



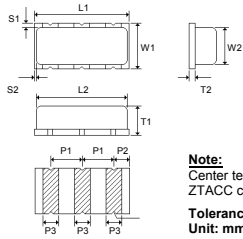
## Ceramic Resonator (MHz)

RoHS Compliant  
Directive 2002/95/EC

REACH Compliant  
(15 SVHCs)  
Regulation (EC)  
No. 1907/2006

### • Dimension

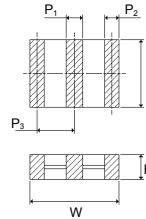
#### ZTACC□MG / ZTTCC□MG



Dimension	ZTACC / ZTTCC	
	L1	7.4±0.2
L2	6.7 max.	
W1	3.4±0.2	
W2	2.2 max.	
T1	1.8±0.2	
T2	0.6±0.05	
S1	0.4±0.3	
S2	0.1±0.2	
P1	2.5±0.2	
P2	1.2±0.1	
P3	1.2±0.2	

**Note:**  
Center terminal is omitted for ZTACC ceramic resonator.  
Tolerance: ±0.3mm  
Unit: mm

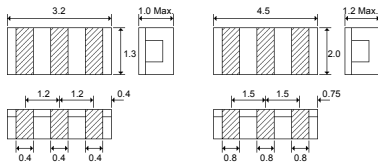
#### ZTACS□MT/MX / ZTACV□MT/MX / ZTTCS□MT/MX / ZTTCV□MT/MX



Dimension	ZTACS / ZTTCS		ZTACV / ZTTCV	
	L	4.7±0.2	3.7±0.2	3.7±0.2
W	4.1±0.2	3.1±0.2	3.1±0.2	3.1±0.2
H	1.9±0.2*	1.7±0.3*	1.7±0.3*	1.7±0.3*
P1	1.0±0.4	0.9±0.2	0.9±0.2	0.9±0.2
P2	0.8±0.4	0.7±0.2	0.7±0.2	0.7±0.2
P3	1.95±0.2	1.5±0.2	1.5±0.2	1.5±0.2

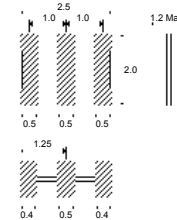
**Note:**  
\* Maximum height  
- Center terminal is omitted for ZTACS / ZTACV ceramic resonator.  
Unit: mm

#### ZTACR□MG / ZTACE□MG / ZTTCR□MG / ZTTCE□MG



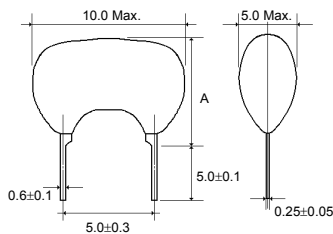
**Note:**  
Center terminal is omitted for ZTACR / ZTACE ceramic resonator.  
Tolerance: ±0.2mm  
Unit: mm

#### ZTACW / ZTTCW



**Note:**  
Center terminal is omitted for ZTACW ceramic resonator.  
Tolerance: ±0.2mm  
Unit: mm

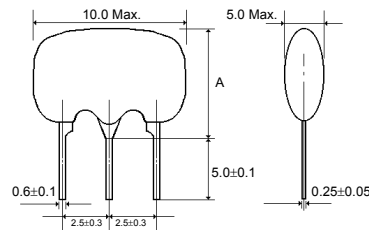
#### ZTA (MG / MT / MX)



Dimension	ZTA	
	MG	MT / MX
A	7.5 Max.	10.0 Max.

Tolerance: ±0.3mm  
Unit: mm

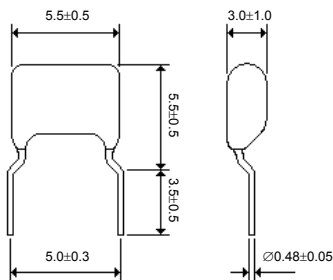
#### ZTT (MGW / MT / MX)



Dimension	ZTT	
	MGW	MT / MX
A	7.5 Max.	10.0 Max.

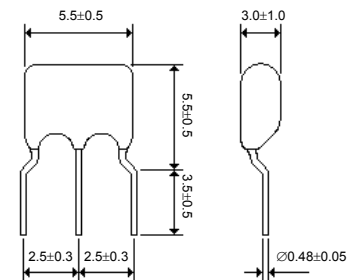
Tolerance: ±0.3mm  
Unit: mm

#### ZTARS□MG



Unit: mm

#### ZTTRS□MG



Unit: mm



### ● Electrical Specifications of ZTACC / ZTCC

Part Number	Frequency Range (MHz)	Frequency Tolerance (%)	Temperature Stability (%)	Operating Temperature Range (°C)	Aging Rate (%)
ZTACC□MG / ZTCC□MG	2.00 ~ 8.00	±0.3, ±0.5	±0.3	-25 ~ +85	±0.5

<sup>1</sup> For other frequencies or specifications, please consult with our sales representatives for details.

