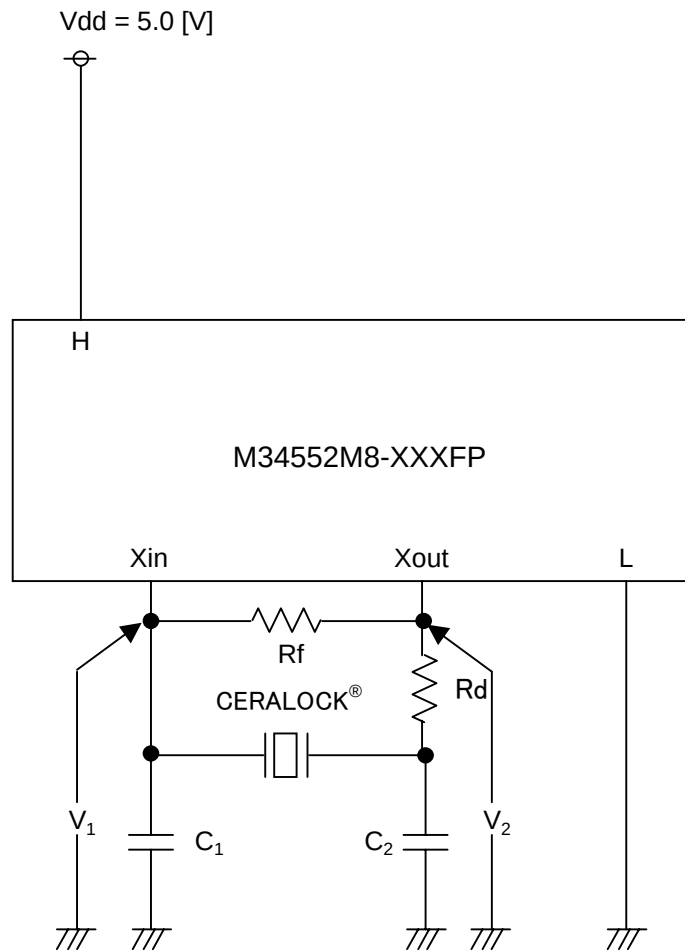
Product Engineering Service Section III  
Planning & Market Promotion Department  
Piezoelectric Components Group

| Approved by                                                                                     | Checked by                                                                                       | Checked by                                                                                      | Issued by                                                                                          | Issued Date | Data No.    |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------|-------------|
| <br>K.Maruno | <br>R.Miyamae | <br>K.Tagata | <br>S.Sakaguchi | Jan 5, 2004 | TCD-03-1613 |

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## Test Circuit



Xin : 20

Xout: 21

H : 18

L : 19,22,25,43

## Recommended Value

CERALOCK® : CSBLA1M00J58-B0

Vdd = 1.9 to 5.5 [V]

