

# PBRC -B, -D Series Chip Resonators

## Built-in Capacitor MHz Band SMT Resonators

$f_0$ : 2.00 to 36.00 MHz

### FEATURES

- 1) Built-in load capacitor
- 2) High reliability chip resonator in a ceramic case which can be reflow soldered and washed
- 3) Ultra-miniature size is suitable for compact equipment and high mounting density
- 4) Rectangular shape allows easy "pick and place" operation
- 5) 2000 pcs. per reel
- 6) Sold in increments of 2000 pcs.

### HOW TO ORDER

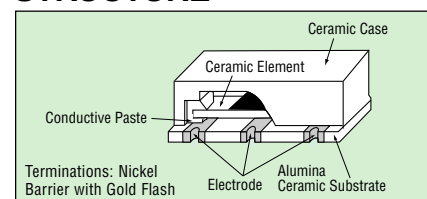
**PBRC - 4.00 B R**

① ② ③ ④ ⑤

- ① Type: (Piezo Bulk Resonator Chip)
- ② Oscillation frequency (MHz)
- ③ Resonator type:  
B = With capacitor (2.00~20.00MHz)  
D = With capacitor (20.01~36.00MHz)
- ④ Packaging:  
R = Tape and reel
- ⑤ Frequency tolerance:  
□ =  $\pm 0.5\%$  (2.00~8.00MHz)  
07 =  $\pm 0.7\%$  (8.01~20.00MHz)  
□ =  $\pm 0.5\%$  (20.01~36.00MHz)



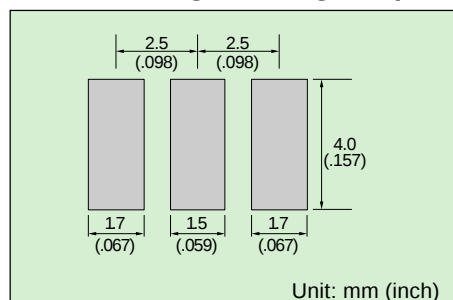
### STRUCTURE



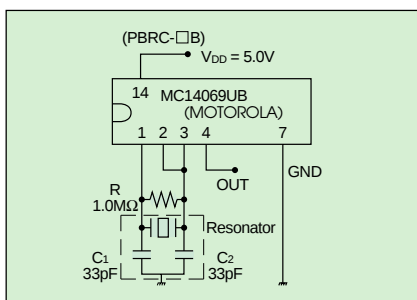
### SPECIFICATIONS (PBRC-□B/PBRC-□D)

| Series Type                                | B                                            |                                                            | D                                                           |
|--------------------------------------------|----------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------|
| Frequency Range                            | 2.00 to 8.00 MHz                             |                                                            | 8.01 to 20.00 MHz                                           |
| Load Capacitor                             | 33 pF (typ.)                                 |                                                            | 10 pF (typ.)                                                |
| Frequency Tolerance                        | $\pm 0.5\%$                                  |                                                            | $\pm 0.7\%$                                                 |
| Resonant Impedance                         | 2.00-2.90MHz<br>3.00-3.57MHz<br>3.58-8.00MHz | 200 $\Omega$ max.<br>100 $\Omega$ max.<br>30 $\Omega$ max. | 150 $\Omega$ Max.<br>150 $\Omega$ Max.<br>150 $\Omega$ Max. |
| Temperature Characteristics (-20 to +80°C) | $\pm 0.3\%$                                  |                                                            | $\pm 0.1\%$                                                 |

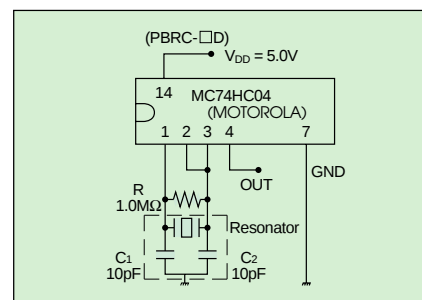
### RECOMMENDED LAND PATTERN FOR PBRC-□B/D



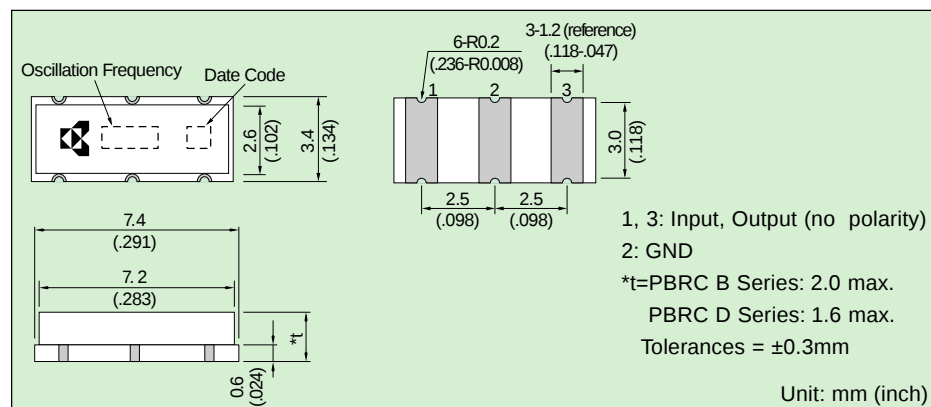
### STANDARD TEST CIRCUIT 2.00 ~ 8.00 MHz



