Technical Data of Ceramic Resonator

MURATA Part No.: CSTCR4M00G53-R0

Applied to HD64F38124H

TOYAMA MURATA MANUFACTURING CO., LTD.

Product Engineering Service Section VI

Piezoelectric Planning & Market Promotion Department II

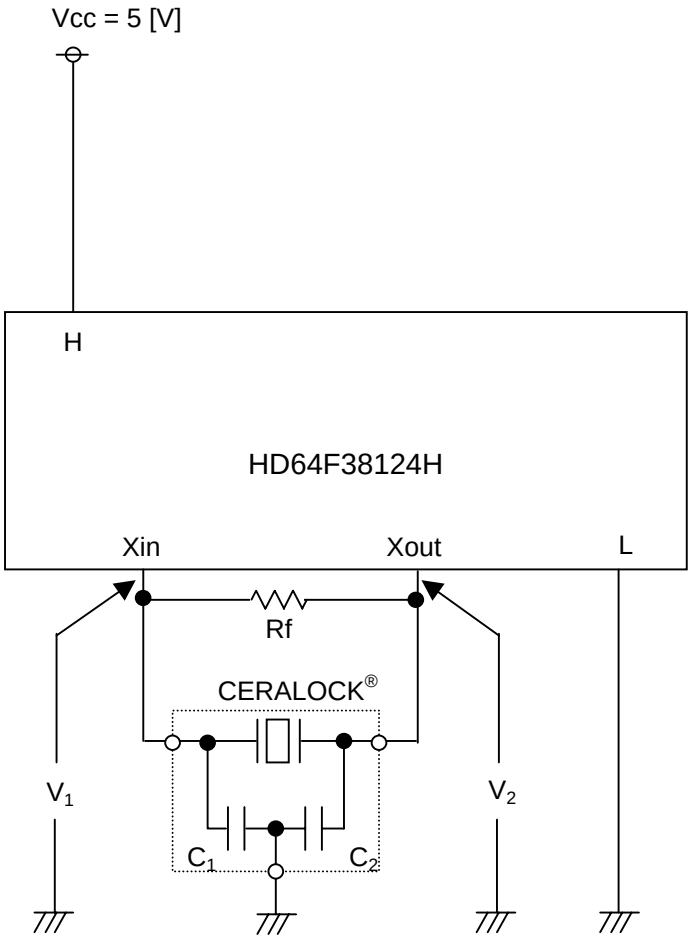
Piezoelectric Components Division

Device Business Unit

Approved by	Checked by	Issued by	Issued Date	Data No.
				
