REPORT NO. Q2002Y-245

**SAMSUNG**

# OPERATION TEST REPORT ON TDK CERAMIC RESONATOR

*(FCR10.0MC5)*

*IC S3F84BBXZZ(SAMSUNG)*

AUG,05,2002

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| APPROVED | CHECKED | CHECKED |
|---|---|---|
| I.Katoh | | |

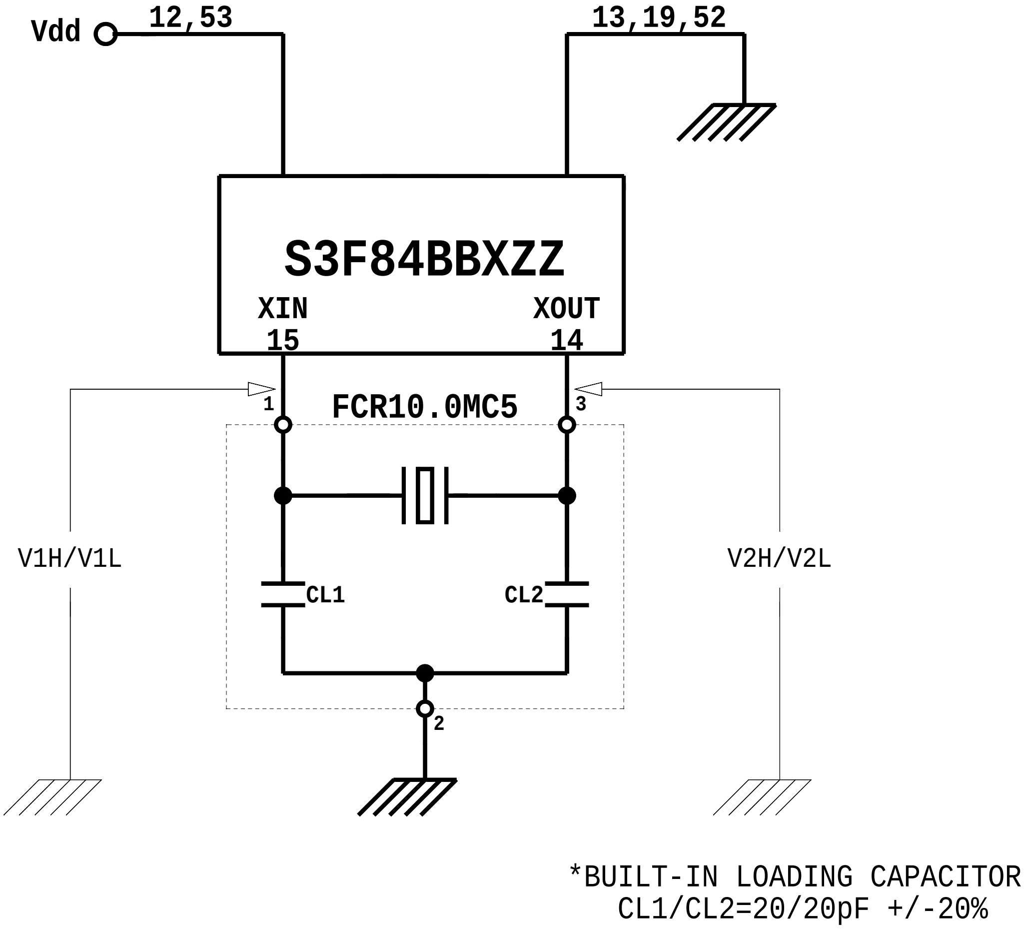
## 1.Contents

## 2.Conclusions

We could confirm the operation satisfactory under the following test conditions.

