

# CERAMIC RESONATOR



## kHz Band SMD Ceramic Resonator **CSBF** Series

### Can be reflow soldered and mounted by automatic placers.

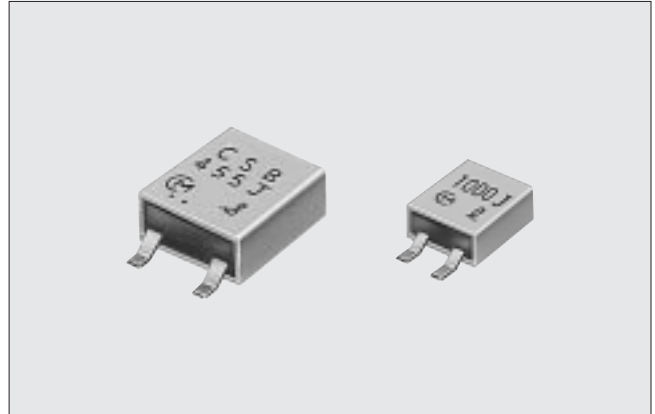
MURATA's original package technologies have enabled the development of the kHz band CERALOCK®. The series is perfect in miniature remote control units and AV modules.

#### FEATURES

1. The series withstands reflow soldering.
2. The series is mountable by automatic placers.
3. No adjustment is necessary for oscillation circuits.

#### APPLICATIONS

- Clock oscillators for microprocessors.
- OA equipment
- AV modules



#### SPECIFICATIONS

Item \ Type	CSBF Series	
	CSBF□J	CSBF□J
Frequency Range	430–519kHz	700–1250kHz
Oscillation Frequency Initial Tolerance	±0.5%	±0.5%
Oscillation Frequency Temperature Stability*1	±0.3%	±0.3%
Aging*2	±0.3%	±0.3%
Oscillation Frequency Measuring Circuit	<div style="float: right; margin-top: 10px;">                     IC : 1/6CD4069UBEX2                      V<sub>DD</sub> : 5V                      X : CERALOCK®                      C<sub>1</sub>, C<sub>2</sub> : 100pF                      Rd : 5.6kΩ*3                 </div>	

\*1 At -20 to +80°C.

\*2 For 10 years at room temperature.

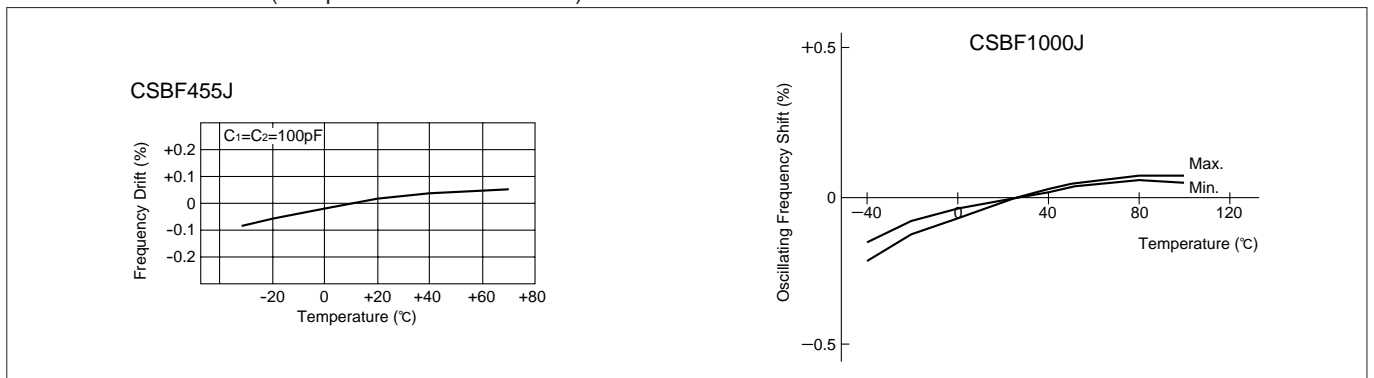
\*3 This resistance value applies to the 700-1250 kHz range.