K.Maruno	R.Miyamae	T.Morita	May 7, 2005	TCD-05-0483

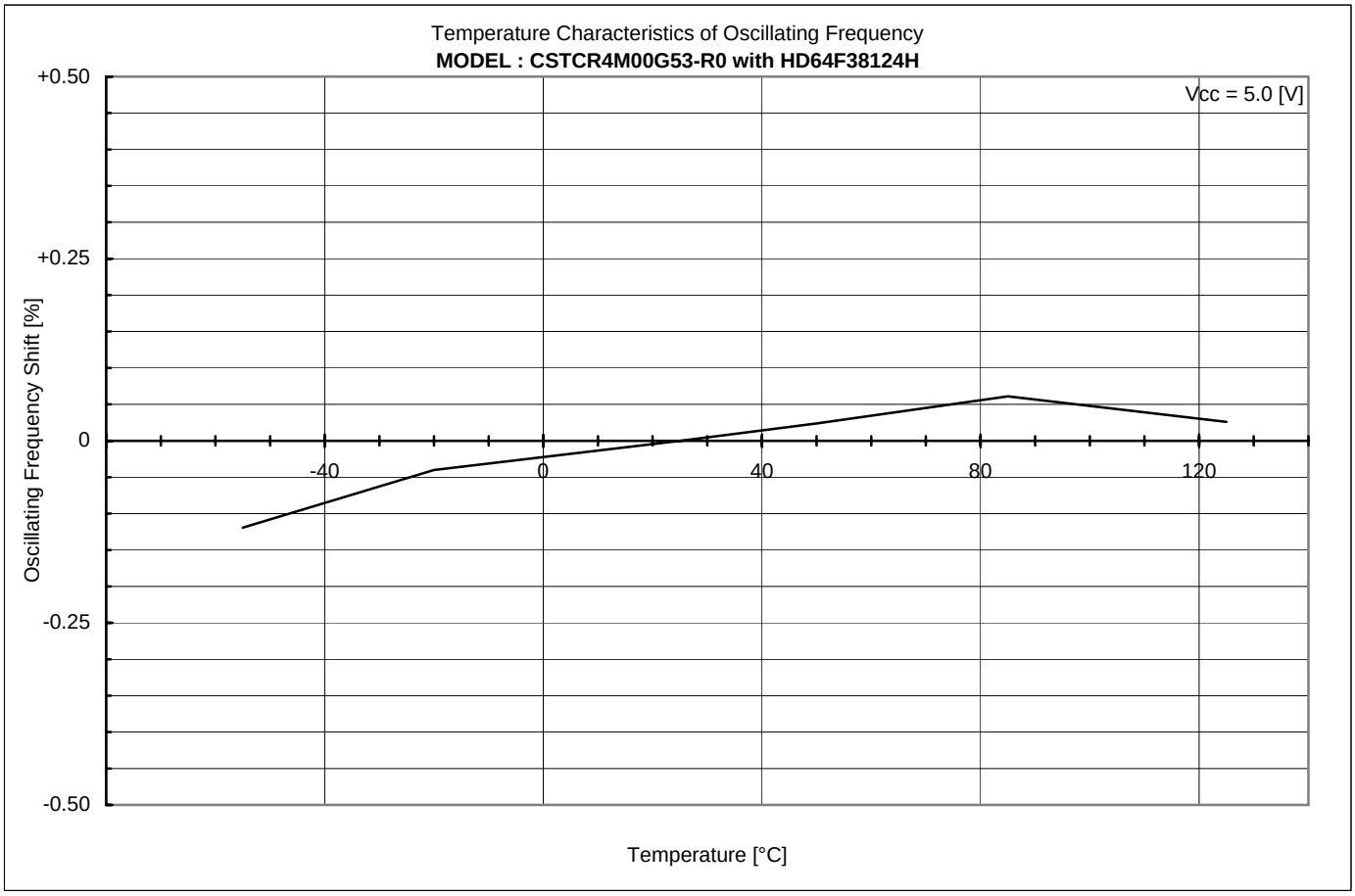
Contents

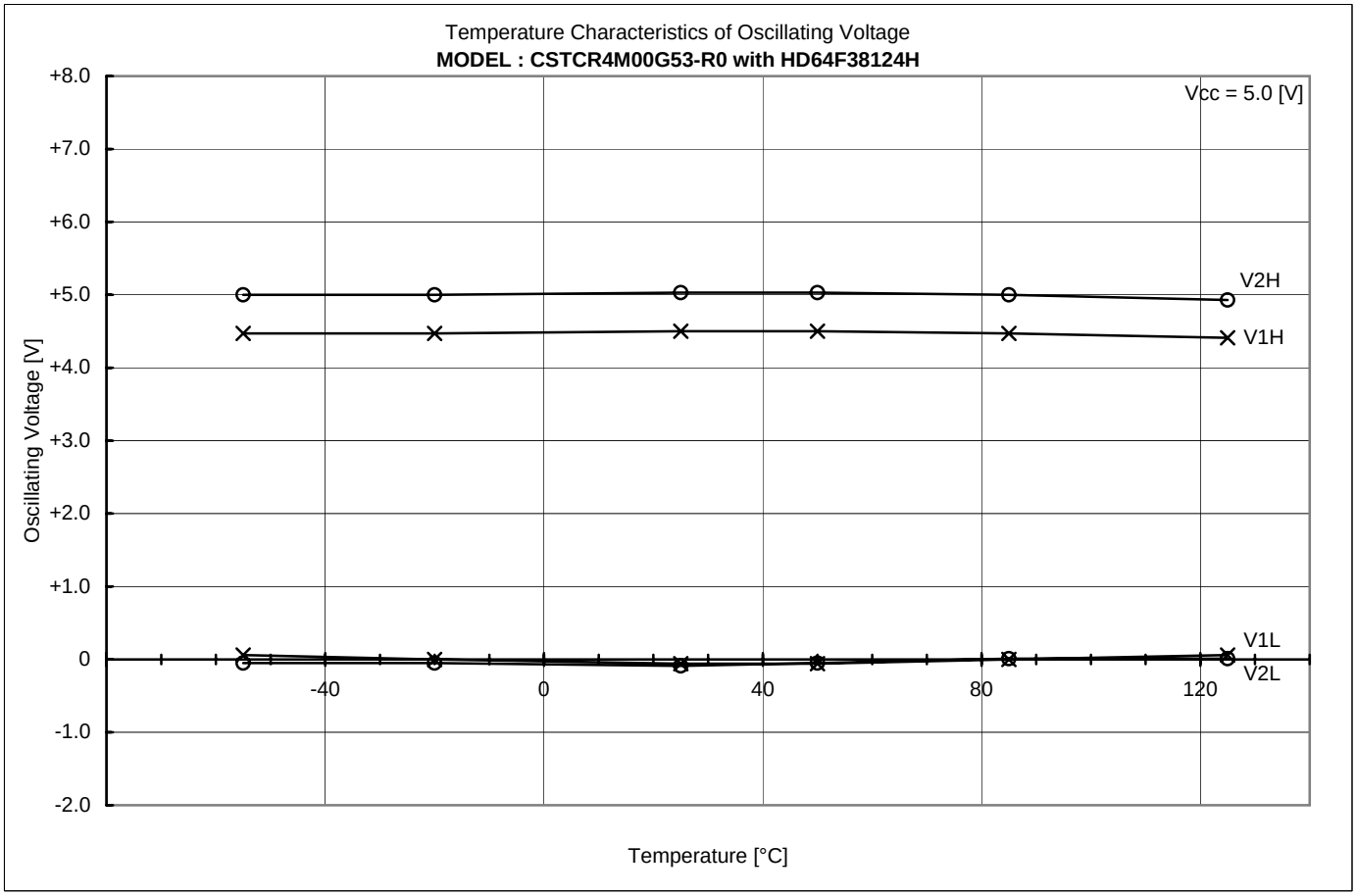
Test Circuit



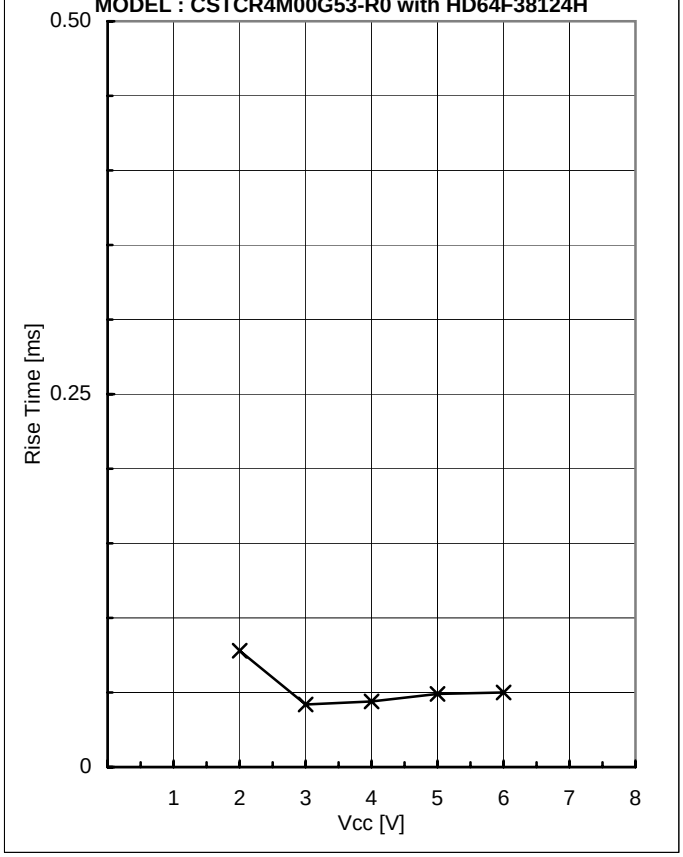
Xin : 10
Xout: 9
H : 1,4,52
L : 8,53

Recommended Value
CERALOCK® : CSTCR4M00G53-R0
Vcc = 2.7 to 5.5 [V]
C1 = 15 [pF] (Typ.)
C2 = 15 [pF] (Typ.)
Rf = 1 [Mohm]
Ta = -40 to 85 [°C]

