

Date : March 19, 2014

# Messrs. Integrated Tracking Technologies

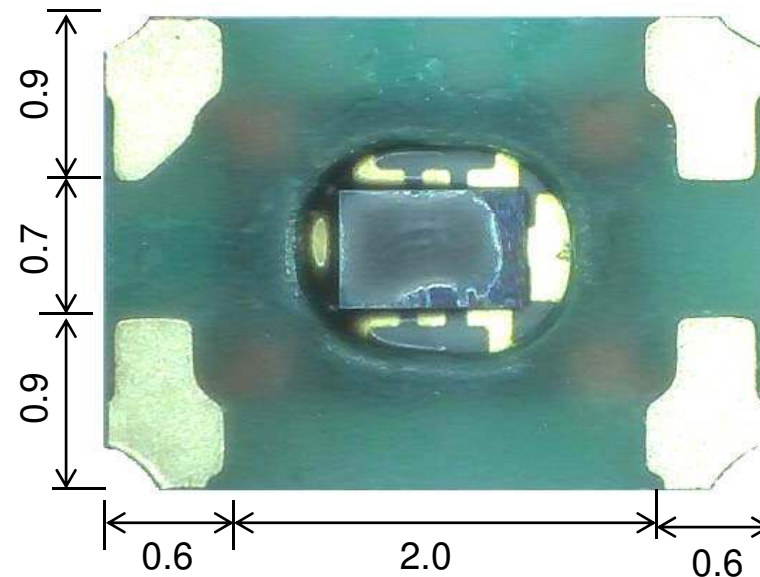
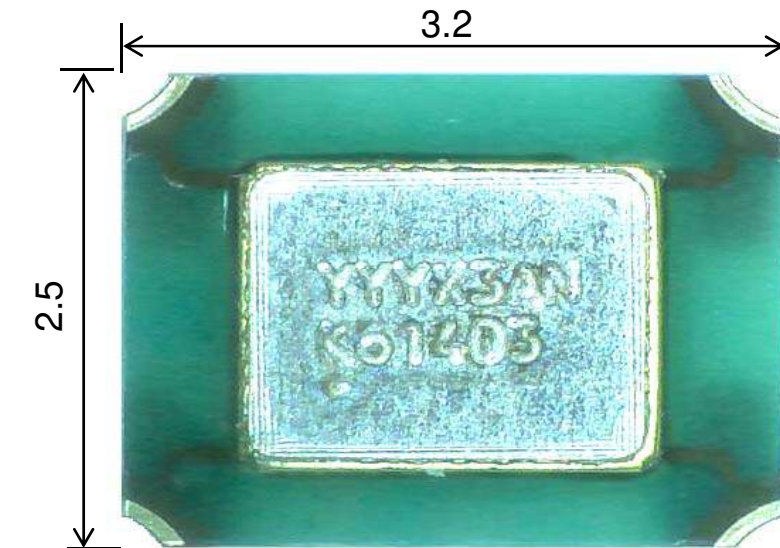
## < Comparison Data >

Model : **KT3225R** vs. **KT3225K**

KYOCERA Crystal Device Corporation  
Oscillator Division  
Oscillator Engineering Department  
Application Engineering Section