■ DIMENSIONS/STANDARD LAND PATTERN (in mm)

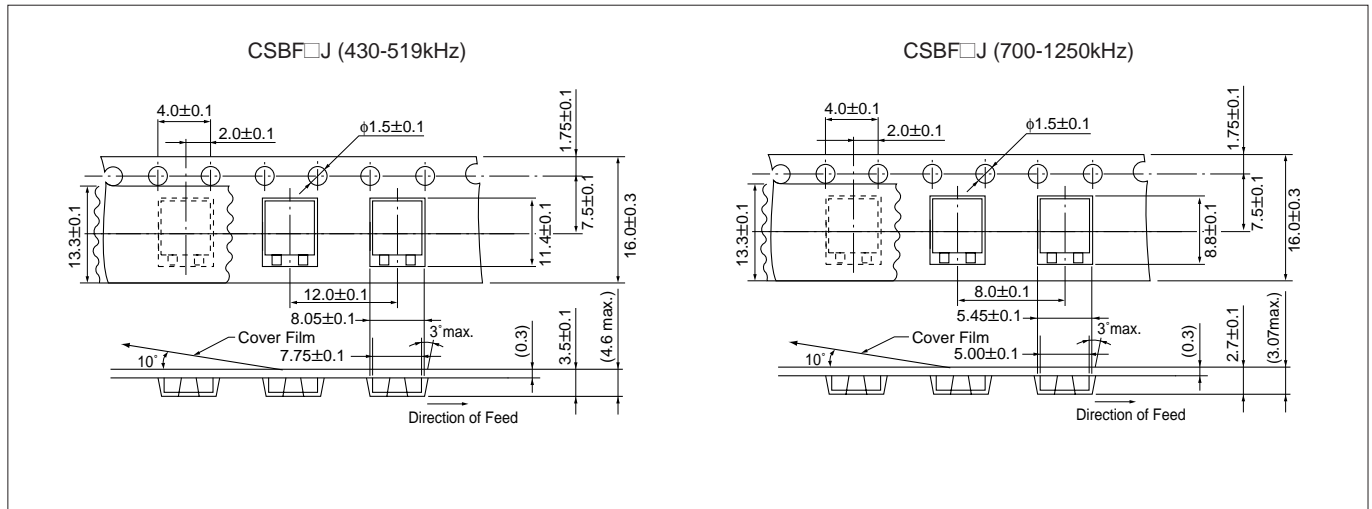
Frequency	430—519kHz	700—1250kHz
Type	CSBF□J	CSBF□J*1
Dimensions		
Standard Land Pattern		

\*1 Available in several standard frequencies.

■ TECHNICAL DATA (Temperature characteristics)



**■ DIMENSIONS OF PLASTIC TAPE**



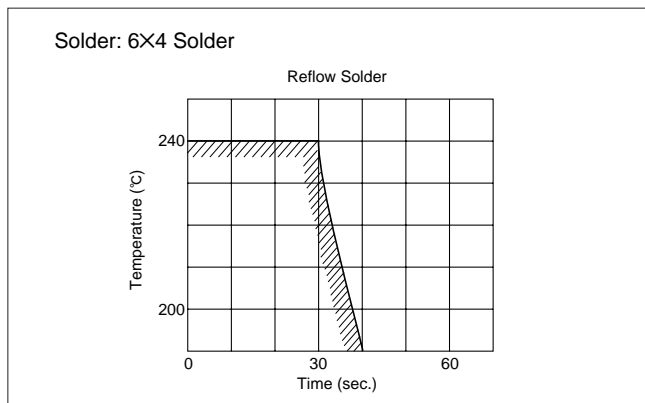
**■ APPLICATIONS**

1. Soldering Conditions

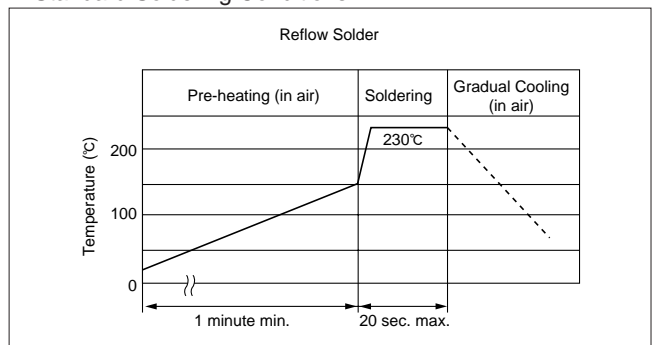
● Soldering Temperature and Time

Solder within the temperature and time combinations illustrated by the slanted lines in the following graph.

If soldering is repeated, please note that the allowed time is the accumulated time.



● Standard Soldering Conditions



● Soldering Method

Soldering conditions : Soldering iron temperature 270°C  
Soldering time less than 3 seconds

2. Cleaning Conditions

Please contact us concerning cleaning method before use. For protection of ozone layer, we also investigate the non-ODC cleaning process for our devices. For more details, please contact us before use.