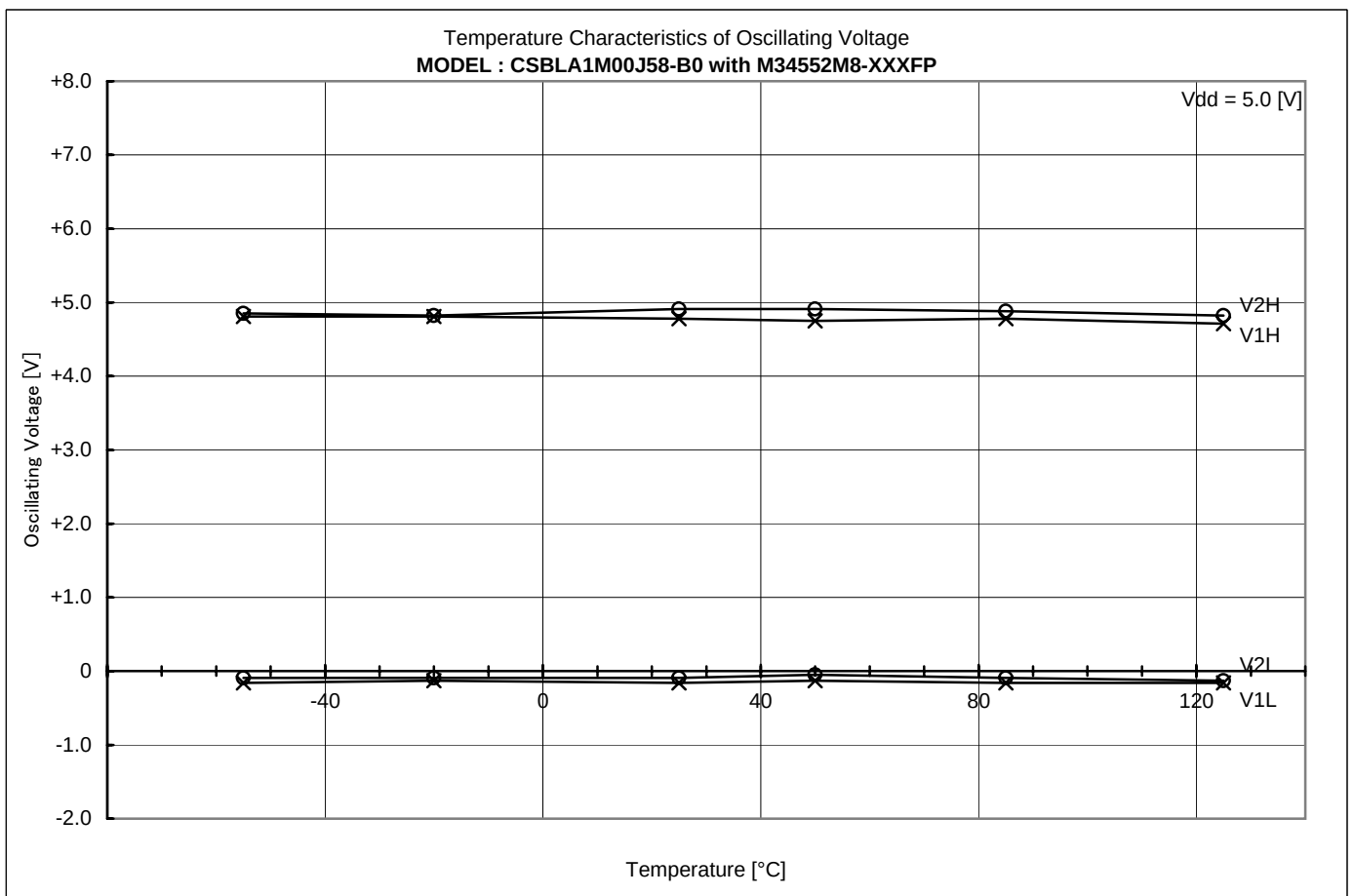
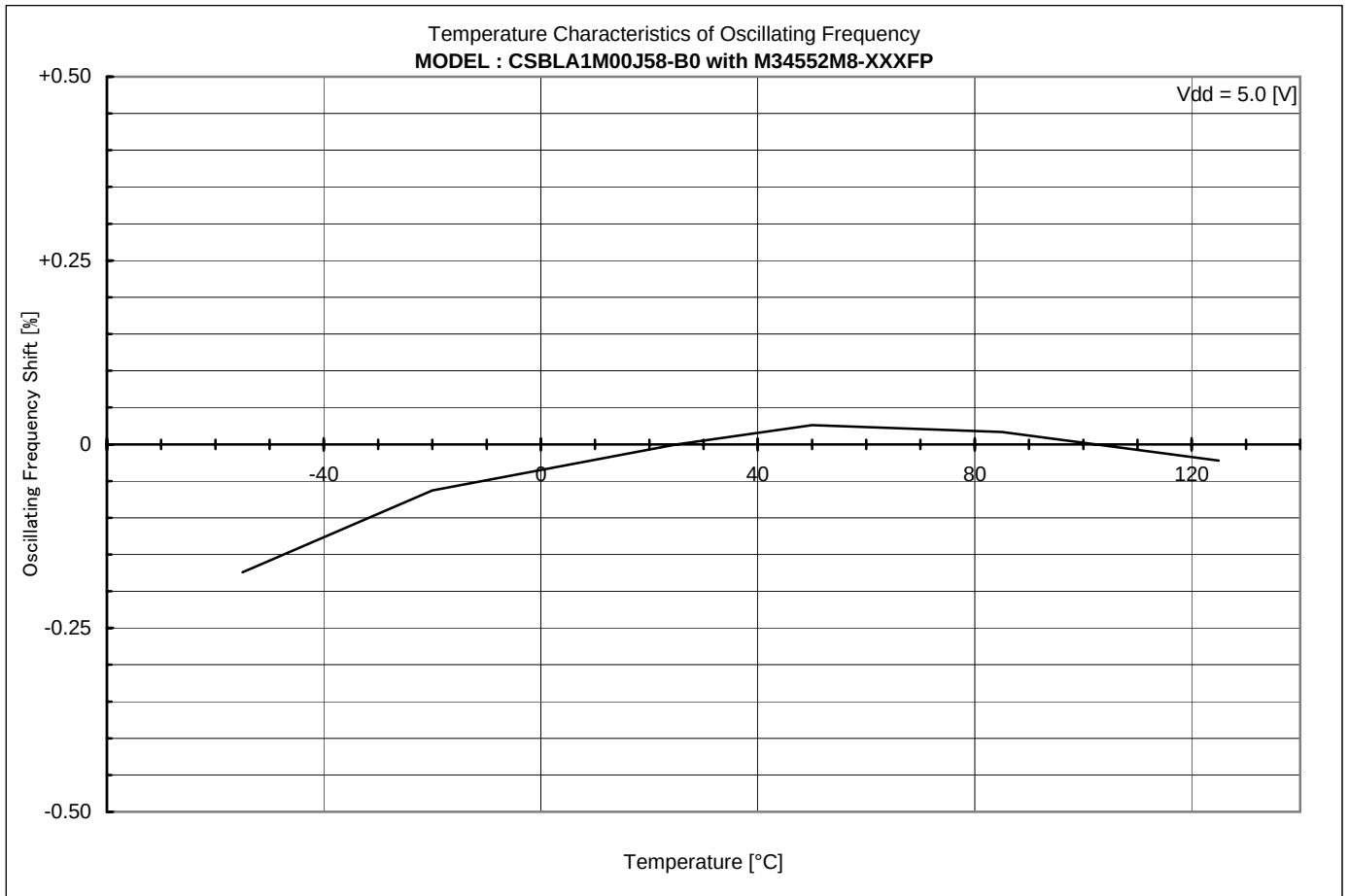
C1 = 100 [pF]