Prepared	Checked	Approved
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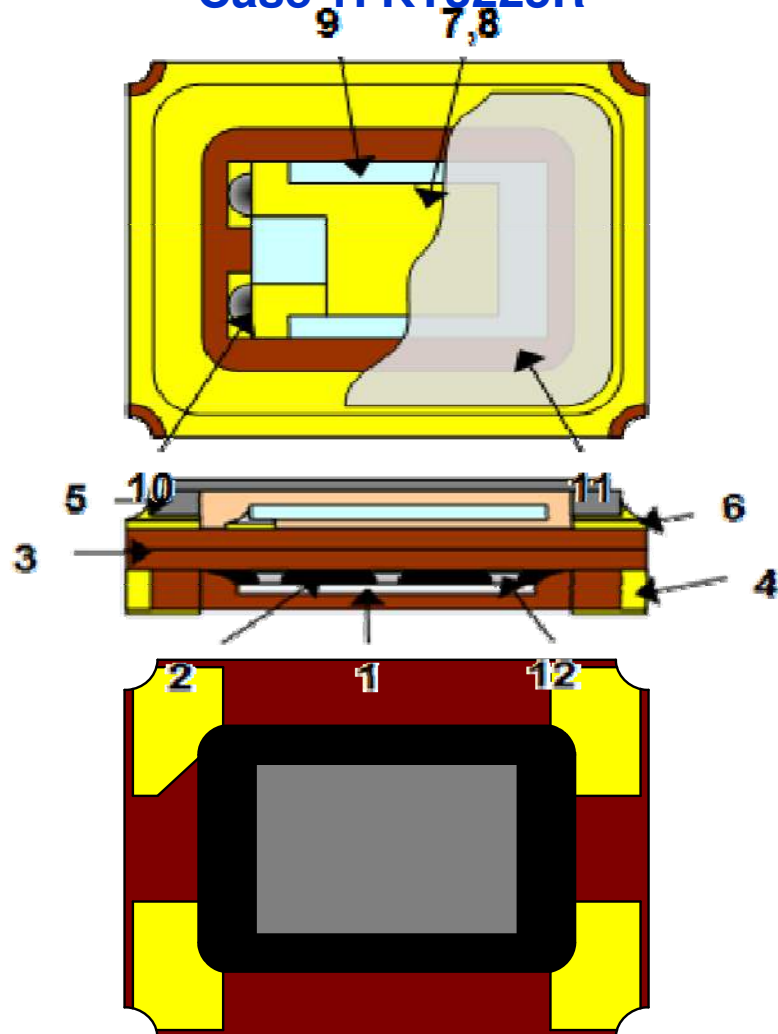
## KT3225K Dimension & Pin Connection



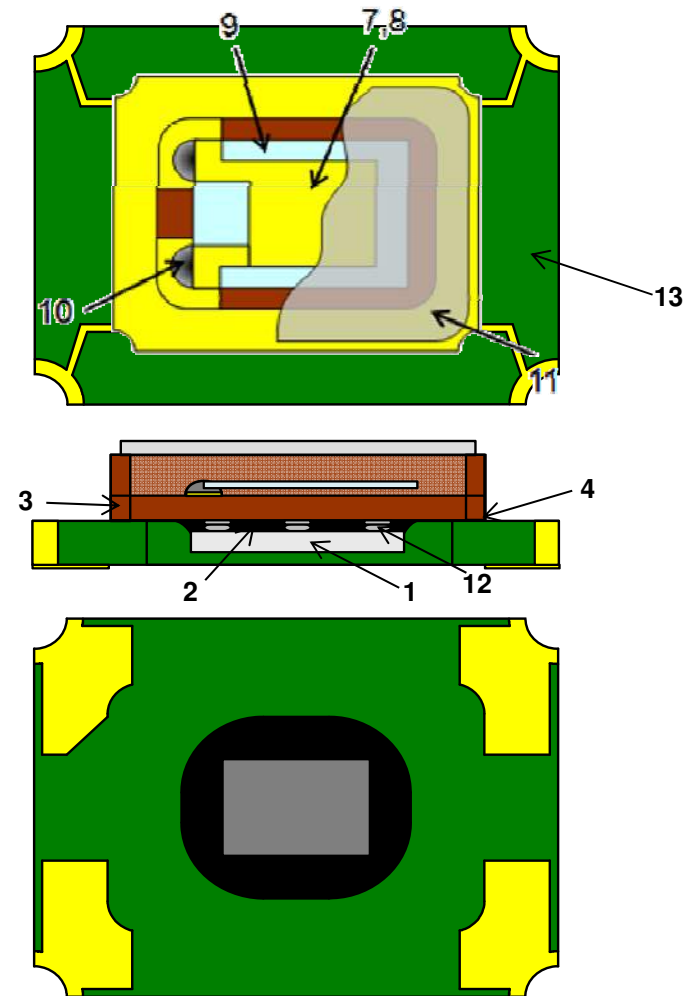
Pin No	Function
#1	TCXO:GND or NC VCTCXO:Vcon
#2	GND
#3	Output
#4	Vcc