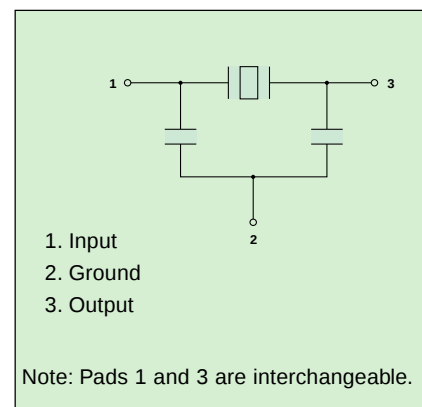
### STANDARD TEST CIRCUIT 8.01 ~ 36.00 MHz



### DIMENSIONS



### PAD CONNECTION



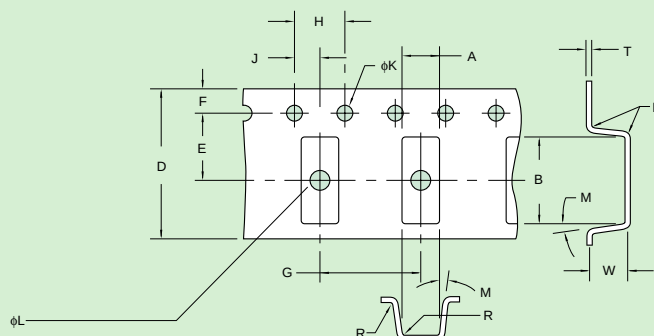
# Tape & Reel Packaging

## Surface Mountable Chip Resonators PBRC -A, -B, -D Types

2000 pieces per reel with 10 positions open at beginning and end of reel. Leader will be 200mm maximum.

### TAPE DIMENSIONS

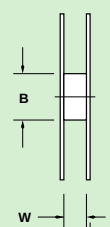
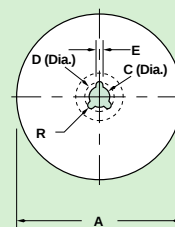
| A         | B         | D         | E         | F         | G         | H         | J         | $\phi K$  | M      | R      | W         | T         | $\phi L$   |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|-----------|-----------|------------|
| $\pm 0.2$ | $\pm 0.2$ | $\pm 0.3$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.1$ |        |        | $\pm 0.2$ | $\pm 0.1$ | $\pm 0.05$ |
| 3.8       | 7.8       | 16.0      | 7.5       | 1.75      | 8.0       | 4.0       | 2.0       | 1.5       | 10°max | 0.3max | 2.1       | 0.3       | 1.55       |



Units:mm

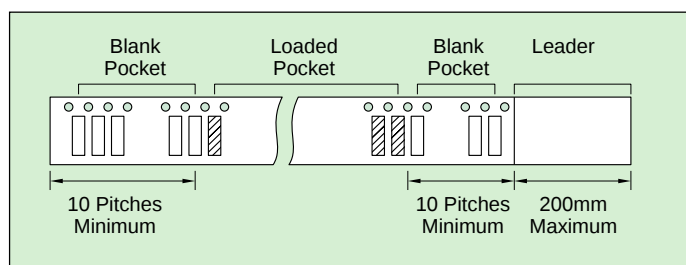
### REEL DIMENSIONS

| A         | B         | C         | D         | E         | R    | W         | T         |
|-----------|-----------|-----------|-----------|-----------|------|-----------|-----------|
| 255       | 80        | 13        | 25        | 2         | 1.0R | 17.5      | 2         |
| $\pm 1.0$ | $\pm 0.5$ | $\pm 0.5$ | $\pm 0.8$ | $\pm 0.5$ |      | $\pm 1.5$ | $\pm 0.5$ |

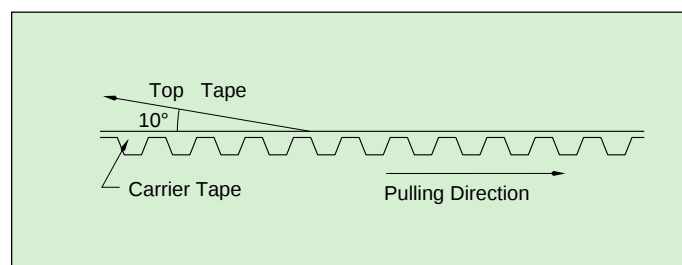


Units:mm

### PACKING METHOD



### TEST CONDITION OF PEELING STRENGTH



### MARKING

#### Marking of Reel

- Type Name
- Lot No.
- Quantity
- Vendor Name

#### Marking of Exterior Package

- Type Name
- Lot No.
- Quantity of Reel
- Shipping Date
- Vendor Name

### REFLOW PROFILE

