



Corp. Automotive Components Gr.

THE NEW VALUE FRONTIER



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°C
Storage Temperature Range	-40 to +85°C
Aging for 10 years on Oscillating Frequency	fosc ±0.30 % max. (at 25°C from initial value)

### 3-1. Measurement Condition

The reference temperature shall be  $25 \pm 2$  °C.  
 The measurement shall be performed in the temperature range from 15 to 35°C 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.

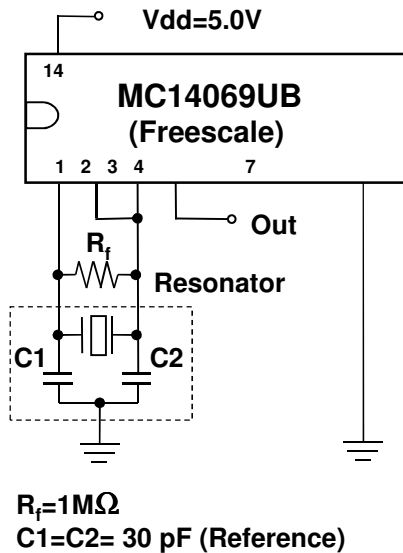
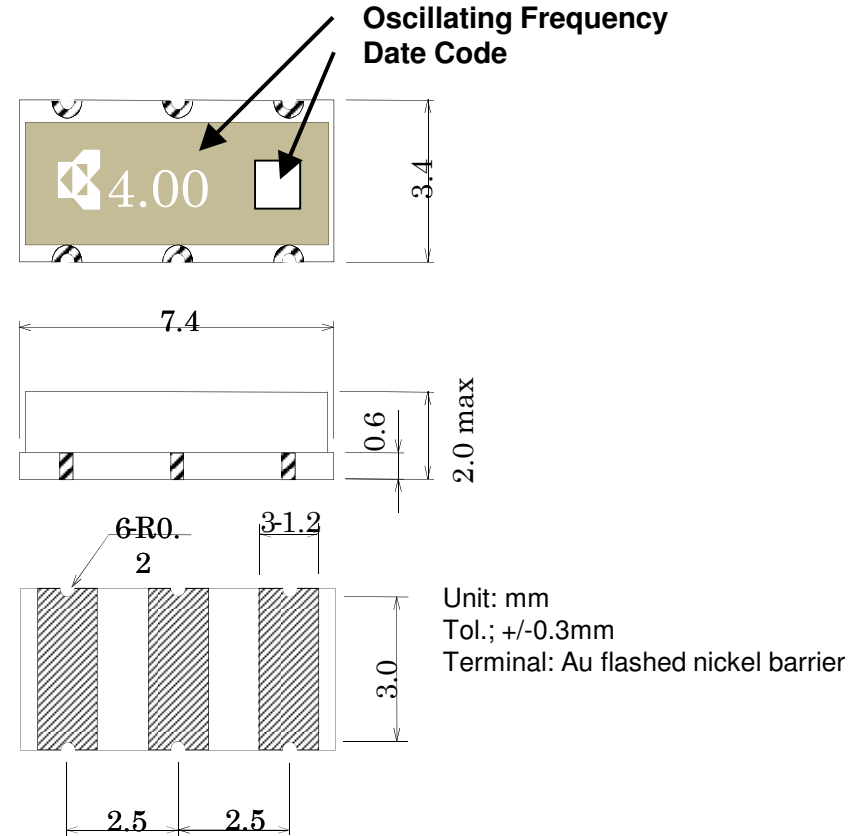


Fig.1 Standard Measuring Circuits

### 4. Dimensions



#### 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")

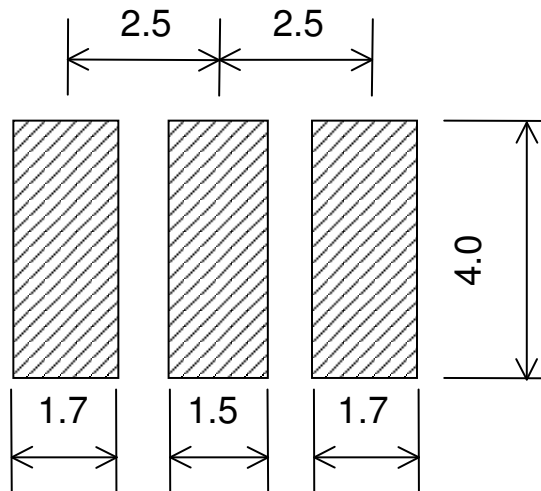
Jan. to Dec. 2016: n to z (except "o")

Note:

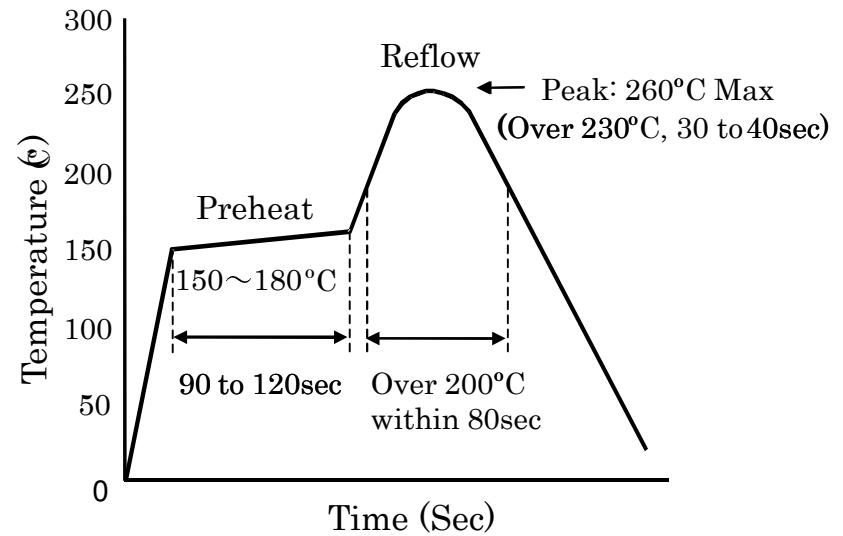
These alphabets should be after Jan.2017.

### 5. Recommended Land Pattern

Unit: mm



### 6. Recommended IR Reflow Profile



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