# Structure comparison of **KT3225R** and **KT3225K**

Case 1: **KT3225R**



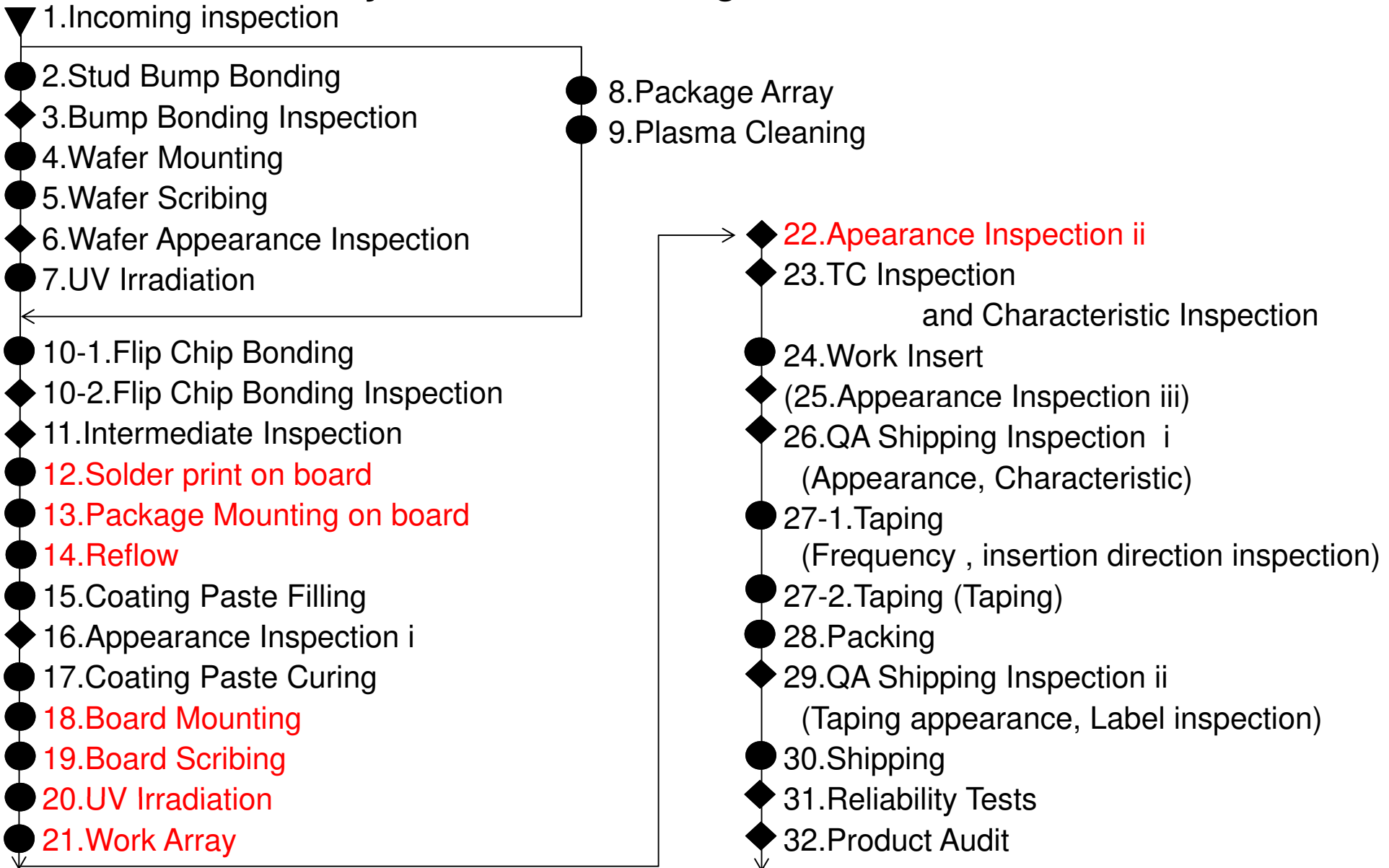
Case 2: **KT3225K**



## Structure comparison of **KT3225R** and **KT3225K**

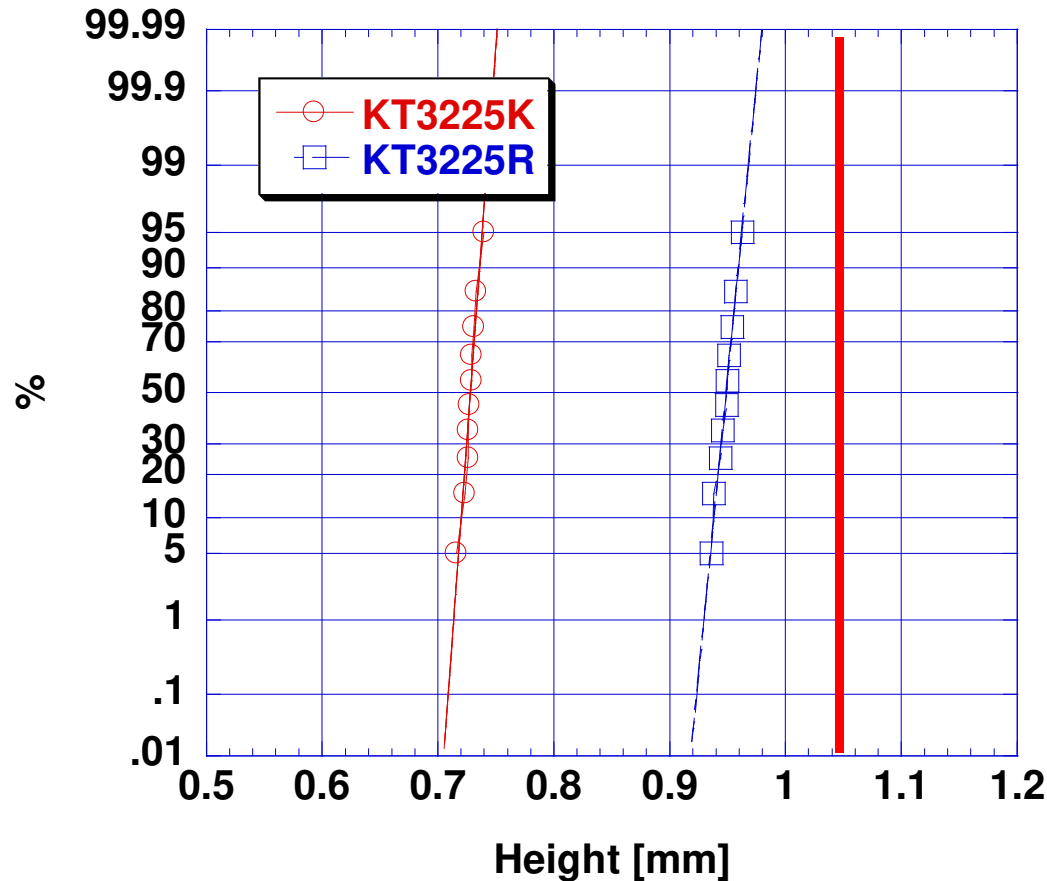
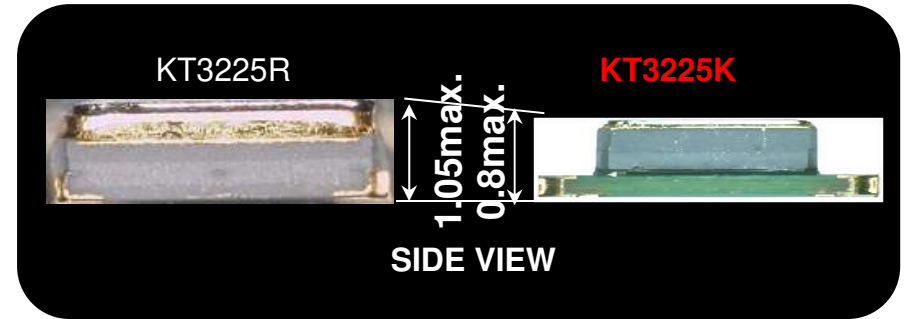
	MATERIAL	KT3225R	KT3225K
1	IC CHIP	TYPE A	TYPE B
2	UNDER FILL RESIN	Epoxy resin	<- (same)
3	BASE-BASE Material	AL <sub>2</sub> O <sub>3</sub>	<- (same)
4	BASE-Metalized	W	MO
5	BASE-SEALING	Kv	NON (Direct-Seam)
6	BASE-SILVER BRAZING ALLOY CLAD FILM	Ag	
7	ELECTRODE	Mechanical Process	<- (same)
8	ELECTRODE UNDERLAYER		
9	QUARTS CHIP		
10	CONDUCTIVE ADHESIVE	Ag Paste	<- (same)
11	LID	Kv	Kv(DS-LID)
12	BUMP	Flip Chip Process	<- (same)
13	Glass Epoxy	NON	Glass Epoxy