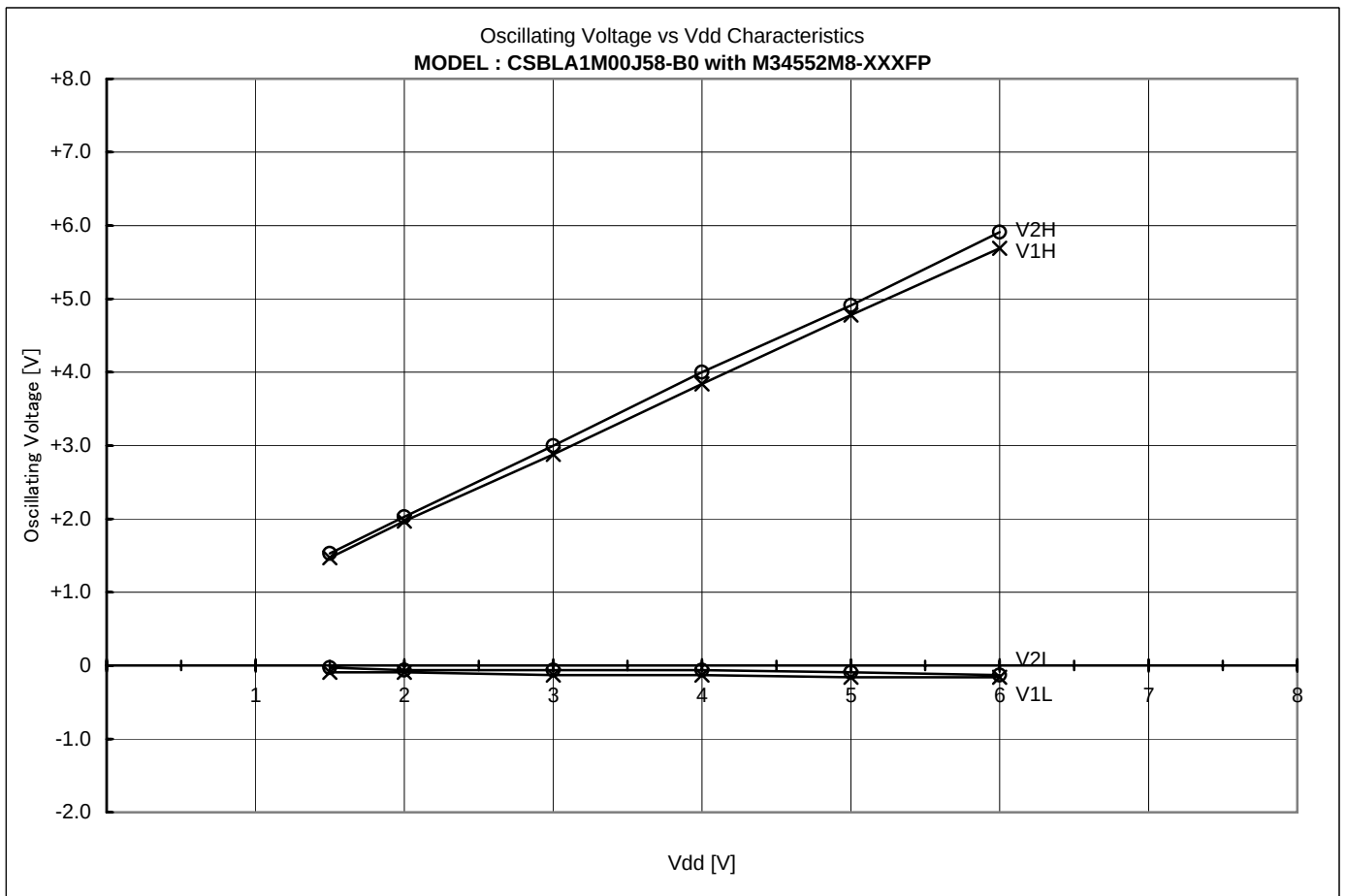
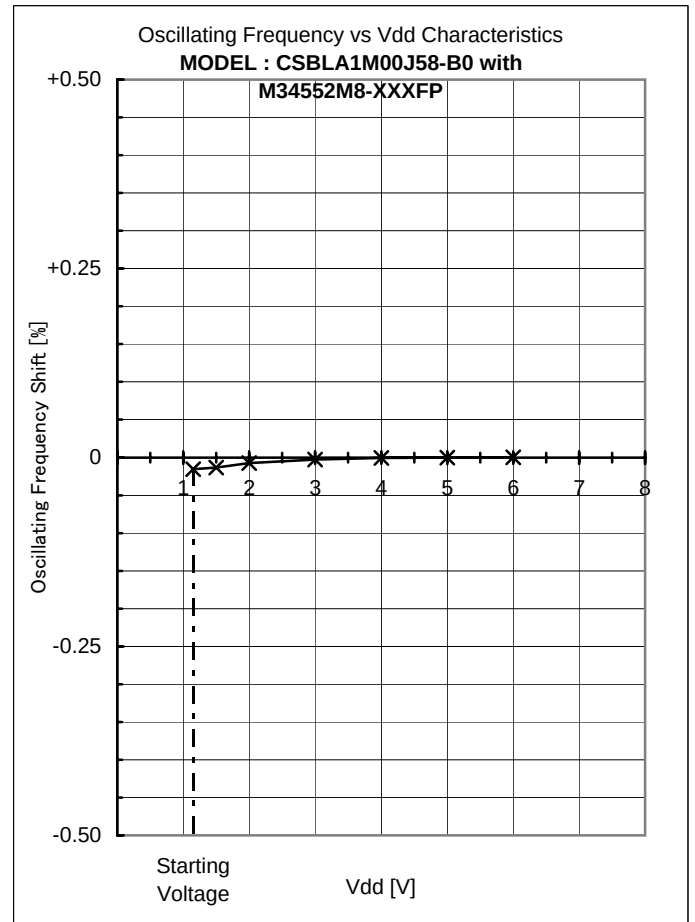
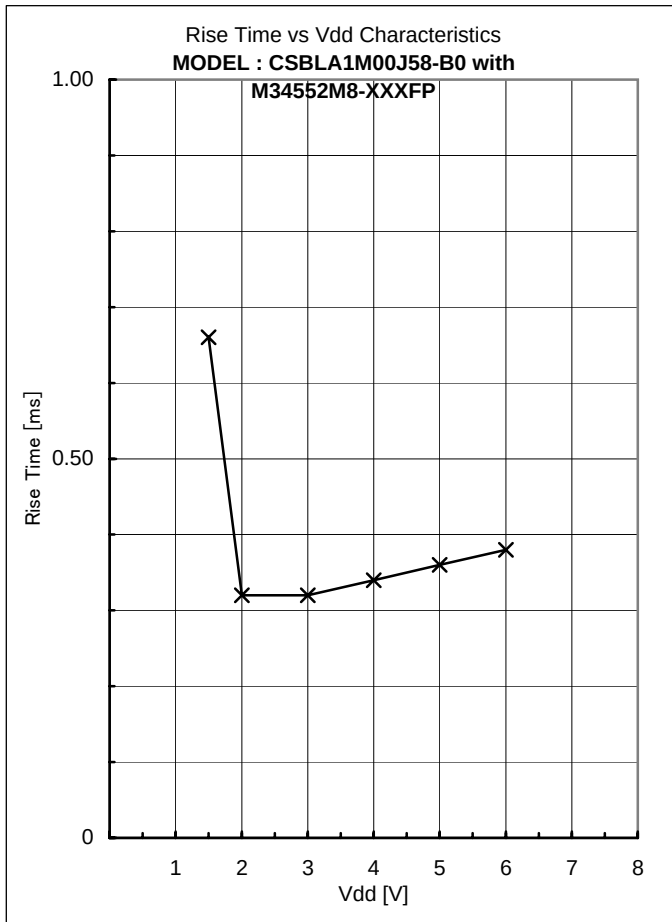
C2 = 100 [pF]