### Test Conditions

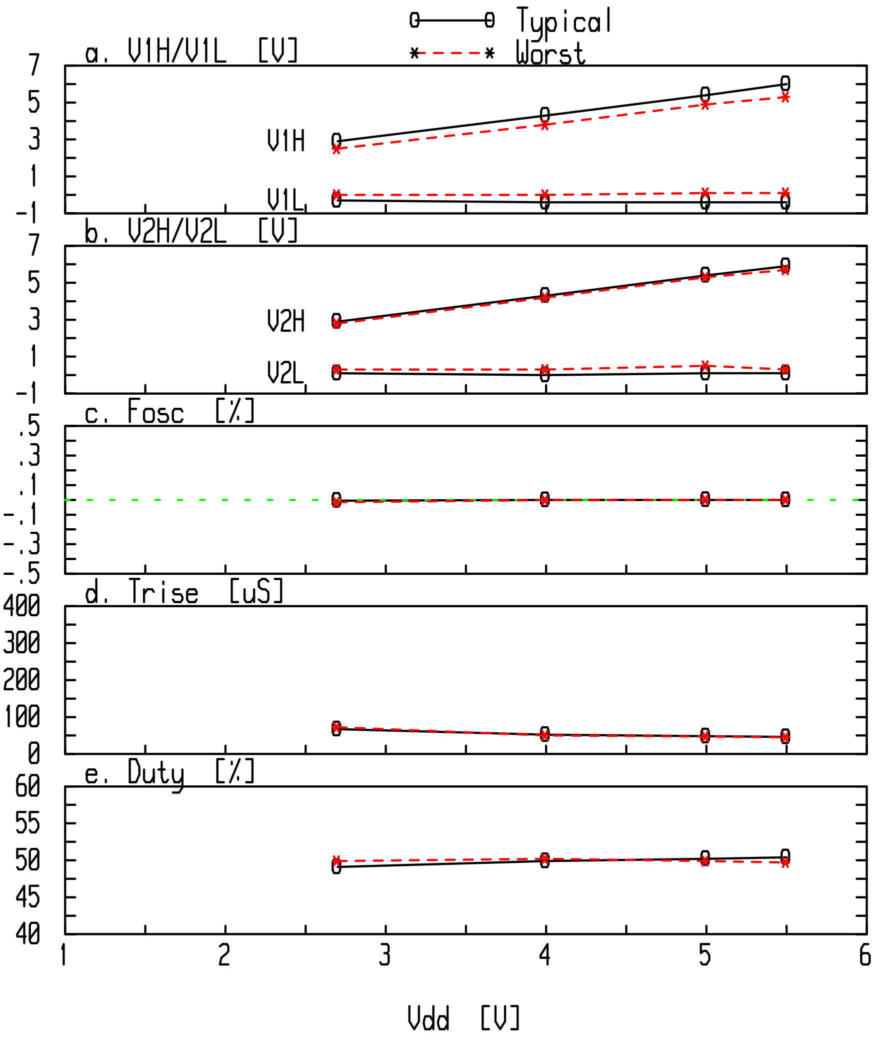
IC : S3F84BBXZZ（SAMSUNG）
Ceramic Resonator : FCR10.0MC5
(Typical and worst sample are tested)
Power Supply Voltage : 2.7(V) ～ 5.5(V)
Temperature Range : -25(℃) ～ 85(℃)



Oscillating circuit for evaluation

S3F84BBXZZ - 1

FCR10.0MC5
Ta= 20 [deg]



