

# 7.4 x 3.4 x 1.8mm BUILT-IN CAPACITANCE CERAMIC RESONATOR

AWSCR-MGD



7.4 x 3.4 x 1.8mm

**AWSCR-MGD**

Moisture Sensitivity Level (MSL) – This product is not Moisture Sensitive - MSL = 1

**RoHS/RoHS II Compliant**

Pb in ceramic, exemption (7c-I)

## FEATURES:

- Low resonant impedance
- Built-in load capacitors
- Suitable for RoHS compliant reflow
- Low cost solution for cost sensitive applications

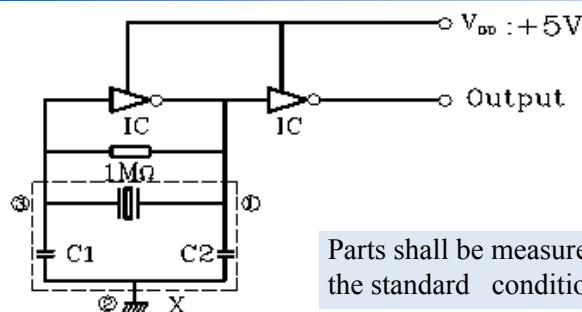
## APPLICATIONS:

- Remote controls, Microprocessor clocks, DVD & CD-ROMs, Electric appliances
- Consumer electronics

## STANDARD SPECIFICATIONS:

| Parameters                            | Minimum          | Typical | Maximum  | Units      | Notes               |
|---------------------------------------|------------------|---------|----------|------------|---------------------|
| Frequency Range                       | 1.84             |         | 8        | MHz        |                     |
| Resonant Impedance (Ro)               |                  |         | 100      | $\Omega$   | 1.84 MHz - 2.39 MHz |
|                                       |                  |         | 100      |            | 2.40 MHz - 2.99 MHz |
|                                       |                  |         | 50       |            | 3.00 MHz - 3.49 MHz |
|                                       |                  |         | 30       |            | 3.50 MHz - 8.00 MHz |
| Standard Built-in Capacitance (C1=C2) | 33 – 20%         | 33      | 33 + 20% | pF         | 1.84 MHz - 2.39 MHz |
|                                       | 22 – 20%         | 22      | 22 + 20% |            | 2.40 MHz - 2.99 MHz |
|                                       |                  |         |          |            | 3.00 MHz - 3.49 MHz |
|                                       |                  |         |          |            | 3.50 MHz - 8.00 MHz |
| Frequency Tolerance                   | -0.5             |         | 0.5      | %          |                     |
| Frequency Stability                   | -0.3             |         | 0.3      | %          | -25°C to +85°C      |
| Withstanding Voltage                  |                  | 50      |          | V          | DC , 1 min          |
| Rating Voltage                        | (1) D.C. Voltage |         | 6        | V          |                     |
|                                       | (2) A.C. Voltage |         | 15       | Vp-p.      |                     |
| Insulation Resistance                 | 100              |         |          | M $\Omega$ | 10V, 1min           |
| Operation Temperature                 | -25              |         | 85       | °C         |                     |
| Storage Temperature                   | -55              |         | 85       | °C         |                     |
| Aging Rate (Fosc) (10 years)          | -0.3             |         | 0.3      | %          |                     |

## TEST CIRCUIT:



X: Ceramic Resonator

1. Input
2. Ground
3. Output

Parts shall be measured under a condition (Temp.: 20±15°C, Humidity: 65±20% R.H.) unless the standard condition (Temp: 25±3°C, Humidity: 65±10% R.H.) is regulated to measure

## OPTIONS AND PART IDENTIFICATION:

(Left blank if standard)

AWSCR – X.XXMGD - C     -   

### Frequency

Frequency in MHz

### Load Capacitance

Contact ABRACON  
for Built-in  
Capacitance options

### Packaging

T: 1000pcs/Reel  
T4: 4000pcs/Reel

ABRACON IS  
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CERTIFIED



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30332 Esperanza, Rancho Santa Margarita, California 92688  
tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)

**Revised: 04.03.13**

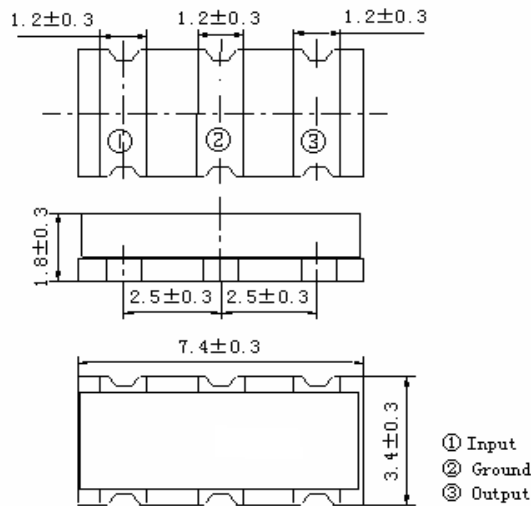
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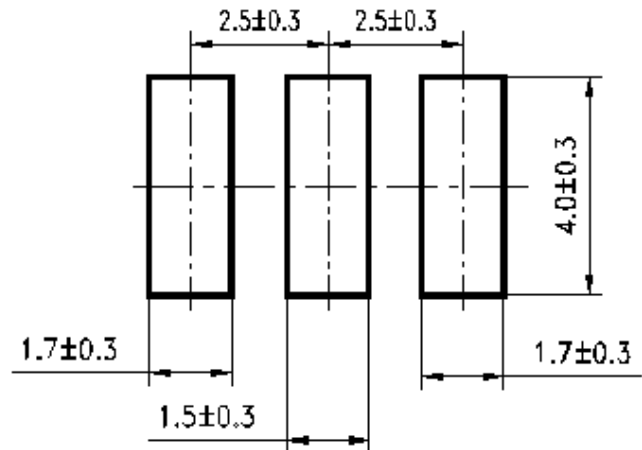


