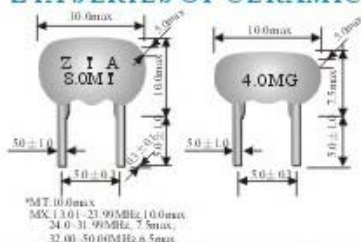


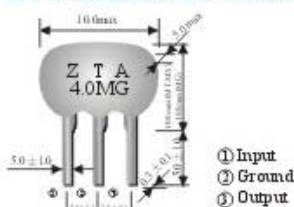
ZTA SERIES OF CERAMIC RESONATOR



TECHNICAL CHARACTERISTICS

| Part Number | Frequency Range (MHz) | Frequency Accuracy (25°C)(%) | Stability Temperature (-20°C~85°C)(%) | Operating Temperature(°C) | Aging For Ten Years(%) |
|-------------|-----------------------|------------------------------|---------------------------------------|---------------------------|------------------------|
| ZTA□□□MG | 1.80~6.00 | ±0.5 | ±0.3 | -20~80 | ±0.3 |
| ZTA□□□MT | 6.01~13.00 | ±0.5 | ±0.3 | -20~80 | ±0.3 |
| ZTA□□□MX | 13.01~50.00 | ±0.5 | ±0.3 | -20~80 | ±0.3 |

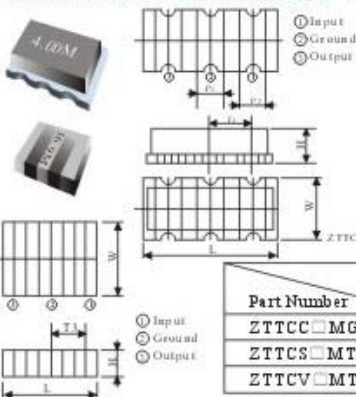
ZTT SERIES OF CERAMIC RESONATOR WITH BUILT-IN CAPACITOR



TECHNICAL CHARACTERISTICS

| Part Number | Frequency Accuracy (25°C)(%) | Stability Temperature (-20°C~85°C)(%) | Aging For Ten Years (%) |
|----------------|------------------------------|---------------------------------------|-------------------------|
| ZTT1.80~6.00MG | ±0.5 | ±0.3 | ±0.3 |
| ZTA□□□MT | ±0.5 | ±0.3 | ±0.3 |
| ZTA□□□MX | ±0.5 | ±0.3 | ±0.3 |

ZTACC/CS/CV□MG/MT/MX ZTTC□MG/MT/MX Series of Ceramic Resonator(Chip type)



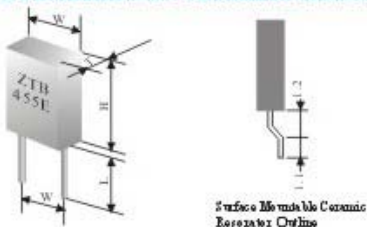
TECHNICAL CHARACTERISTICS

| Part Number | Frequency Range (MHz) | Frequency Accuracy (%) | Stability in Temperature (-20°C~85°C)(%) | Aging For Ten Years (%) |
|---------------|-----------------------|------------------------|--|-------------------------|
| ZTACC□MG | 2.00~6.99 | ±0.5 | ±0.3 | ±0.3 |
| ZTAC□CV□MT/MX | 7.00~13.00 | ±0.5 | ±0.4 | ±0.3 |
| ZTTC□CV□MT/MX | 13.01~50.00 | | ±0.3 | |

| Part Number | Dimensions(mm) | | | | | | | | | |
|-------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|--|
| | L | W | H | P1 | P2 | T1 | T2 | T3 | W1 | |
| ZTTC□MG | 7.4 ± 0.3 | 3.4 ± 0.3 | 1.8 ± 0.3 | 1.2 ± 0.3 | 1.2 ± 0.3 | 1.5 ± 0.3 | 1.7 ± 0.3 | 2.5 ± 0.3 | 4.0 ± 0.3 | |
| ZTTC□MT/MX | 4.7 ± 0.2 | 4.1 ± 0.2 | 1.6 ± 0.3 | 1.0 ± 0.4 | 0.8 ± 0.4 | 1.3 ± 0.2 | 0.8 ± 0.2 | 1.95 ± 0.2 | 5.1 ± 0.2 | |
| ZTTCV□MT/MX | 3.7 ± 0.2 | 3.1 ± 0.2 | 1.2 ± 0.3 | 0.9 ± 0.3 | 0.7 ± 0.3 | 1.0 ± 0.2 | 0.7 ± 0.2 | 1.5 ± 0.2 | 4.1 ± 0.2 | |

Note: No middle terminal for ZAT series

ZTB SERIES OF CERAMIC RESONATOR ZTB□YKHZ SERIES SURFACE MOUNTABLE CERAMIC RESONATOR



| Frequency Range | Width (mm) | Thickness (mm) | Height (mm) | Lead Space (mm) | Lead Length (mm) |
|-----------------|------------|----------------|-------------|-----------------|------------------|
| 190~249 | 13.5 | 3.8 | 14.7 | 10 | 8 |
| 250~374 | 11 | 3.8 | 12.2 | 7.7 | 7 |
| 375~400 | 7.9 | 3.6 | 9.3 | 5 | 7.7 |
| 401~699 | 7.0 | 3.5 | 9 | 5 | 4(6) |
| 700~1250 | 5.2 | 2.8 | 6.8 | 2.5 | 3.5(5) |
| 1000J | 5.1 | 2.3 | 6.3 | 2.5 | 4 |

TECHNICAL CHARACTERISTICS

| Part Number | Frequency Accuracy | Resonant Impedance | Stability Temperature | Aging For Ten years | Load Capacitance(pF) | |
|---------------|--------------------|--------------------|-----------------------|---------------------|----------------------|-----|
| | | | | | C1 | C2 |
| ZTB190~249D | ±1KHz | ≤20 | ±0.3 | ±0.3 | 330 | 470 |
| ZTB250~374D | ±1KHz | ≤20 | ±0.3 | ±0.3 | 220 | 470 |
| ZTB375~429P | ±2KHz | ≤20 | ±0.3 | ±0.3 | 120 | 470 |
| ZTB430~509E | ±2KHz | ≤20 | ±0.3 | ±0.3 | 100 | 100 |
| ZTB510~699P | ±2KHz | ≤30 | ±0.3 | ±0.3 | 100 | 100 |
| ZTB700~999J | ±0.5% | ≤70 | ±0.3 | ±0.3 | 100 | 100 |
| ZTB1000~1250J | ±0.5% | ≤100 | ±0.3 | ±0.3 | 100 | 100 |

After Lead Forming, The Part Number Change into ZTB375~1250Y

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