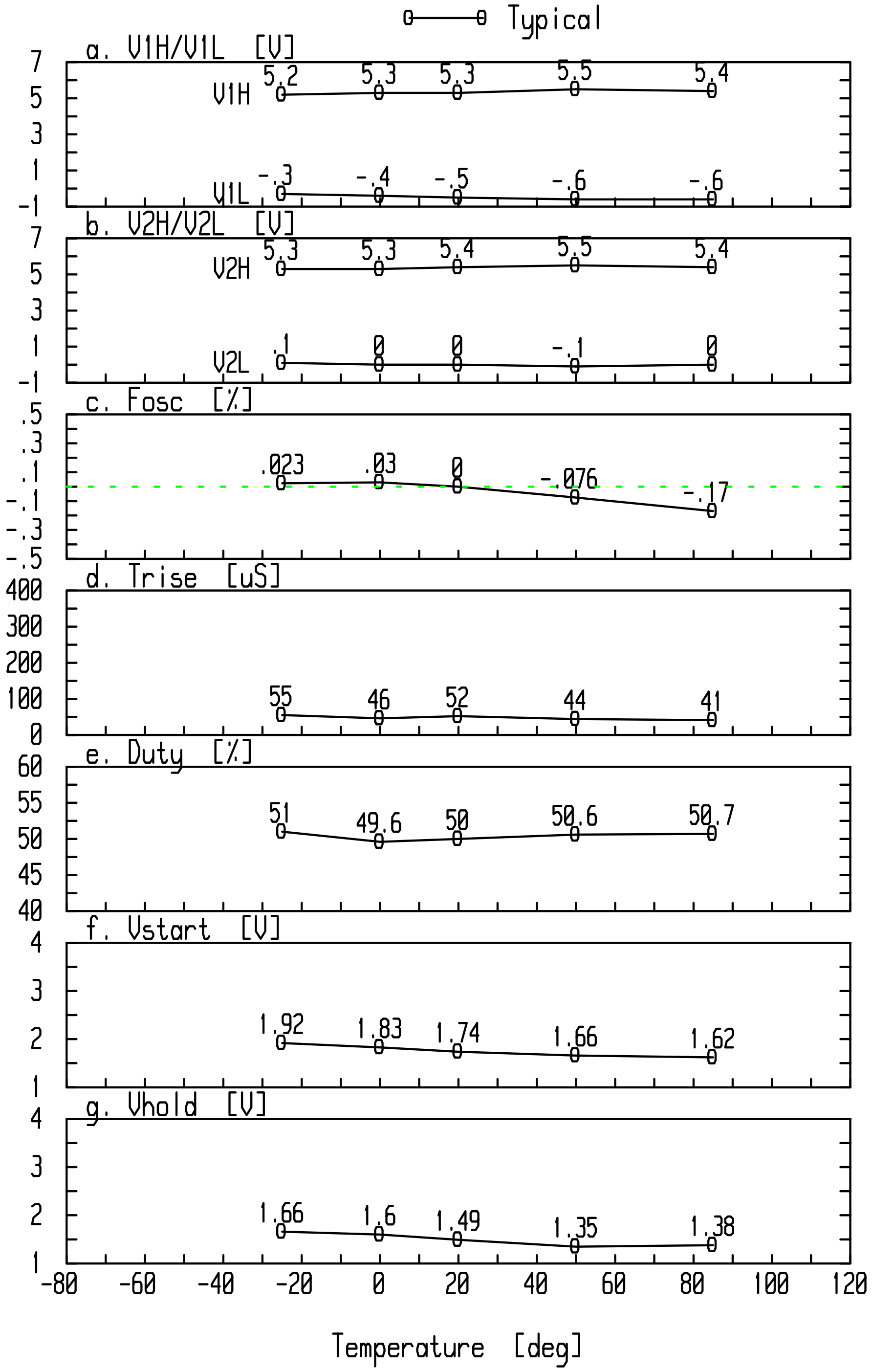
f. Vstart [V]
Typical = 1.77
Worst = 1.86