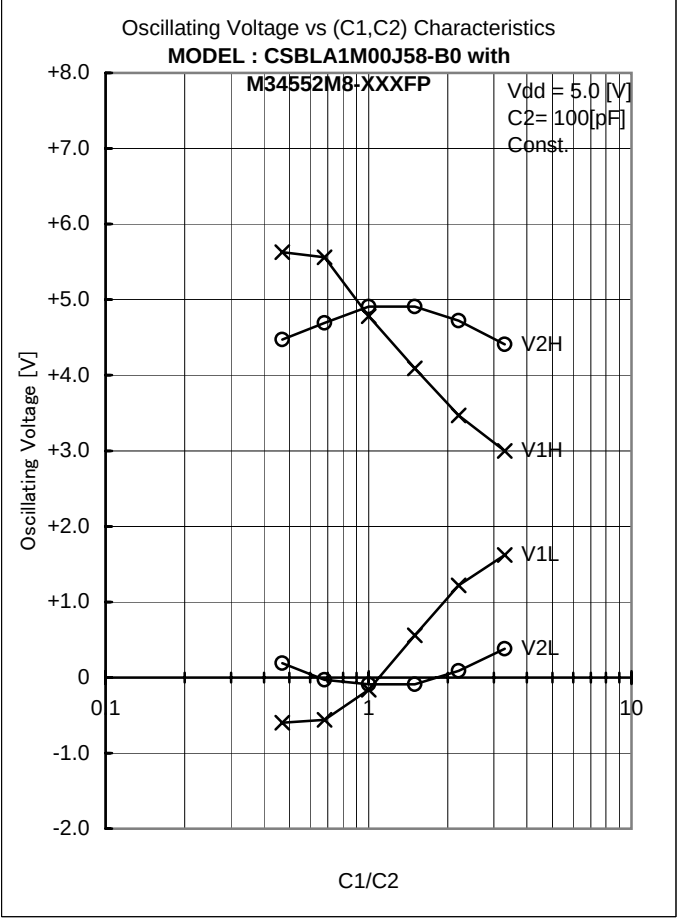
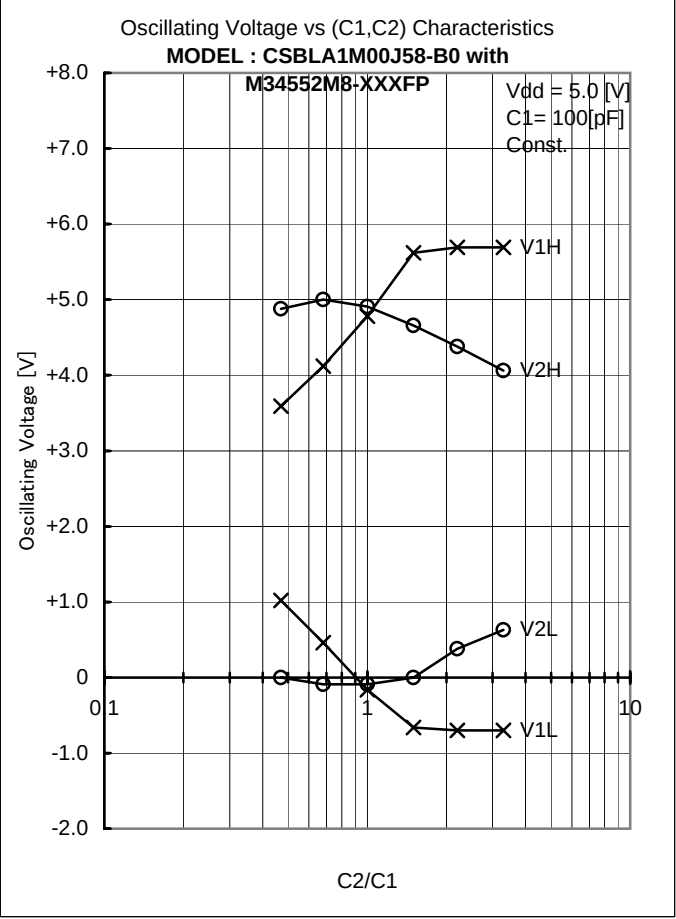
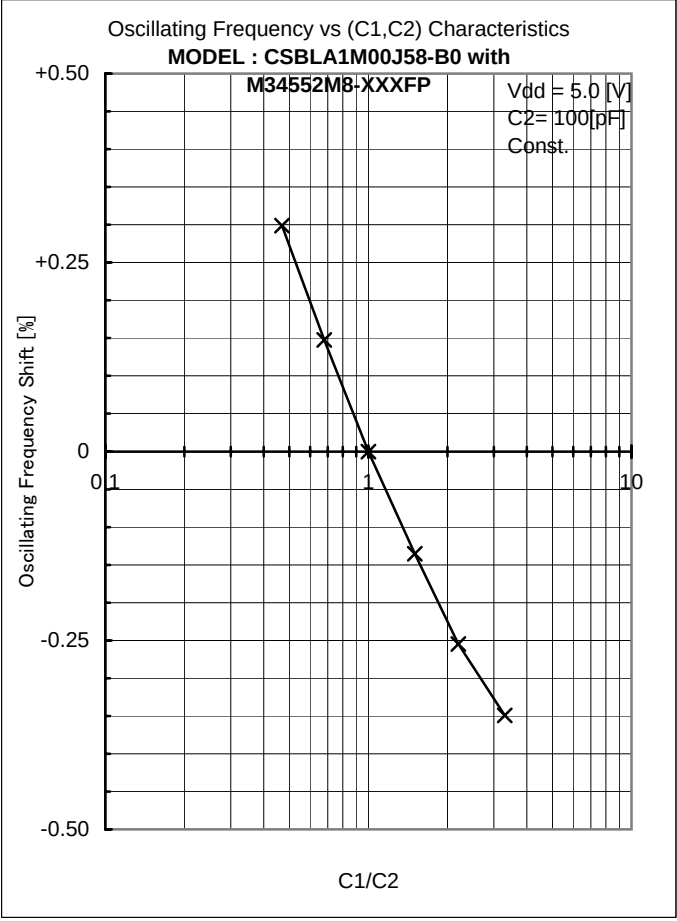
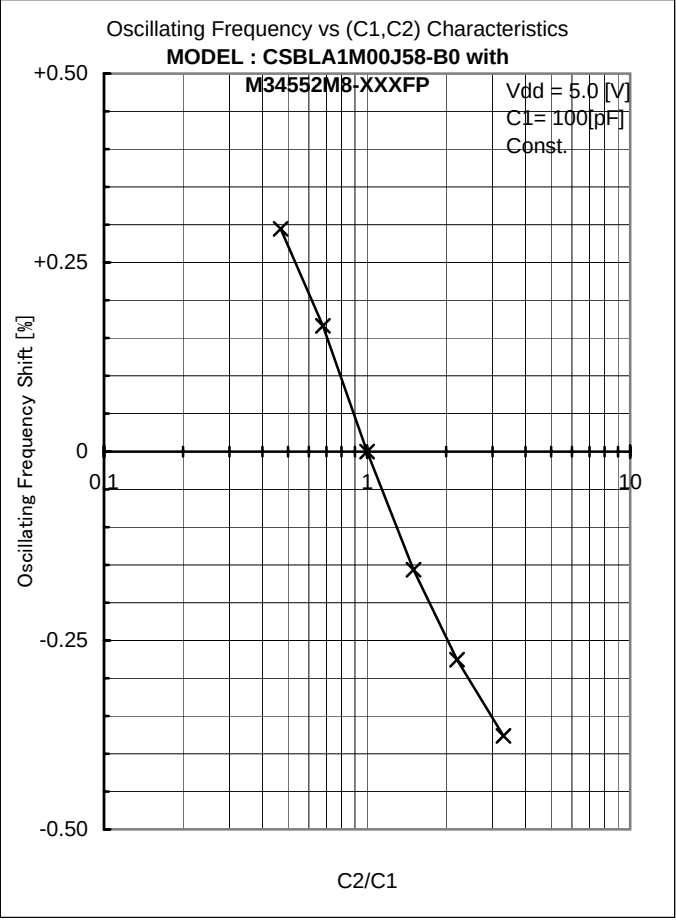
Rf = 1 [Mohm]

