AVX
A KYOCERA GROUP COMPANY

Parameter on Ceramic Resonators
PBRC-HR Series

11th-Dec. 2015

KYOCERA Corporation
Automotive Components
Engineering division
Engineering section

京セラ株式会社

1.Series Name

PBRC-HR series
(+85deg.C / consumer/industrial / 7.4 x 3.4 mm)

2. Electrical Characteristics

(key parameters)

PN	Freq	Freq Initial Tolerance	Freq Temp Stability	Resonant Impedance
	(MHz)	(%)	(%)	ohm
PBRC2.00HR50X000	2.00	±0.5	±0.5	200
PBRC2.45HR50X000	2.45	±0.5	±0.5	200
PBRC2.46HR50X000	2.46	±0.5	±0.5	200
PBRC3.58HR50X000	3.58	±0.5	±0.5	30
PBRC3.68HR50X000	3.68	±0.5	±0.5	30
PBRC4.00HR50X000	4.00	±0.5	±0.5	30
PBRC4.19HR50X000	4.19	±0.5	±0.5	30
PBRC4.91HR50X000	4.91	±0.5	±0.5	30
PBRC5.00HR50X000	5.00	±0.5	±0.5	30
PBRC6.00HR50X000	6.00	±0.5	±0.5	30

PN	Freq	Freq Initial Tolerance	Freq Temp Stability	Resonant Impedance
	(MHz)	(%)	(%)	ohm
PBRC7.37HR50X000	7.37	±0.5	±0.5	30
PBRC8.00HR50X000	8.00	±0.5	±0.5	30
PBRC10.00HR50X000	10.00	±0.5	±0.5	150
PBRC11.06HR50X000	11.06	±0.5	±0.5	150
PBRC12.00HR50X000	12.00	±0.5	±0.5	150
PBRC14.74HR50X000	14.74	±0.5	±0.5	150
PBRC16.00HR50X000	16.00	±0.5	±0.5	150
PBRC20.00HR50X000	20.00	±0.5	±0.5	150

(other common parameters)

Items	Specifications
Standard Test IC	MC14069UB(2.0-8.0MHz) / MC74HCU04(8.01-20.0mHz) (Freescale)
Withstanding Voltage	100 V D.C. 10 sec max.
Max. Input Signal Voltage	15 Vp-p
Insulation Resistance	100 MΩ min. (at 10 V D.C.)
Operating Temperature Range	-40 to +85℃
Storage Temperature Range	-40 to +85℃
Aging for 10 years on Oscillating Frequency	fosc $\pm$0.30 % max. (at 25℃ from initial value)

3-1. Measurement Condition

The reference temperature shall be 25±2 ℃.
The measurement shall be performed in the temperature range
 from 15 to 35℃ unless otherwise the result is doubtful.

3-2. Measurement Circuit

Oscillating frequency shall be measured using the Kyocera
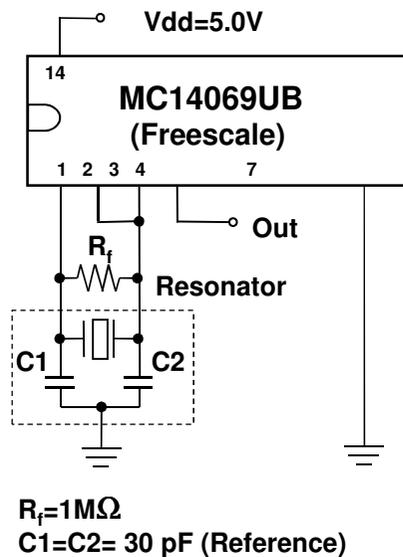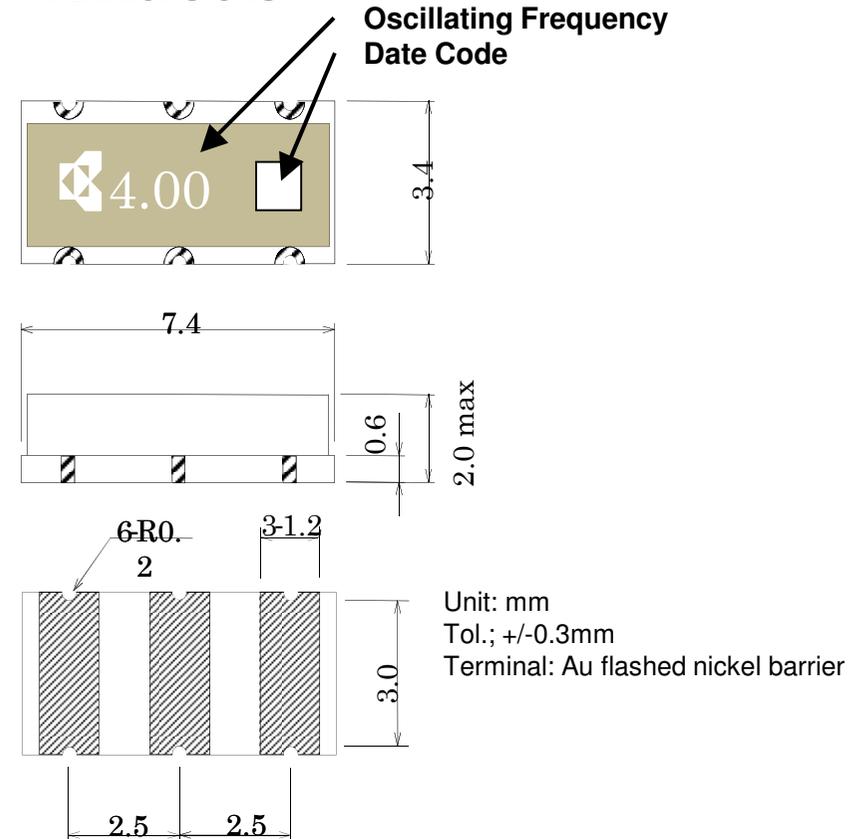standard test circuit shown in Fig. 1.