# “K” series Assembly Process Flow Diagram



# Height Data

**KT3225K**(0.8mm max.) vs. **KT3225R**(1.05mm max.)



	Height	
	<b>KT3225K</b>	KT3225R
1	0.73	0.95
2	0.73	0.95
3	0.73	0.96
4	0.73	0.95
5	0.74	0.94
6	0.73	0.94
7	0.72	0.94
8	0.73	0.95
9	0.73	0.95
10	0.72	0.96
MAX	0.74	0.96
MIN	0.72	0.94
AVE	0.728	0.949
STD	0.006	0.008
SPEC MAX	0.80	1.05

[mm]

# Electrical Characteristics Comparison

P/N : **KT3225R26000ZAW28TMA**

**Vs.**

New P/N : **KT3225K26000ZAW28TCS**

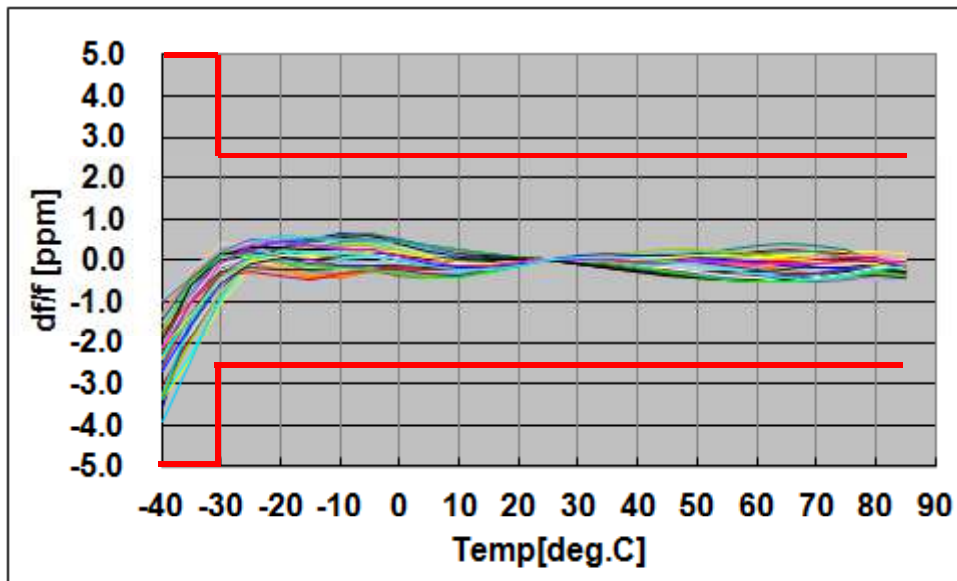
## Electrical Characteristics

Freq.=26.0MHz

Test Condition :  $V_{CC}=2.8V$   
Load:10kohm//10pF

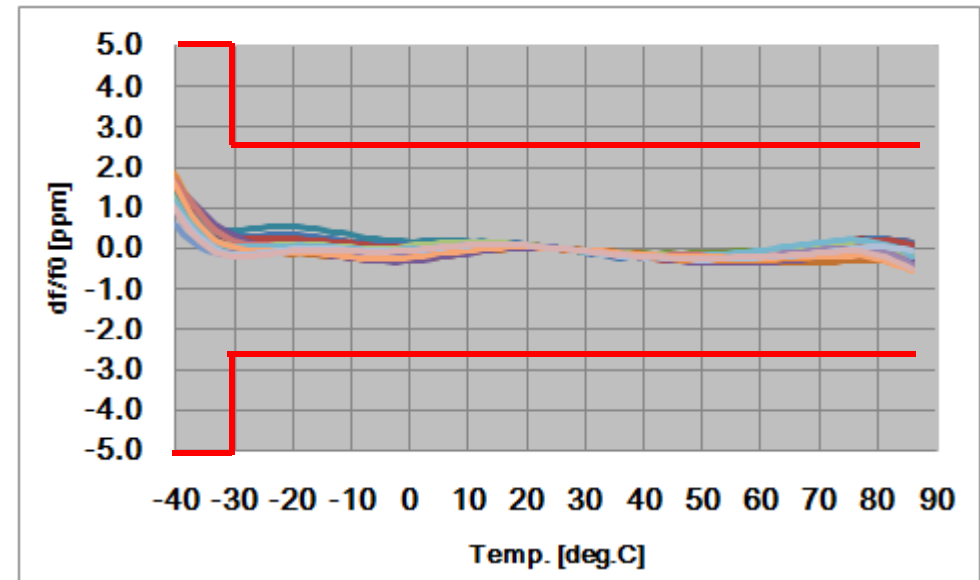
### Current

Frequency stability vs. temp.