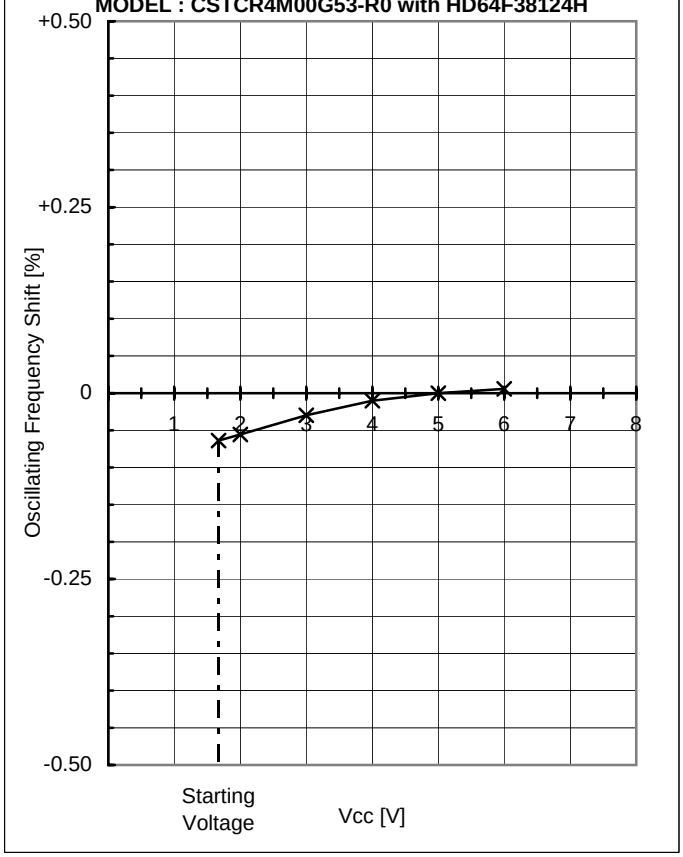

Temperature Characteristics of Oscillating Frequency
MODEL : CSTCR4M00G53-R0 with HD64F38124H
Vcc = 5.0 [V]
+0.50
+0.25
0
-0.25
-0.50
Oscillating Frequency Shift [%]
-40
0
40
80
120
Temperature [°C]


Temperature Characteristics of Oscillating Voltage
MODEL : CSTCR4M00G53-R0 with HD64F38124H
Vcc = 5.0 [V]
+8.0
+7.0
+6.0
+5.0
+4.0
+3.0
+2.0
+1.0
0
-1.0
-2.0
Oscillating Voltage [V]
V2H
V1H
V1L
V2L
-40
0
40
80
120
Temperature [°C]

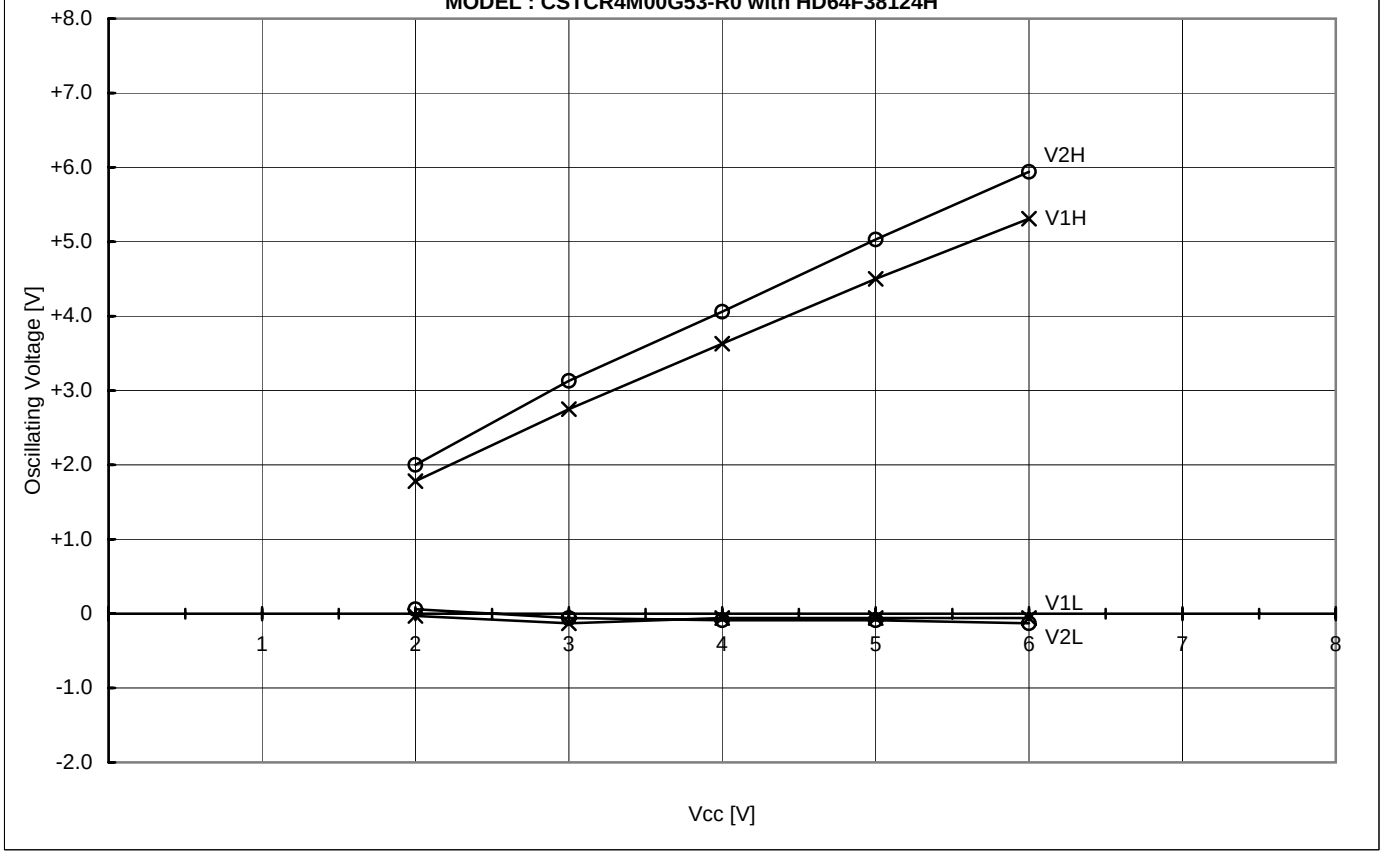
Rise Time vs Vcc Characteristics
MODEL : CSTCR4M00G53-R0 with HD64F38124H



