CSBF/CSAC, CSACV/CSACW Series

Increasing demand for size reduction and the economies realized through Surface Mount Technology, have led Murata Electronics to develop the CSBF and CSAC ceramic resonators. The CSBF is a miniaturized leaded unit offering size compatibility with most commonly available surface mount devices, while the CSKCC and the CSAC are true surface mountable component.

Both devices are available in tape and reel packaging compatible with most auto-placement equipment.

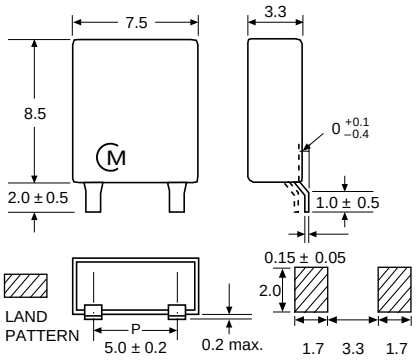
PART NUMBERING SYSTEM

CSBF	500	J	100	–	TC01
SERIES	**3 OR 4 DIGITS** Freq. in kHz	**TYPE** Standard	**TOLERANCE** Standard ± 0.5% (Blank) 100 ± 0.3% 800 ± 1.0%		**TAPE CARRIER**

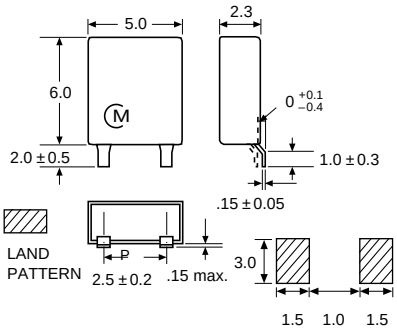
Note: CSBF Resonators sorted to only CMOS Characteristic Circuit.

DIMENSIONS: MM
CSBF SERIES – 430 to 1250kHz

430 – 519kHz



700 – 1250kHz

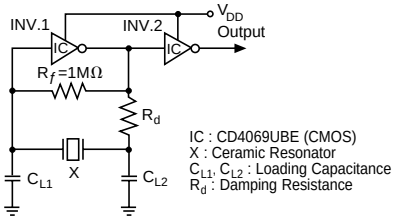


SPECIFICATIONS

Frequency Range	430 – 519kHz	700 – 1250kHz
Standard Initial Frequency Tolerance (25°C)	±0.5%	±0.5%
Temperature Stability (–20°C to +80°C)*	±0.3%	±0.3%

*Unavailable for certain frequency ranges.

STANDARD TEST CIRCUIT



Note: Also available in automotive temp. grade.

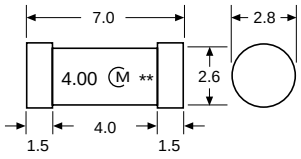
CSAC/CSACV/CSACW SERIES – 1.80 to 60.00MHz

NEW

SPECIFICATIONS	CSAC□MGC/MGCM-TC	CSACV□MTJ-TC20	CSACV□MXJ040-TC20	CSACW□MX-T
Frequency Range	1.80 to 6.00MHz	6.01 to 13.0MHz	13.50 to 15.99MHz	16.00 to 60.00
Standard Initial Frequency Tolerance	±0.5%	±0.5%	±0.5%	±0.5%
Storage Temperature Range	−40°C to +85°C			−55°C to +85°C
Temperature Tol. (−20°C to +80°C)	±0.3%	±0.5%	±0.3%	±0.2%
Withstand Voltage	50 VDC max.			100 VDC max.