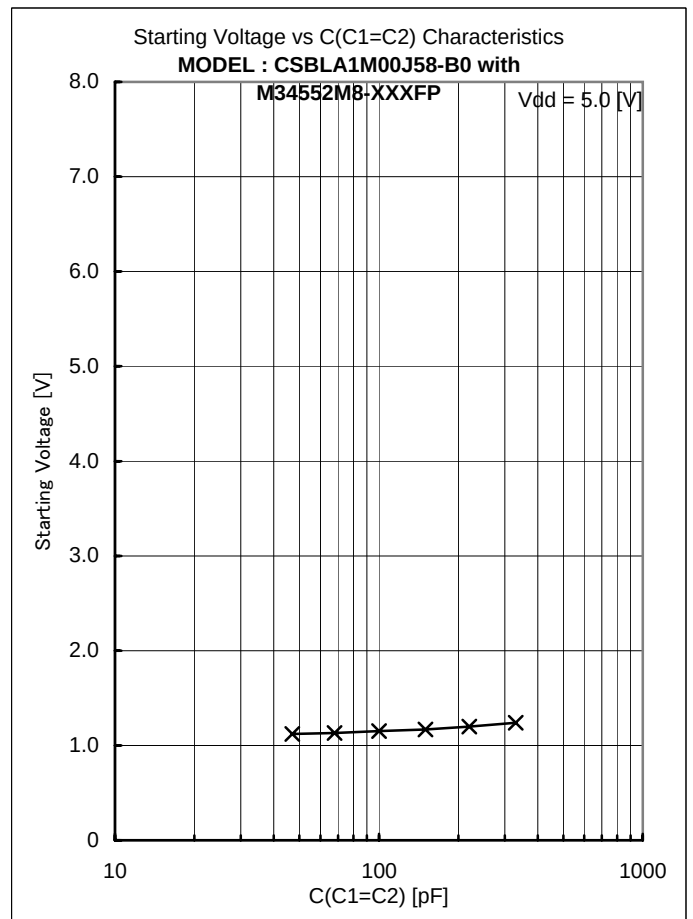
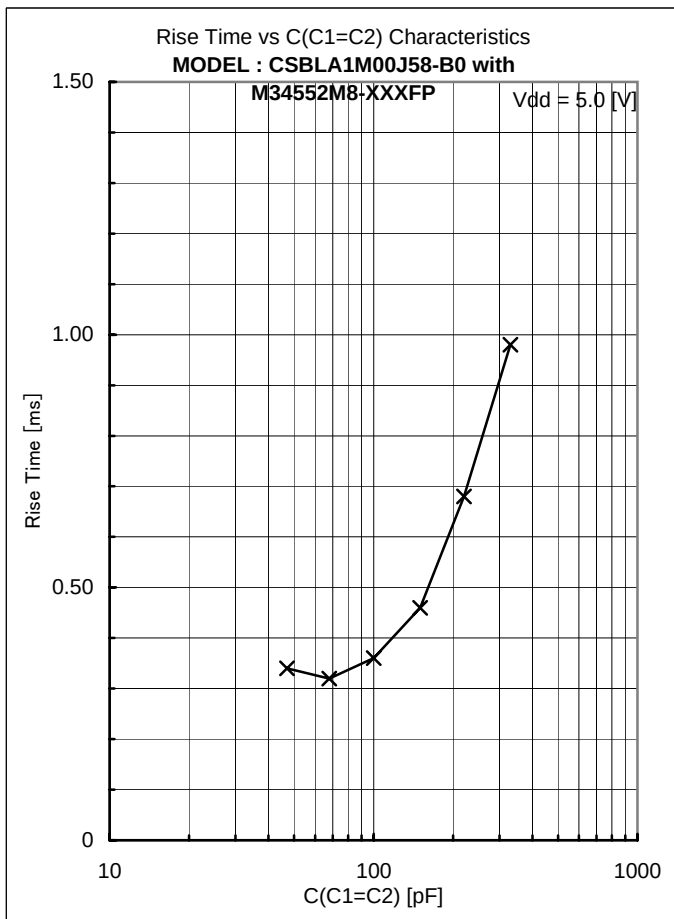
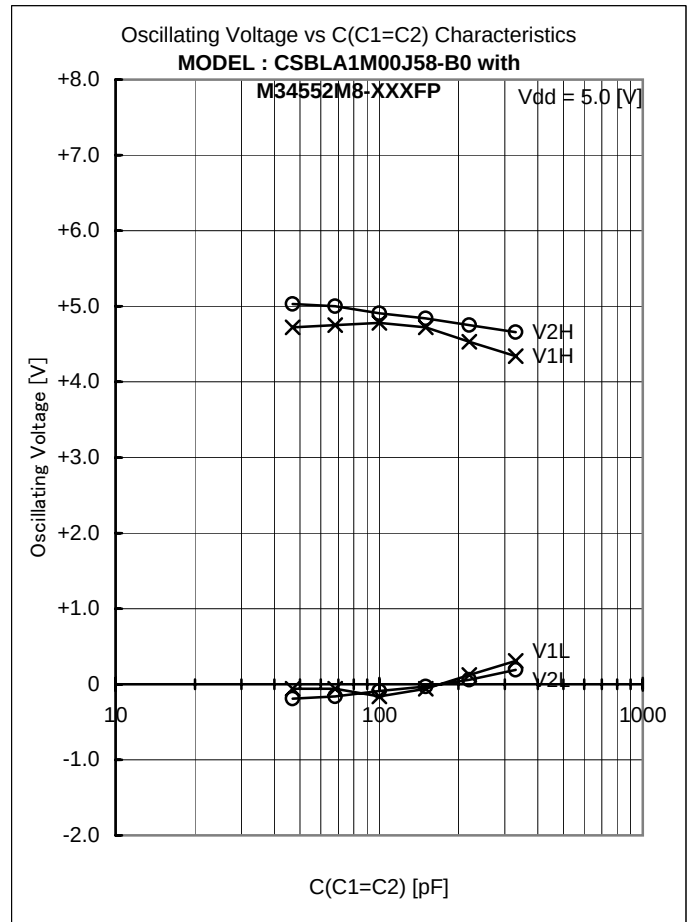
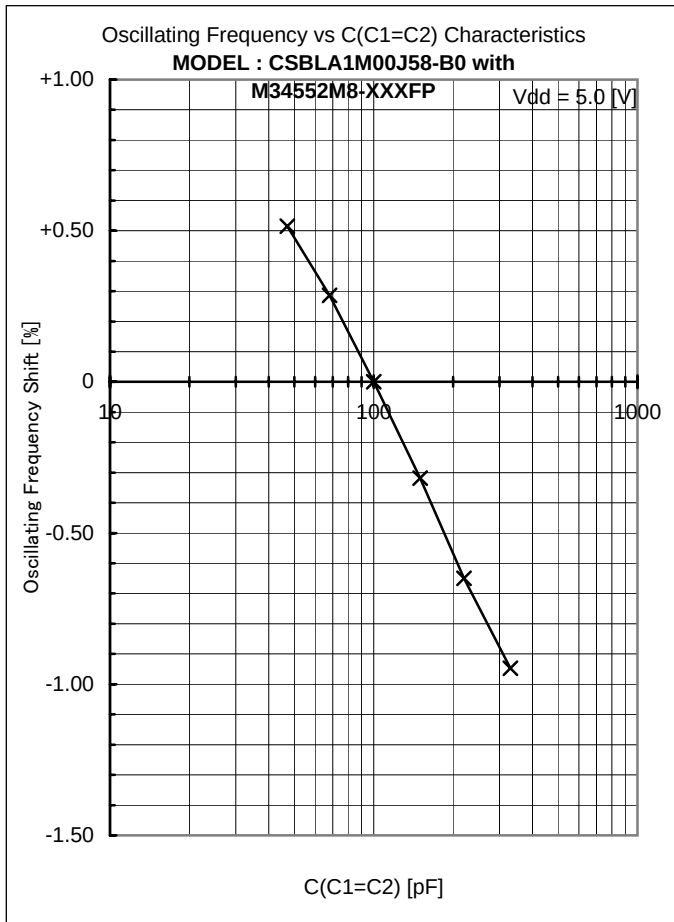
Rd = 2.2 [kohm]