Oscillating Frequency vs Vcc Characteristics
MODEL : CSTCR4M00G53-R0 with HD64F38124H



Oscillating Voltage vs Vcc Characteristics
MODEL : CSTCR4M00G53-R0 with HD64F38124H



Appendixes

Comparison Table

IC : No	V1H [V]	V1L [V]	V1p-p [V]	V2H [V]	V2L [V]	V2p-p [V]	Fosc [kHz]	Trise [ms]	Vstart [V]
なし	4.50	-0.06	4.56	5.03	-0.09	5.12	4053.698	0.049	1.67
N高P低	4.44	0.00	4.44	5.03	0.01	5.02	4053.298	0.053	1.64
N低P高	4.31	-0.06	4.37	4.94	-0.09	5.03	4053.573	0.046	1.77
SG太太	4.44	-0.06	4.50	5.03	-0.02	5.05	4053.373	0.050	1.80
SG細細	4.44	-0.09	4.53	5.03	-0.06	5.09	4053.063	0.051	1.81

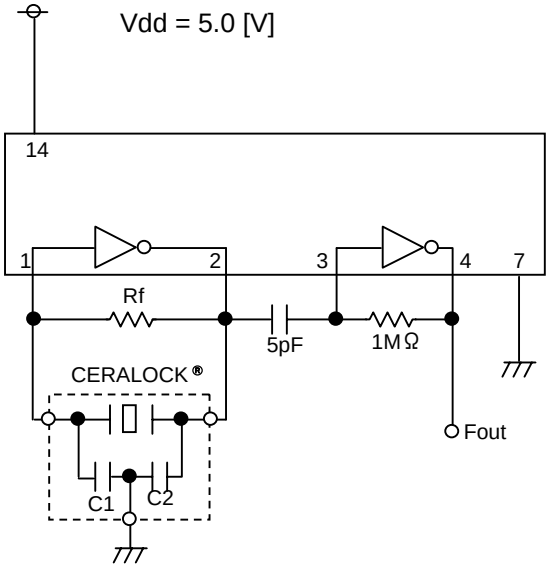
Ref.

Performance described page 2 to 3 were measured with IC No. なし

Frequency Correlation Data

Sample No.	HD64F38124H Fosc [kHz]	TC4069UBP Fosc [kHz]	Shift [%]
1	3995.774	4000.284	-0.1127
2	3998.176	4000.154	-0.0495
3	3996.391	4000.438	-0.1012
4	3996.086	3999.964	-0.0970
5	3998.284	4000.279	-0.0499
$\bar{X}$	3996.942	4000.224	-0.0820

muRata Standard Circuit



CERALOCK® : CSTCR4M00G53-R0
C1 = 15 [pF]
C2 = 15 [pF]
Rf = 1 [Mohm]