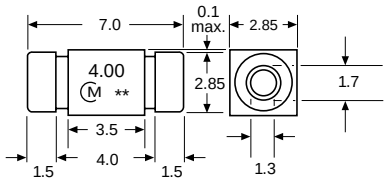
DIMENSIONS: mm

CSAC□MGC-TC



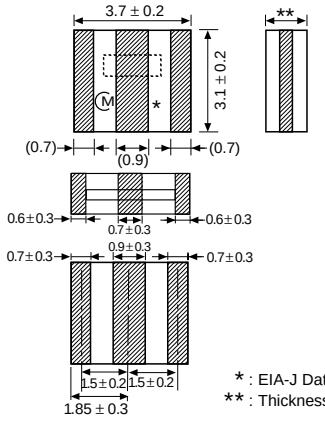
** : EIA-J Date Code

CSAC□MGCM-TC



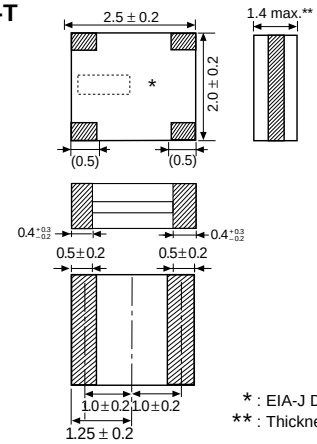
** : EIA-J Date Code

CSACV□MTJ/MXJ-TC20



* : EIA-J Date Code
** : Thickness varies by frequency

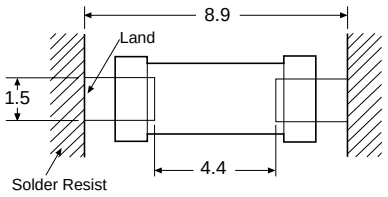
CSACW□MX-T



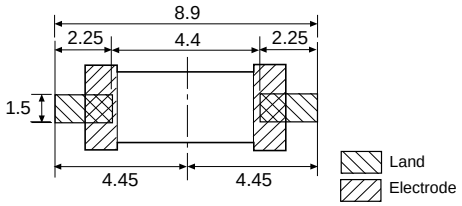
* : EIA-J Date Code
** : Thickness varies by frequency