g. Vhold [V]
Typical = 1.5
Worst = 1.75

Power supply voltage dependence of oscillating characteristics

S3F84BBXZZ - 1

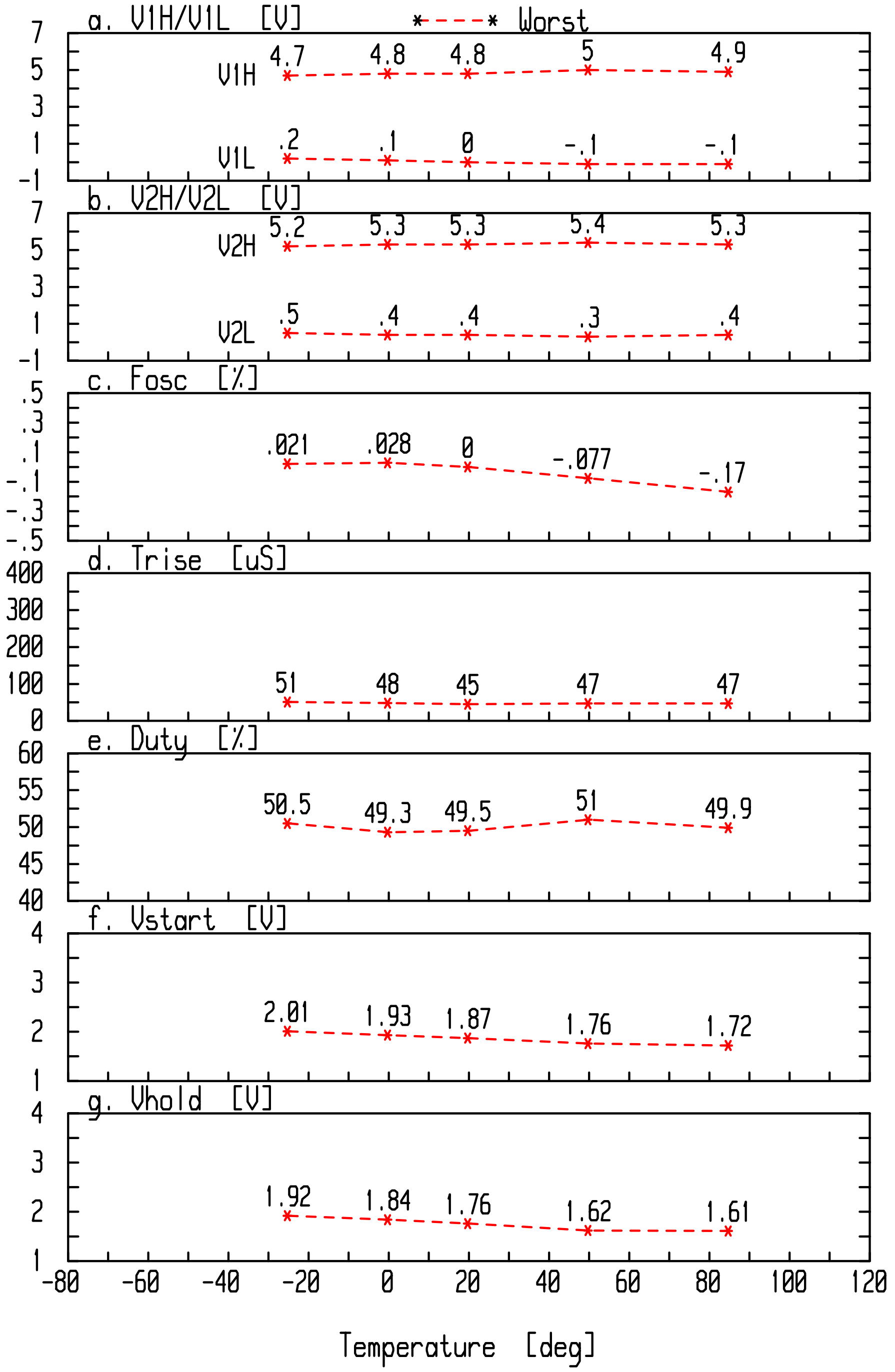
FCR10.0MC5
Vdd= 5 [V] (Fig.a~e)