### New

Frequency stability vs. temp.





# Electrical Characteristics

Freq.=26.0MHz

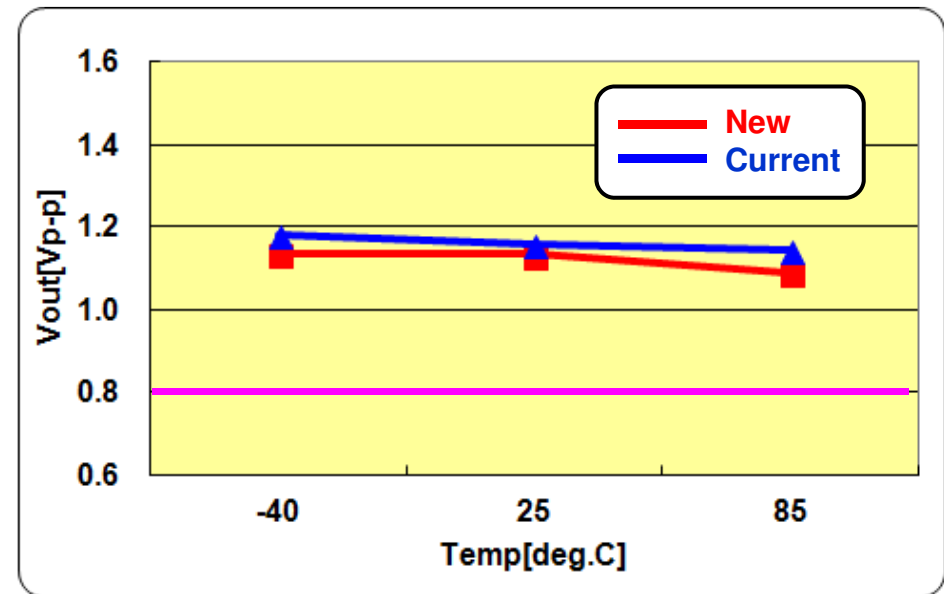
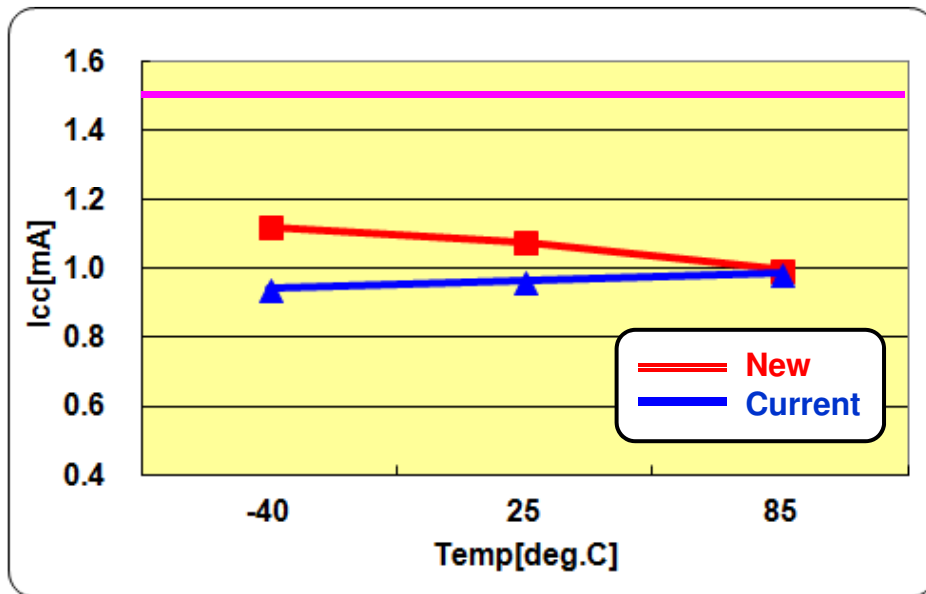
Test Condition :  $V_{CC}=2.8V$   
Load:10kohm//10pF

## Power Supply Current

	Temp[deg.C]		
	-40	25	85
New	1.12	1.07	0.99
Current	0.94	0.96	0.98
			[mA]