LAND PATTERN: mm

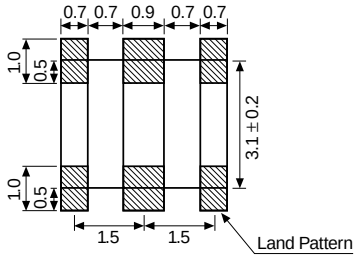
CSAC□MGC-TC



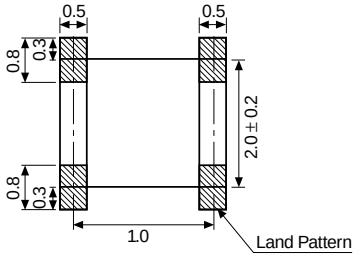
CSAC□MGCM-TC



CSACV□MTJ/MXJ-TC20

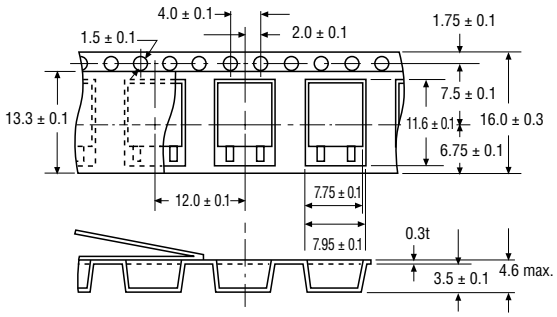


CSACW□MX-T

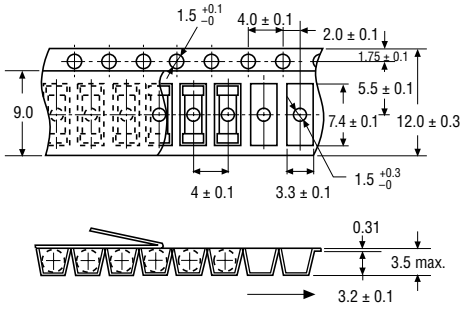


PLASTIC TAPE DIMENSIONS: mm

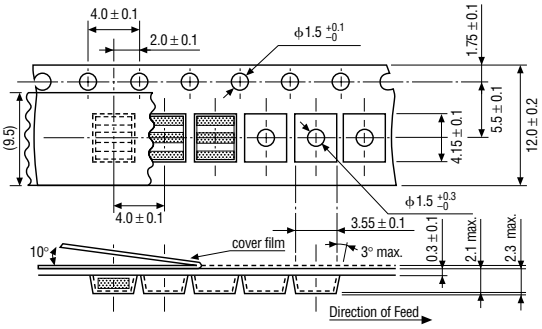
CSBF 430 – 519kHz



CSAC MGC/M



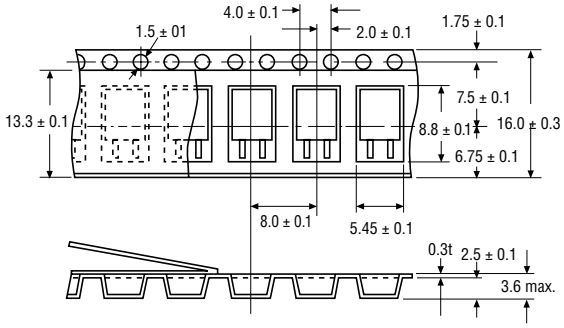
CSACV□MTJ/MXJ



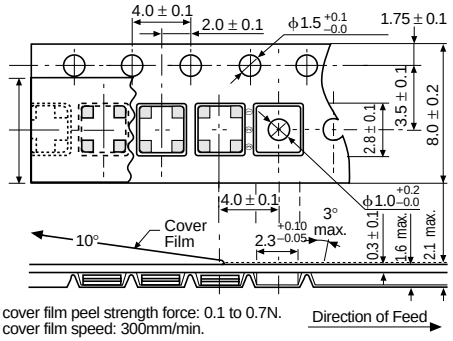
The cover
film peel strength force: 20 ~ 70gr.

The cover
film peel speed: 300mm/min.

CSBF 700 – 1250kHz



CSACW□MX-T

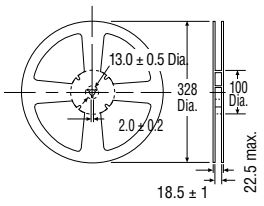


The cover film peel strength force: 0.1 to 0.7N.
The cover film speed: 300mm/min.

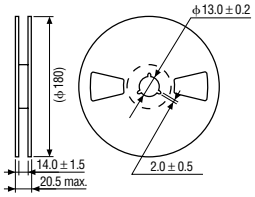
Direction of Feed

PLASTIC REEL DIMENSIONS: mm

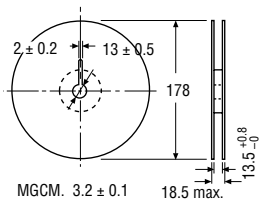
CSBF 328mm Dia.



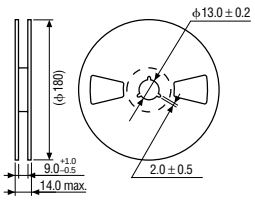
CSACV□MTJ/MXJ-TC20



CSAC MGC/M



CSACW□MX-T



PART NUMBERING SYSTEM

CSTCC 4.00 MG 1 00 – TC

SERIES	3 OR 4 DIGIT FREQUENCY	TYPE	INITIAL TOLERANCE		TAPE CARRIER
			Blank or 0 = ± 0.5% 1 = ± 0.3% 2 = ± 0.2% 8 = ± 1.0%	Denotes Sorting IC circuit and load cap value. Blank or 00 = CMOS 40 = HCMOS	

CSTCW 2000 MX 0 3 001 – T

SERIES	4 DIGIT FREQUENCY	TYPE	TOLERANCE	LOAD CAP VALUE	CUSTOM MARK	TAPE CARRIER
			0 = ± 0.5% std. 1 = ± 0.3% 2 = ± 0.2% 4 = ± 0.1% 8 = ± 1.0%	1 = 6pF 3 = 15pF		