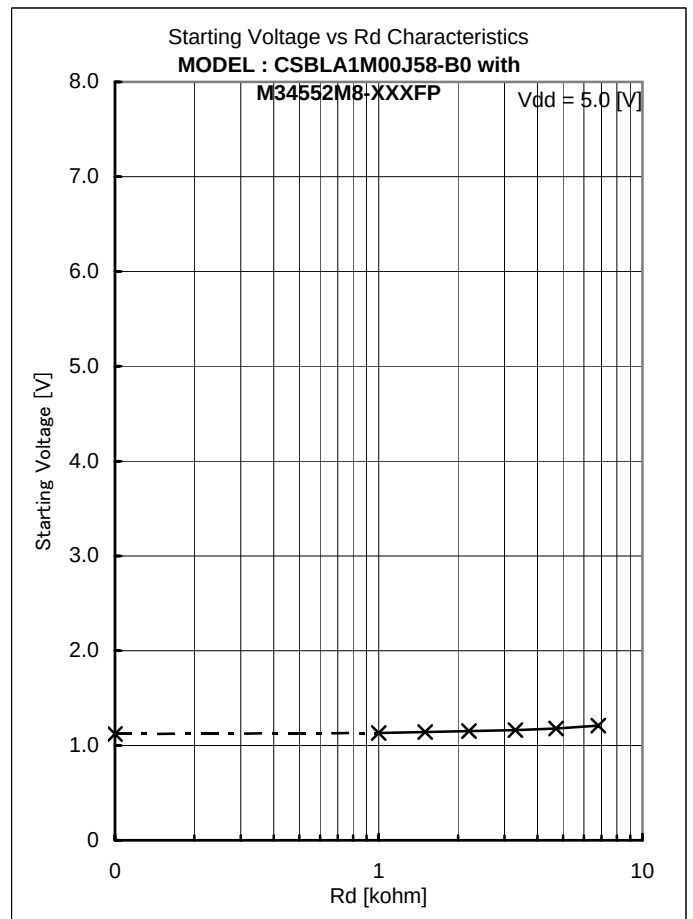
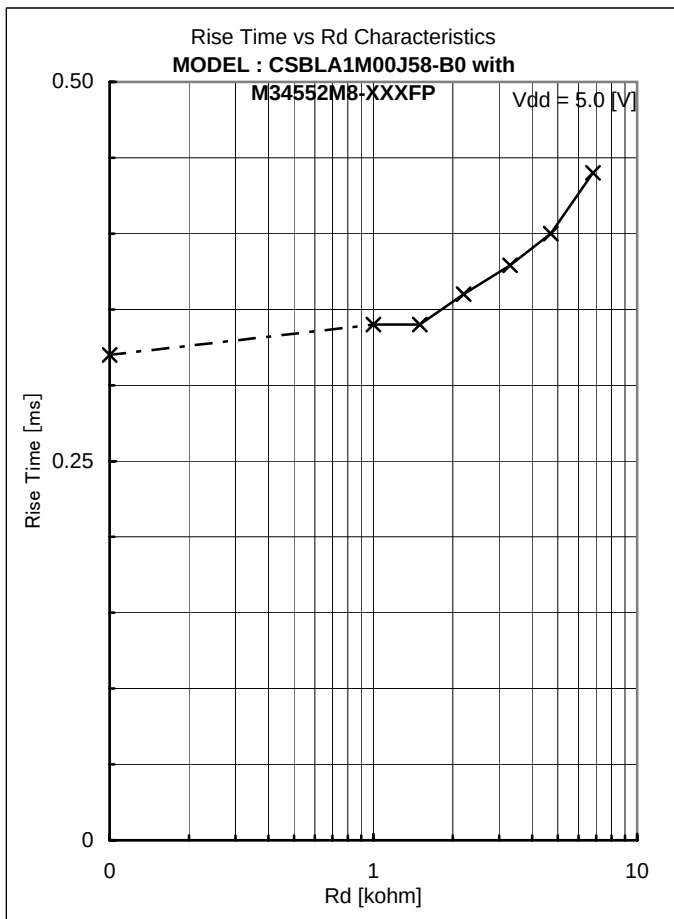