Vdd=5.0V

14

MC14069UB
(Freescale)

1 2 3 4   7

Out

R_f

Resonator

C1   **C2**

R_f=1MΩ
C1=C2= 30 pF (Reference)

Fig.1 Standard Measuring Circuits

4. Dimensions

Oscillating Frequency
Date Code

4.00

3.4

7.4

0.6

2.0 max

6-R0.
2

3-1.2

3.0

2.5   2.5

Unit: mm
Tol.; +/-0.3mm
Terminal: Au flashed nickel barrier

Oscillating Frequency
ex.4.00 (4.00 is the meaning of 4.00MHz/Oscillating
Frequency)
Date Code
Jan. to Dec. 2013: A to M (except "I")
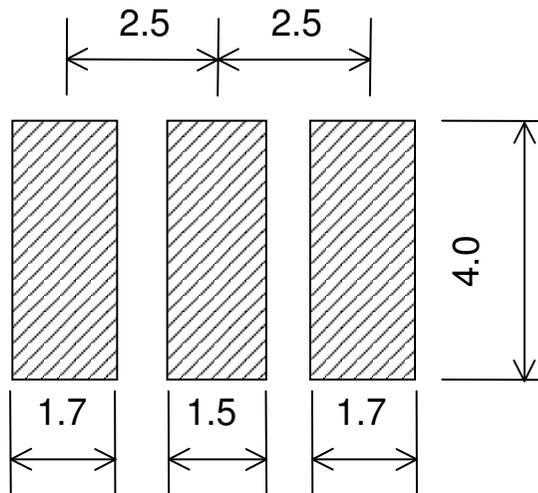Jan. to Dec. 2014: N to Z (except "O")
Jan. to Dec. 2015: a to m (except "i")
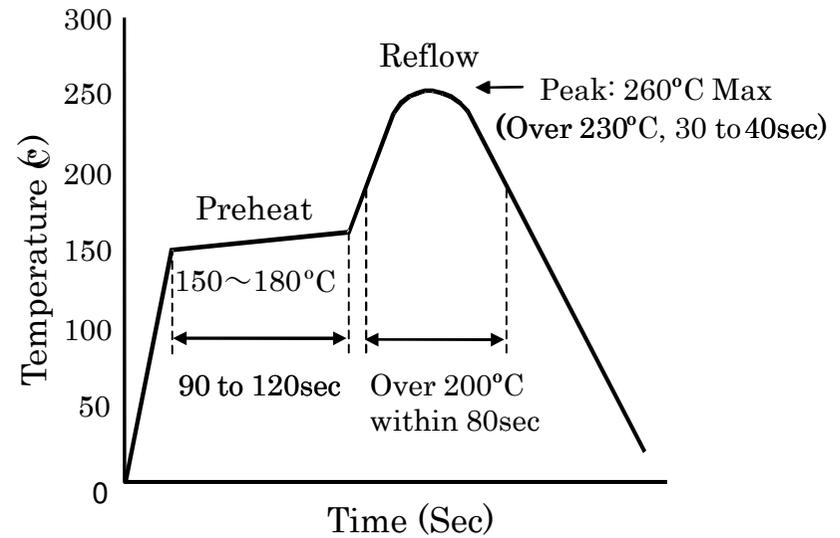Jan. to Dec. 2016: n to z (except "o")
Note:
These alphabets should be after Jan.2017.

5. Recommended Land Pattern

Unit: mm

6. Recommended IR Reflow Profile

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[AVX](#):
  PBRC-4.00HR03 PBRC-20.00HR PBRC-8.00HR PBRC-16.00HR PBRC-4.00HR PBRC-4.19HR PBRC-5.00HR
PBRC-6.00HR PBRC-7.37HR PBRC10.00HR70X000 PBRC12.00HR70X000 PBRC2.45HR50X000
PBRC3.68HR50X000 PBRC5.00HR50X000 PBRC16.00HR70X000 PBRC4.19HR50X000 PBRC7.37HR50X000
PBRC4.91HR50X000 PBRC-12.00HR PBRC-4.91HR PBRC-10.00HR PBRC-3.68HR PBRC20.00HR50X000
PBRC18.00HR70X000 PBRC10.00HR50X0RZ PBRC2.46HR50X000 PBRC4.00HR50X000 PBRC14.74HR70X000
PBRC7.00HR50X000 PBRC6.96HR50X000 PBRC11.06HR70X000 PBRC8.00HR50X000 PBRC6.00HR50X000
PBRC20.00HR70X000 PBRC3.58HR50X000 PBRC18.43HR70X000 PBRC10.00HR50X000 PBRC12.00HR50X000
PBRC16.00HR50X000 PBRC16.00HR50X0RZ PBRC-3.58HR PBRC2.00HR50X000 PBRC-14.74HR
PBRC18.43HR50X000 PBRC14.74HR50X000 PBRC7.37HR10X000 PBRC8.00HR10X000 PBRC3.68HR10X000
PBRC2.00HR10X000 PBRC4.19HR10X000 PBRC4.00HR10X000 PBRC4.91HR10X000