SURFACE MOUNT RESONATORS WITH BUILT-IN LOAD CAPACITORS

NEW

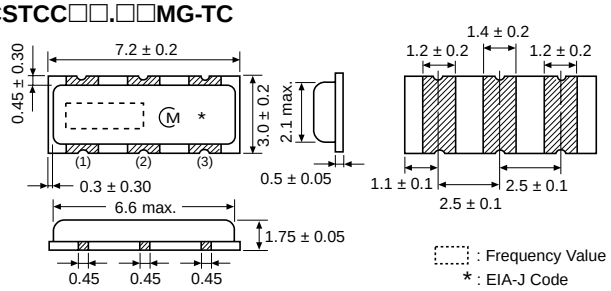
Part Number (note 1)	CSTCC□.□□MG-TC	CSTCV□□.□MTJ-TC20	CSTCV□□.□□MXJ-TC20	CSTCW□□□□MX-T
Available Frequencies (note 2)	2.00 to 10.0MHz	10.01 to 13.0MHz	13.50 to 15.99MHz	16.00 to 60.00MHz
Std. Initial Tolerance	±0.5%	±0.5%	±0.5%	±0.5%
Temperature Tol. –20°C TO +80°C	±0.3%	±0.4%	±0.3%	±0.3%
Aging Stability (for 10 yrs @ 25°C)	±0.3%	±0.3%	±0.3%	±0.3%
Built-in Capacitance (note 3)	15pF ± 20% (blank) 47pF ± 20% (OH6)	22pF ± 20% (0C4)	22pF ± 20%…13.50 to 15.99MHz (0H4)	6pF ± 2pF (01) 15pF ± 20% (03)

Note 1: For CSTCC□.□□MG, 3.58, 3.68, 4.00, 4.19, 4.91, 5.00, 6.00, 8.00, 8.19, 9.00, 10.0MHz are common values.
For CSTCV□□.□MTJ, 11.00, 11.059, 12.00MHz are common values.
For CSTCV□□.□□MXJ, 13.50,14.72, 14.74MHz are common values.
For CSTCW□□□□MX, 16.00, 16.93, 20.00, 24.00, 27.00, 32.00, 33.86, 40.00, 50.00MHz are common values.
For other frequency values, please contact Murata Electronics.

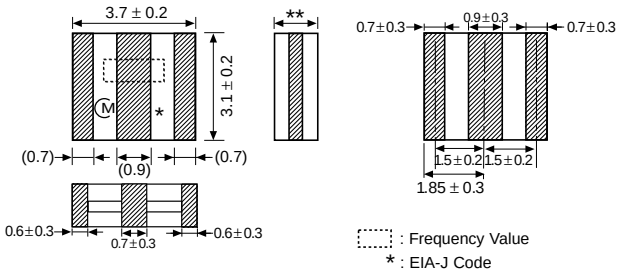
Note 2: Load capacitance value and tolerance are reference value.
Note 3: Please contact Murata Electronics for proper selection of circuit values.

DIMENSIONS: mm

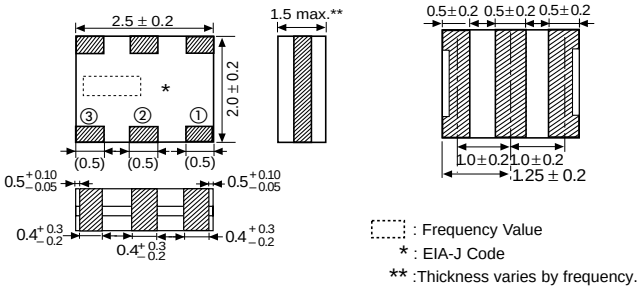
CSTCC□□.□□MG-TC



CSTCV□□.□□MTJ/MXJ-TC20

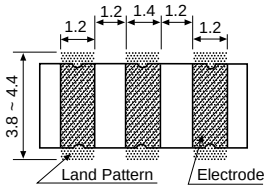


CSTCW□□□□MX-T

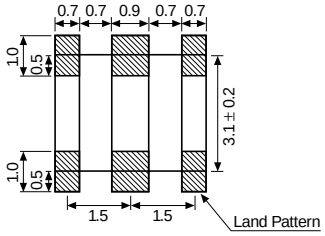


RECOMMENDABLE LAND PATTERN

CSTCC□□.□□MG-TC



CSTCV□□.□□MTJ/MXJ-TC20



CSTCW□□□□MX-T