<sup>2</sup> For typical and available built-in capacitance, please consult with our sales representative.

<sup>3</sup> Withstanding voltage: DC100V (5 seconds max.)

<sup>4</sup> Insulation resistance:  $5 \times 10^8 \Omega$  min. (DC10V)

### ● Electrical Specifications of ZTACS / ZTACV / ZTCS / ZTCV

Part Number	Frequency Range (MHz)	Frequency Tolerance (%)	Temperature Stability (%)	Operating Temperature Range (°C)	Aging Rate (%)
ZTACS□MT / ZTCS□MT	6.00 ~ 13.00	±0.5	±0.3	-25 ~ +85	±0.5
ZTACS□MX / ZTCS□MX	13.01 ~ 60.00	±0.5	±0.4	-25 ~ +85	±0.5
ZTACV□MT / ZTCV□MT	8.00 ~ 13.00	±0.5	±0.3	-25 ~ +85	±0.5
ZTACV□MX / ZTCV□MX	16.00 ~ 60.00	±0.5	±0.3	-25 ~ +85	±0.5

<sup>1</sup> For other frequencies or specifications, please consult with our sales representatives for details.

<sup>2</sup> For typical and available built-in capacitance, please consult with our sales representative.

<sup>3</sup> Withstanding voltage: DC100V (5 seconds max.)

<sup>4</sup> Insulation resistance:  $5 \times 10^8 \Omega$  min. (DC10V)

### ● Electrical Specifications of ZTACR / ZTCR

Part Number	Frequency Range (MHz)	Frequency Tolerance (%)	Temperature Stability (%)	Operating Temperature Range (°C)	Aging Rate (%)
ZTACR□MG / ZTCR□MG	4.00 ~ 8.00	±0.5	±0.3	-25 ~ +85	±0.5

<sup>1</sup> For other frequencies or specifications, please consult with our sales representatives for details.

<sup>2</sup> For typical and available built-in capacitance, please consult with our sales representative.

<sup>3</sup> Withstanding voltage: DC100V (5 seconds max.)

<sup>4</sup> Insulation resistance:  $5 \times 10^8 \Omega$  min. (DC10V)

### ● Electrical Specifications of ZTACE / ZTCE

Part Number	Frequency Range (MHz)	Frequency Tolerance (%)	Temperature Stability (%)	Operating Temperature Range (°C)	Aging Rate (%)
ZTACE□MG / ZTCE□MG	8.00 ~ 12.00	±0.5	±0.3	-25 ~ +85	±0.5

<sup>1</sup> For other frequencies or specifications, please consult with our sales representatives for details.

<sup>2</sup> For typical and available built-in capacitance, please consult with our sales representative.

<sup>3</sup> Withstanding voltage: DC100V (5 seconds max.)

<sup>4</sup> Insulation resistance:  $5 \times 10^8 \Omega$  min. (DC10V)

### ● Electrical Specifications of ZTACW / ZTCW

Part Number	Frequency Range (MHz)	Frequency Tolerance (%)	Temperature Stability (%)	Operating Temperature Range (°C)	Aging Rate (%)
ZTACW□MX / ZTCW□MX	20.00 ~ 60.00	±0.5	±0.3	-25 ~ +85	±0.5

<sup>1</sup> For other frequencies or specifications, please consult with our sales representatives for details.

<sup>2</sup> For typical and available built-in capacitance, please consult with our sales representative.

<sup>3</sup> Withstanding voltage: DC100V (5 seconds max.)

<sup>4</sup> Insulation resistance:  $5 \times 10^8 \Omega$  min. (DC10V)

### ● Electrical Specifications of ZTA / ZTARS / ZTT / ZTTRS

Part Number	Frequency Range (MHz)	Frequency Tolerance (%)	Temperature Stability (%)	Operating Temperature Range (°C)	Aging Rate (%)
ZTA□MG / ZTT□MG	2.00 ~ 8.00	±0.3, ±0.5	±0.3	-25 ~ +85	±0.5
ZTARS□MG / ZTTRS□MG	3.00 ~ 10.00	±0.3, ±0.5	±0.3	-25 ~ +85	±0.5
ZTA□MT / ZTT□MT	6.00 ~ 13.00	±0.5	±0.3	-25 ~ +85	±0.5
ZTA□MX / ZTT□MX	12.00 ~ 60.00	±0.5	±0.3	-25 ~ +85	±0.5

<sup>1</sup> For other frequencies or specifications, please consult with our sales representatives for details.

<sup>2</sup> For typical and available built-in capacitance, please consult with our sales representative.

<sup>3</sup> Withstanding voltage: DC100V (5 seconds max.)

<sup>4</sup> Insulation resistance:  $5 \times 10^8 \Omega$  min. (DC10V)