## Output Voltage

	Temp[deg.C]		
	-40	25	85
New	1.14	1.13	1.09
Current	1.18	1.16	1.15
			[V]

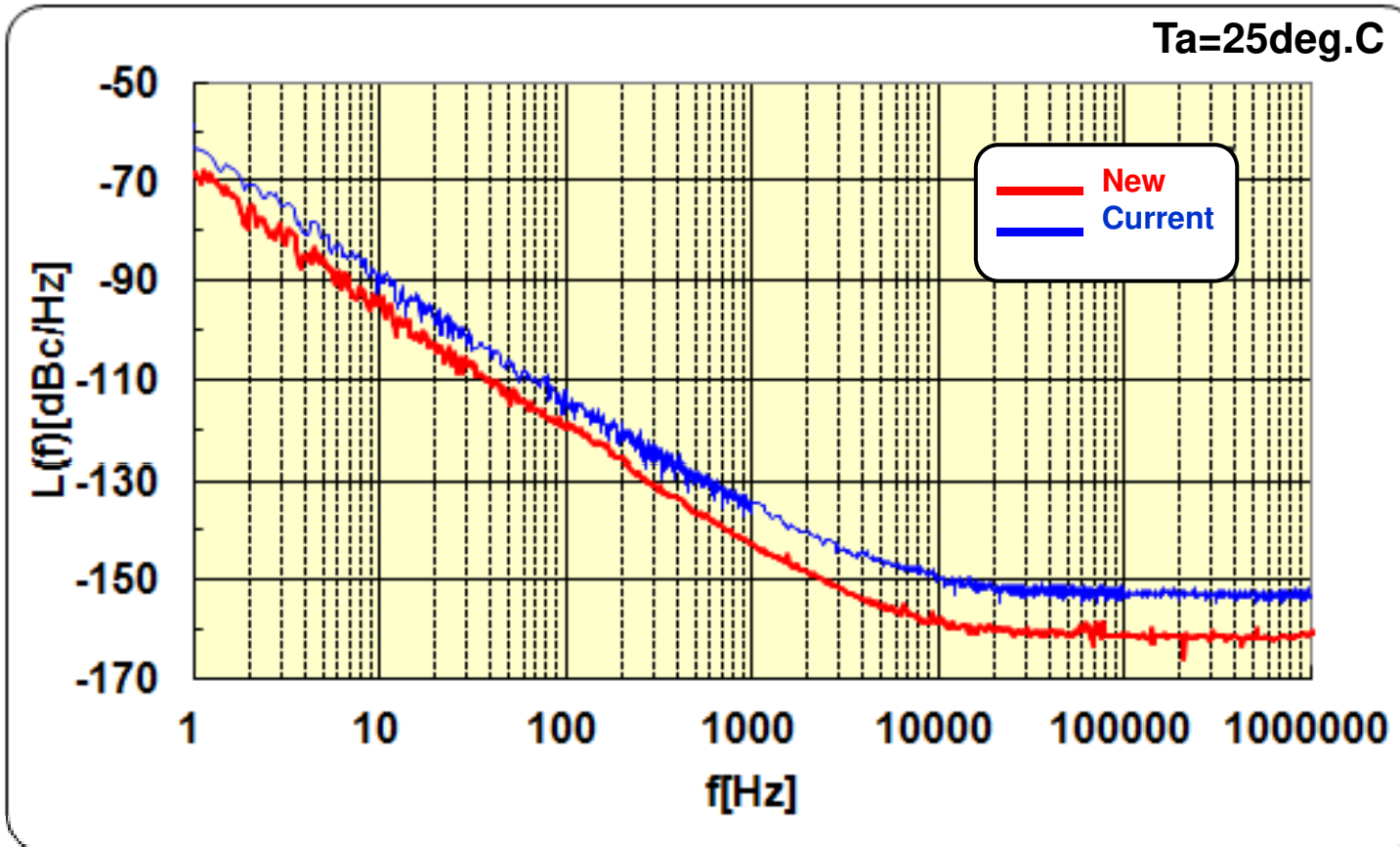


Phase Noise (1Hz to 1MHz)

Freq.=26.0MHz

Test condition : Vcc=2.8V

Ta=25deg.C



	1Hz	10Hz	100Hz	1KHz	10KHz	100KHz	1MHz
New	-68	-95	-119	-143	-158	-161	-161
Current	-62	-89	-113	-135	-150	-153	-153

[dBc/Hz]