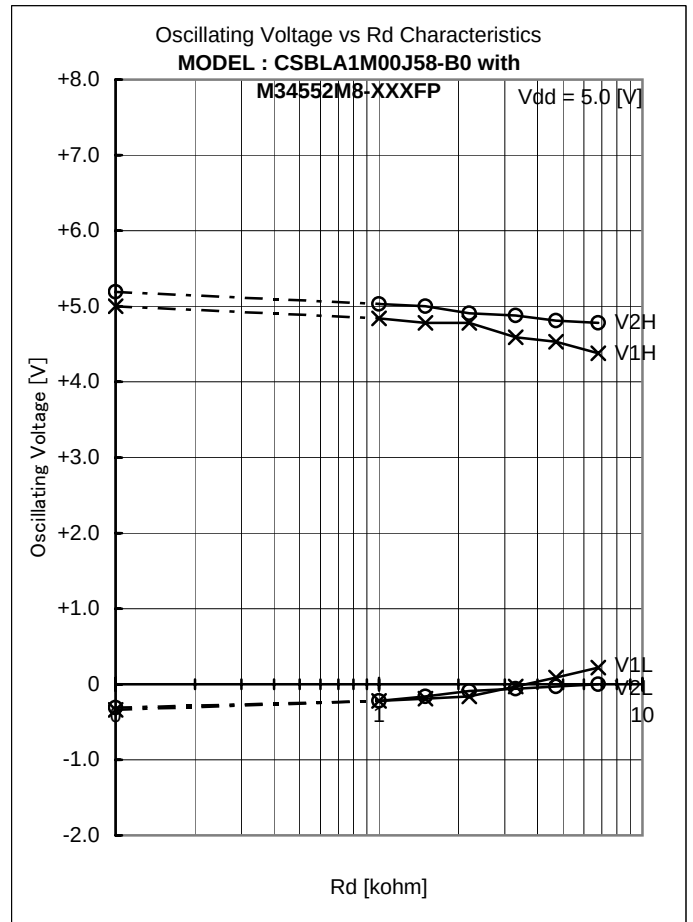
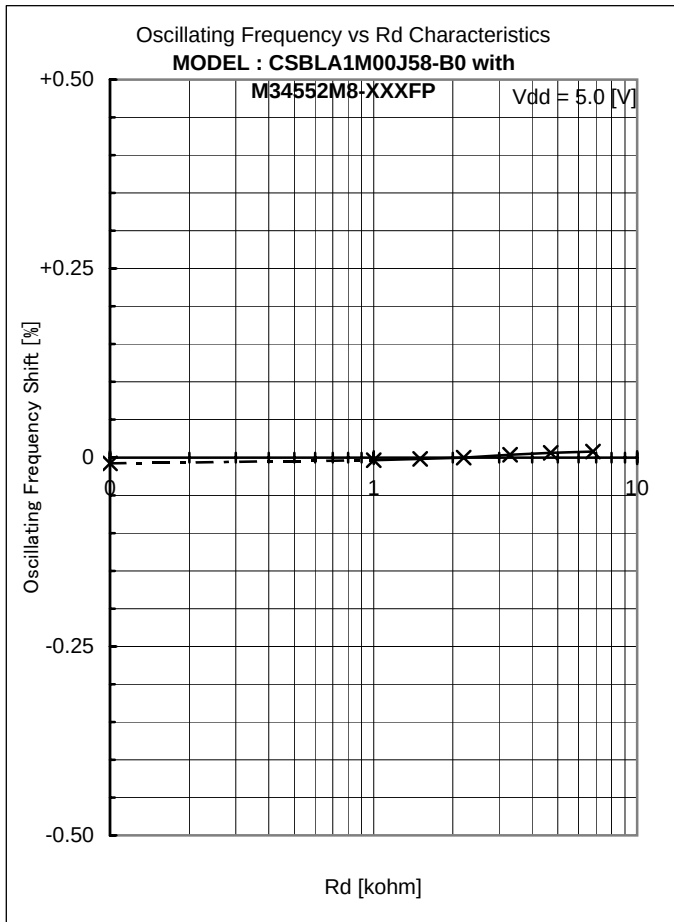
Ta = -20 to 85 [°C]















