

CERAMIC RESONATOR

ZTA Series WITH BUILT-IN CAPACITOR, DIP AND CHIP TYPE



Approved by:
Checked by:
Issued by:

SPECIFICATION

ZTA4.00MG

深圳市晶科鑫实业有限公司
SHENZHEN CRYSTAL TECHNOLOGY INDUSTRIAL CO., LTD.

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1. SCOPE

This specification shall cover the characteristics of the ceramic resonator ZTA4.00MG for the clock oscillation of microprocessor ect.

2. ELECTRICAL SPECIFICATION:

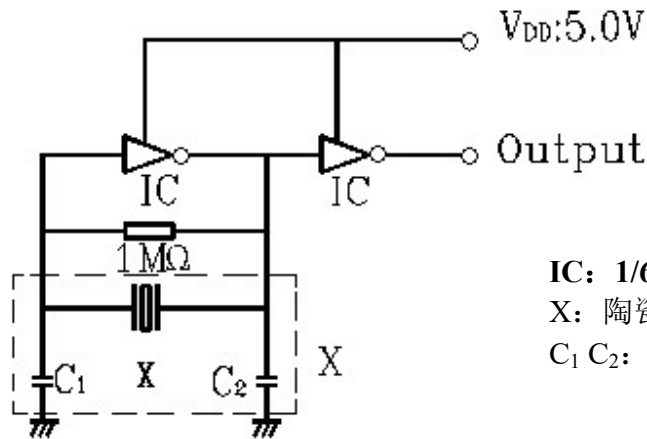
Nominal Frequency	4.00 MHz
Frequency Tolerance	$\pm 0.5\%$
Load Capacitor	30PF
Temperature Coefficient of Oscillation Frequency	$\pm 0.3\% \text{MAX} (-20^{\circ}\text{C} \sim +80^{\circ}\text{C})$
Work Temperature	$-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Aging for 10 years	$\pm 0.3\%$
Resonator Resistance	$\leq 30 \Omega$
Insulation resistance	100M Ω /EX X min. (at 10VDC)
Storage Temperature	$-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$
Withstanding voltage	100VDC 5sec. max

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3. TEST CIRCUIT

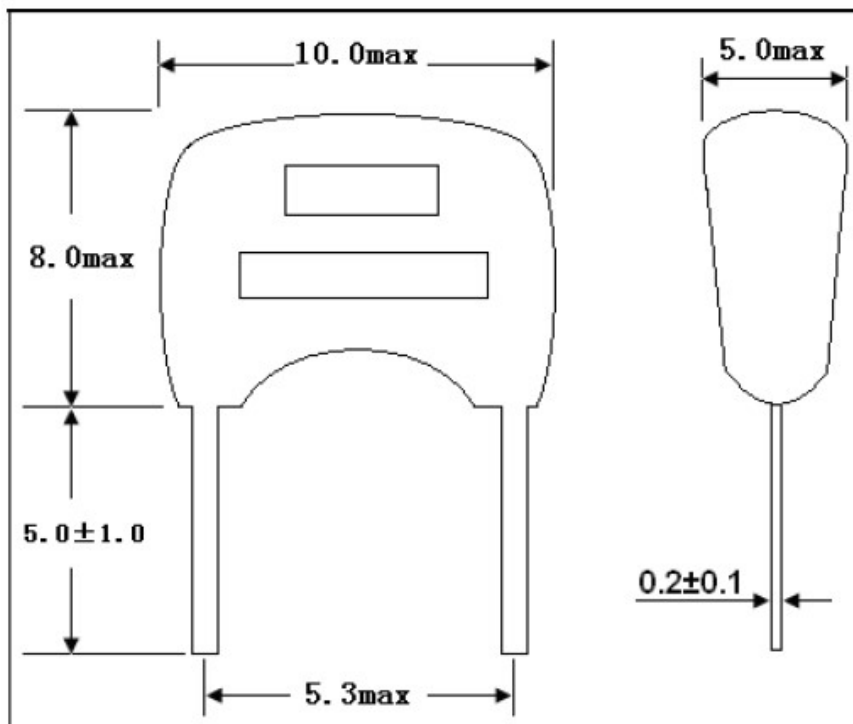


IC: 1/6TC4069UBP

X: 陶瓷谐振器

C₁ C₂: 30pF (1±20%)

4. DIMENSIONS



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5. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

Test item	Equipment	Condition	Specification
1. TERMINAL STRENGTH TEST	tensiometer	Pull test: In loading 5 ~ quietly on the terminal, bending tests perpendicular with 10 N forces Shi 10 seconds: 2.5 millimeters of place terminal are curved 9	FC \leq \pm 0.2% 30 Ω MAX
2. SOLDERABILITY TEST	SJK-REL001、RC-328A	Solder nature tests: Terminal 1.5 MM immerse in 230 +/-5 $^{\circ}$ C tin pool inner at least: 5 +/-solders the heatproof testing second: The terminal arrives at the component root segment in 350 \pm 10 $^{\circ}$ C tin pool inner immersion 1. 3 seconds of natural conditions test 5 MM time 1 hour	FC \leq \pm 0.2% 30 Ω MAX
3. VIBRATION TEST	bobbing machine (HG-V4)、S&A250B	Vibration frequency pushes down 10-55 Hertz , 10 gs , extent 1.5 MM; X , Y , Z horizontal plane , every direction 1 uses 250 B do test hour, again to the sample	FC \leq \pm 0.2% 30 Ω MAX
4 DROP TEST	hardwood;S&A250B	Crystal drops 3 time from 1M altitudes going ahead in the cement floor; Use 250 B do test again to the sample	FC \leq \pm 0.2% 30 Ω MAX
5 TEMP & HUM CYCLING TEST	H-PTH-80CK & HM101-3ABN, S&A350B/250B	High temperature: 40 $^{\circ}$ C \pm 2 $^{\circ}$ C , 100 hour; Humidity: 90 ~ 95%, natural conditions places testing 1 hour	FC \leq \pm 0.2% 30 Ω MAX
6 HIGH TEMP STORAGE TEST	H-PTH-80CK CHAMBER, S&A350B/250B	Temperature: 85 $^{\circ}$ C \pm 2 $^{\circ}$ C, place in the container 100 hours, 1 hour of natural conditions	FC \leq \pm 0.2% 30 Ω MAX
7 LOW TEMP STORAGE TEST	H-PTH-80CK CHAMBER, S&A350B/250B	Temperature: -55 $^{\circ}$ C \pm 2, places in the container 100 hours, 1 hour of natural conditions	FC \leq \pm 0.2% 30 Ω MAX
8. THE TEMPERATURE POUNDS A TEST	H-PTH-80CK CHAMBER, S&A350B/250B	Temperature: -55 $^{\circ}$ C (30 minutes), test 1 hour till 85 $^{\circ}$ C (30 minutes) 5 time of circulation , 15 1 time of minutes , natural conditions	FC \leq \pm 0.2% 30 Ω MAX

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