

# SMD Ceramic Resonator

# ZTTC Series



(Built-in Capacitors)

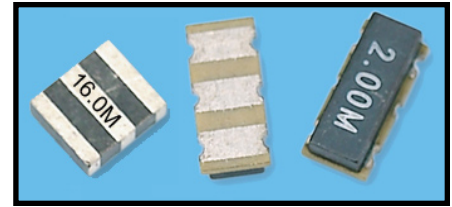
(3 Pads SMD)

### Features:

- Low profile
- Industry standard dimensions.
- Built-in capacitance load.
- Wide frequency range.
- High reliability.
- Tape & Reel
- **RoHs Compliant (Pb Free)**

### Dimensionn:

- ZTTC: 7.4 x 3.4 x 1.8mm
- ZTCS: 4.7 x 4.1 x 1.6mm
- ZTTCV: 3.7 x 3.1 x 1.2mm

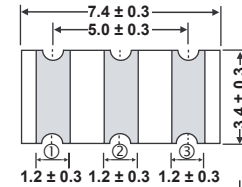


### Electrical Specifications:

Part Number *	Frequency Range (MHz)	
ZTCC_ _ _ MG	1.80 - 10.00MHz	
ZTCS_ _ _ MT	7.00 - 13.00MHz	
ZTTCV_ _ _ MT	7.00 - 13.00MHz	
ZTCS_ _ _ MX	13.01 - 50.00MHz	
ZTTCV_ _ _ MX	13.01 - 50.00MHz	
Resonant Resistance (ESR) by Frequency Range	1.80 - 1.99MHz	≤100Ω
	2.00 - 2.99MHz	≤80Ω
	3.00 - 3.49MHz	≤50Ω
	3.50 - 6.99MHz	≤30Ω
	7.00 - 12.99MHz	≤25Ω
	13.00 - 50.00MHz	≤40Ω
C1 = C2 Capacitance Values (±20%)	5, 10, 15, 20, 22, 30, 33, 39, 47 pF	
Operating Temperature	- 40°C to 85°C	
Storage Temperature	- 55°C to 85°C	
Frequency Tolerance (at 25°C)	± 0.5% max.	
Frequency Stability (over temp. range)	± 0.3% max.	
Aging for 10 years	± 0.3% max.	
Rating Voltage	DC Voltage 6VDC AC Voltage 15Vpp	
Withstanding Voltage	100VDC, 5 sec max.	
Insulation Resistance	500MΩ min. at 10VDC	

### Dimensions (mm):

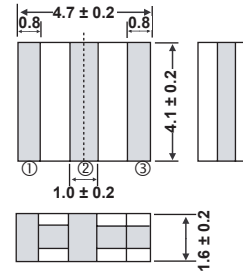
#### ZTCC



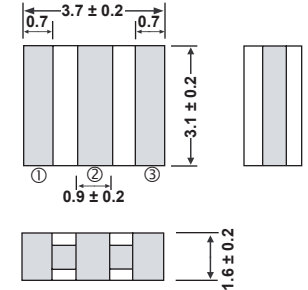
### Connection:

- #1: IN / OUT
- #2: GROUND
- #3: OUT / IN

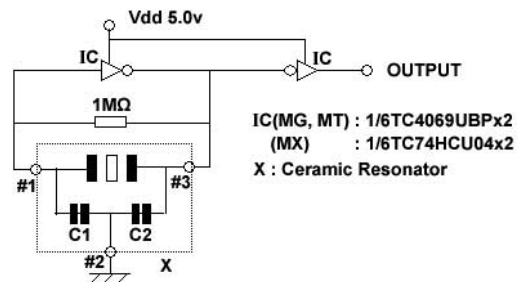
#### ZTCS



#### ZTTCV



### Test Circuit:



### Part Numbering System:

**ZTTC**   **25.00**   **MG**   **TR**

①   ②   ③   ④   ⑤

#### ① Series

ZTCC
ZTCS
ZTTCV

#### ② Frequency

Frequency
1.80 ~ 50.00

#### ③ Type

Type
MG
MT
MX

#### ④ C1 = C2 Capacitance

Code	Capacitance
47	47pF
↓	↓
5	5pF

#### ⑤ Packing

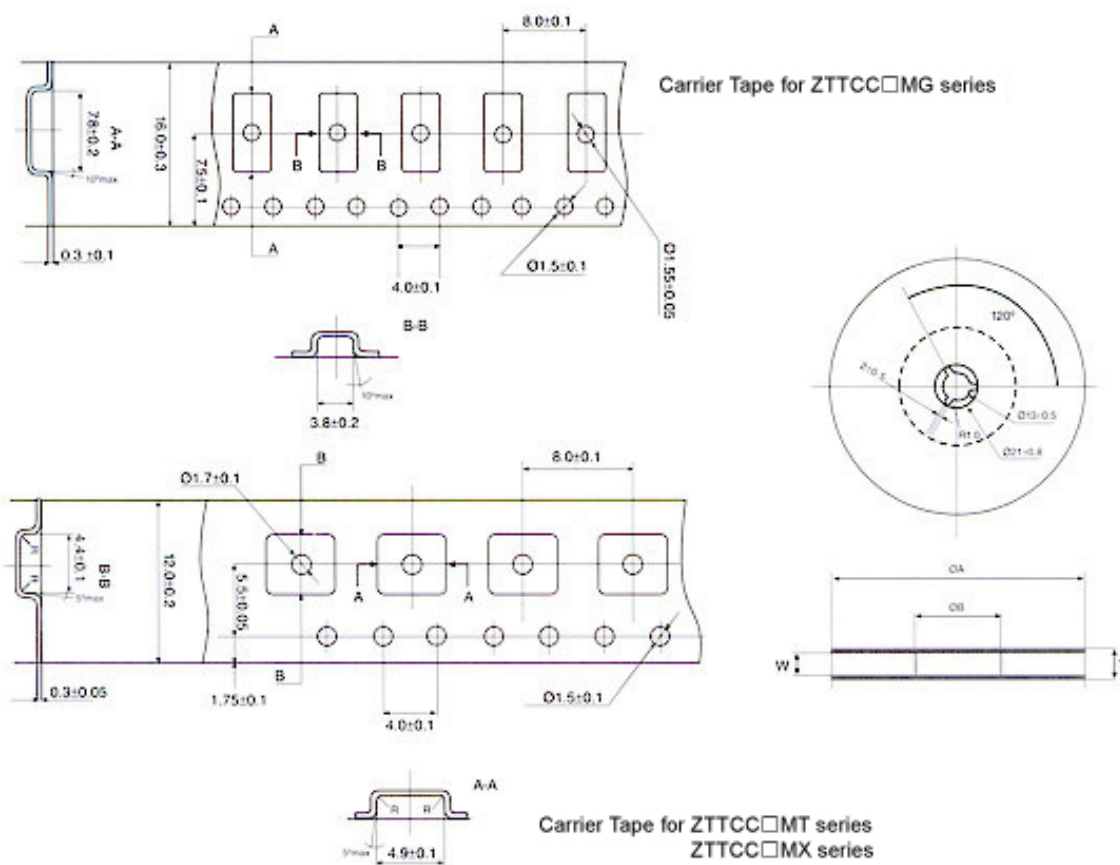
Code	Packing
TR	Tape & Reel

**Remark:** Specifications are subject to change without prior notice. Please confirm with our sales engineer.

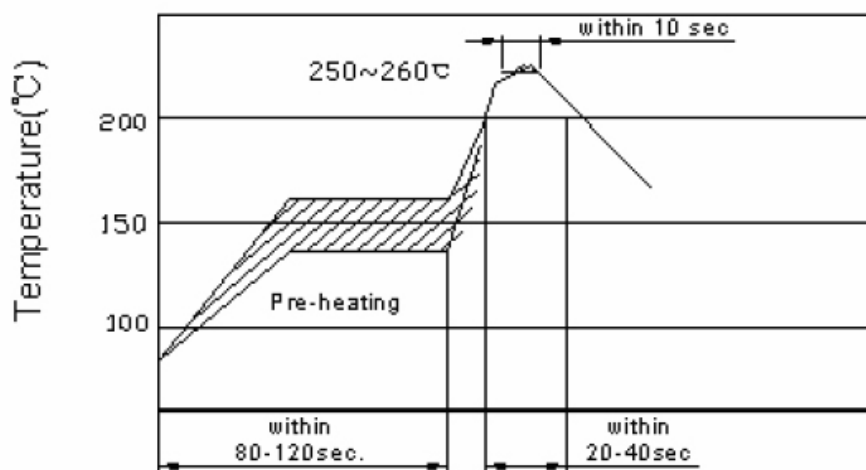
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**Tape Specification:**



**Recommended Reflow Soldering:**



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