## Appendixes

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**Comparison Table**

| IC : No | V1H [V] | V1L [V] | V1p-p [V] | V2H [V] | V2L [V] | V2p-p [V] | Fosc [kHz] | Trise [ms] | Vstart [V] |
|---------|---------|---------|-----------|---------|---------|-----------|------------|------------|------------|
| HH      | 4.90    | -0.32   | 5.22      | 4.97    | -0.09   | 5.06      | 1000.097   | 0.340      | 1.38       |
| MM      | 4.78    | -0.16   | 4.94      | 4.91    | -0.09   | 5.00      | 1000.063   | 0.360      | 1.15       |
| LL      | 4.87    | -0.20   | 5.07      | 4.97    | -0.06   | 5.03      | 1000.090   | 0.360      | 0.87       |

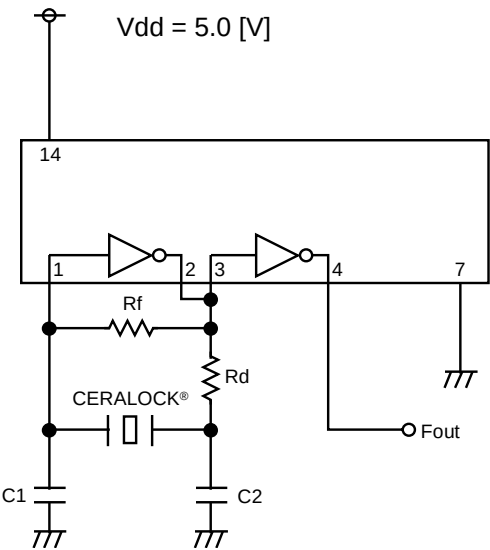
Ref.

Performance described page 2 to 6 were measured with IC No. MM

Frequency Correlation Data

| Sample No. | M34552M8-XXXFP<br>Fosc [kHz] | CD4069UBE<br>Fosc [kHz] | Shift [%] |
|------------|------------------------------|-------------------------|-----------|
| 1          | 1000.145                     | 999.907                 | 0.0238    |
| 2          | 998.836                      | 998.891                 | -0.0055   |
| 3          | 1000.369                     | 1000.399                | -0.0030   |
| 4          | 999.994                      | 999.724                 | 0.0270    |
| 5          | 1000.163                     | 999.895                 | 0.0268    |
| $\bar{X}$  | 999.901                      | 999.763                 | 0.0138    |

muRata Standard Circuit



CERALOCK® : CSBLA1M00J58-B0  
C1 = 100 [pF]  
C2 = 100 [pF]  
Rf = 1 [Mohm]  
Rd = 5.6 [kohm]