Temperature dependence of oscillating characteristics

S3F84BBXZZ - 1

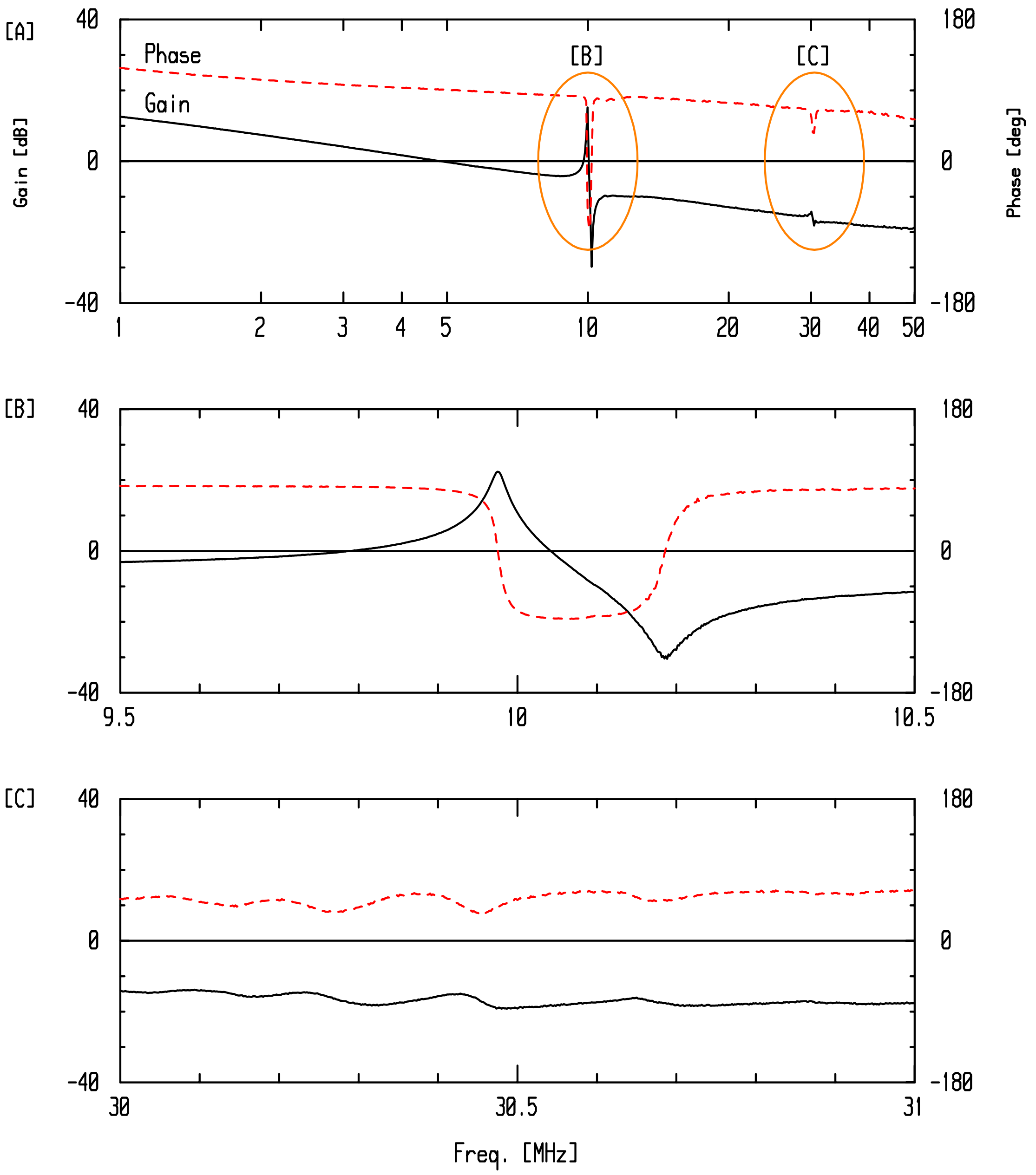
FCR10.0MC5
Vdd= 5 [V] (Fig.a~e)



Temperature dependence of oscillating characteristics

S3F84BBXZZ - 1
FCR10.0MC5 - Typical
Vdd [V] 5

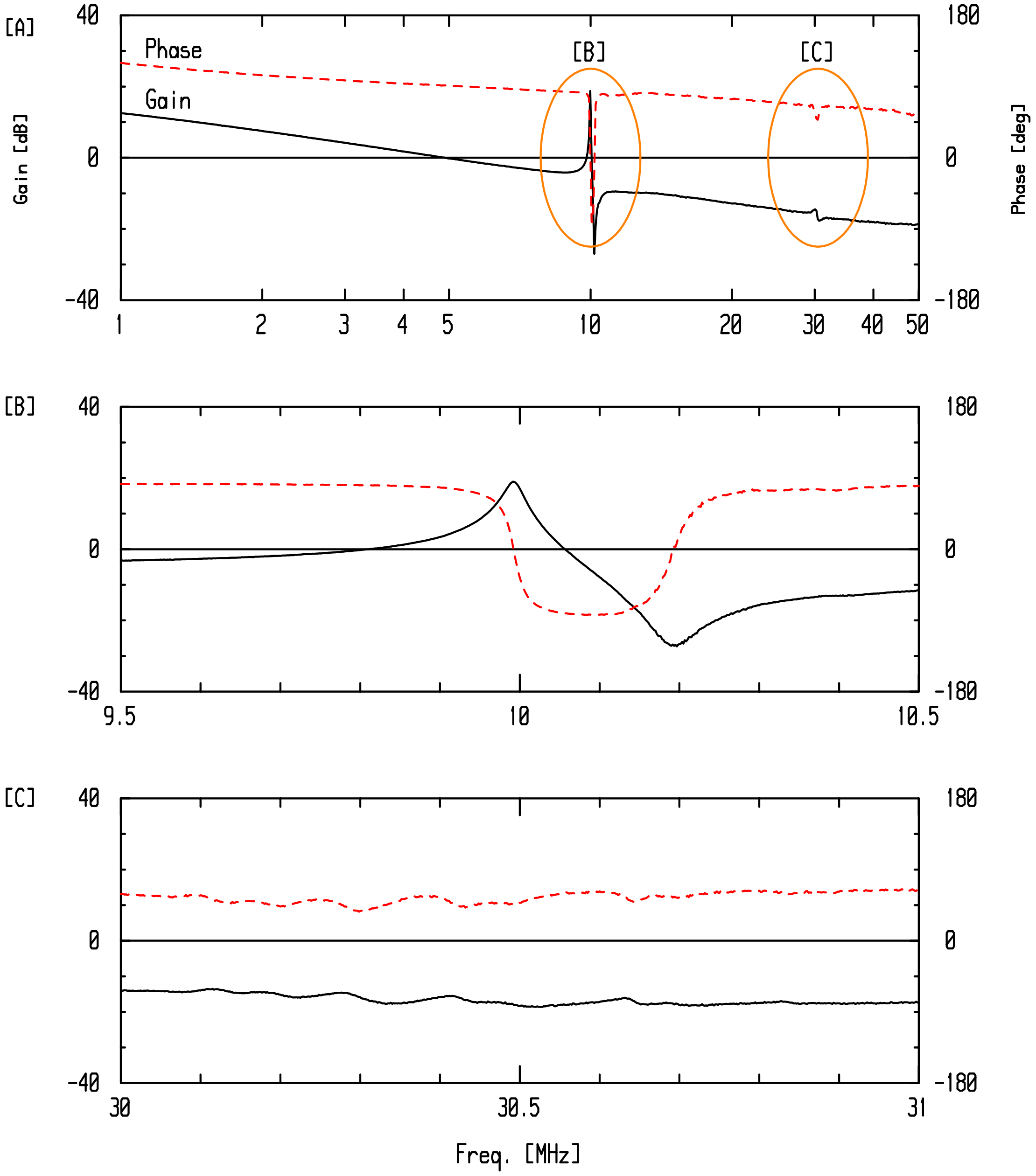
| | [B] | [C] |
|---|---|---|
| Gmax [dB] | 22.4 | -13.82 |
| LGM [dB] | 22.31 | 0 |
| FLGM [MHz] | 9.9762 | 0 |
| LPM [deg] | -85.39 | 43.34 |



Open loop characteristics (Typical Sample)

S3F84BBXZZ - 1
FCR10.0MC5 - Worst
Vdd [V] 5

| | [B] | [C] |
|---|---|---|
| Gmax [dB] | 18.97 | -13.5 |
| LGM [dB] | 18.91 | 0 |
| FLGM [MHz] | 9.993 | 0 |
| LPM [deg] | -81.1 | 46.96 |



Open loop characteristics (Worst Sample)