7.4 x 3.4 x 1.8mm

## OUTLINE DRAWING:



## Recommended Land Pattern

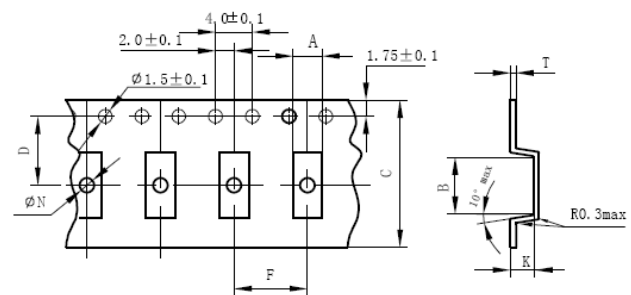
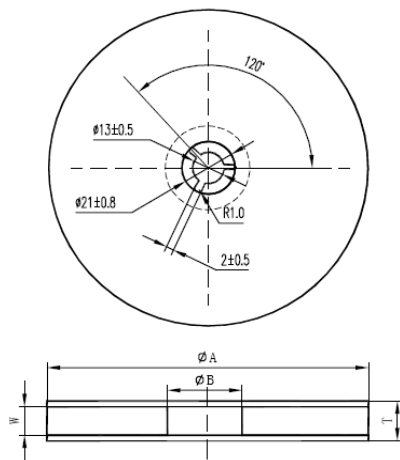


**Dimension: mm**

## TAPE & REEL:

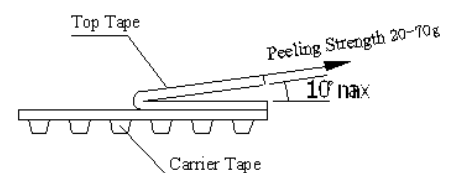
**T: 1000pcs/reel**

**T4: 4000pcs/reel**



| A       | B       | C        | D       | F       | φN        | K       | T        | 对应产品 |
|---------|---------|----------|---------|---------|-----------|---------|----------|------|
| 3.8±0.2 | 7.8±0.2 | 16.0±0.2 | 7.5±0.1 | 8.0±0.1 | 1.55±0.05 | 2.1±0.1 | 0.3±0.05 | CC   |

| Reel Quantity | ΦA    | ΦB      | W        | T        | Pieces per reel | Carrier tape size |
|---------------|-------|---------|----------|----------|-----------------|-------------------|
| 1000 (T)      | 179±2 | 60 typ. | 16.4 min | 22.4 max | 1000 typ.       | 16                |
| 4000 (T4)     | 330±3 | 80 min  | 16.4 min | 22.4 max | 4000 typ.       | 16                |



**Dimension: mm**

Note: upon opening the original packaging, it is recommended that the product be used within 1 year. If the product will not be used within 1 year, it is recommended that the product be re-sealed in airtight packaging according to MSL 1 requirements to maintain solderability.

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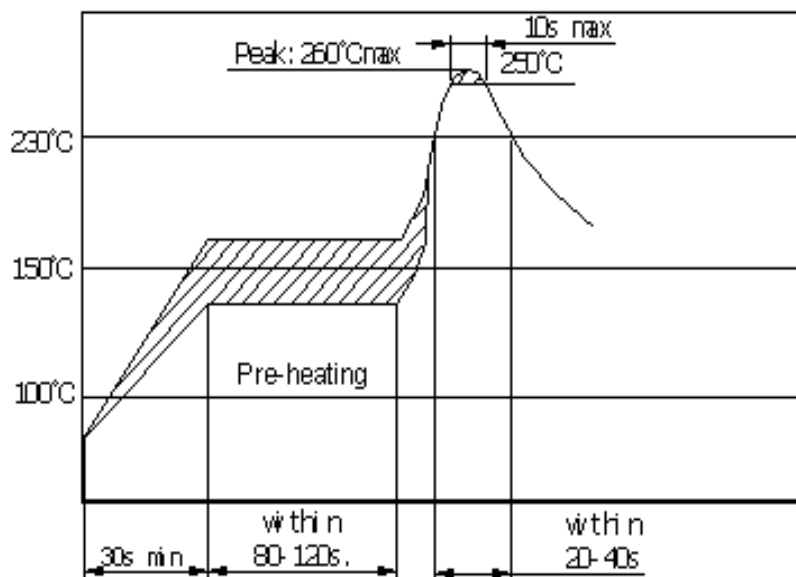
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7.4 x 3.4 x 1.8mm

## REFLOW PROFILE:



Dimension: mm

## CAUTION:

- Do not apply excess mechanical stress to the component body or terminations. Do not attempt to re-form or bend the components as this will cause damage to the component.
- This component is not hermetically sealed. Do not clean or wash the component.
- Reflow soldering: Do not use strong acidity flux, such as flux with chlorine content of greater than 0.2wt% during reflow Soldering.
- Do not expose the component to open flame.
- This specification applies to the functionality of the component as a single unit. Customers are advised to insure that the component is thoroughly evaluated in the particular application.
- Storage conditions: If the product is to be stored for a period greater than six months after the delivery date, it is recommended that customers confirm the solderability and characteristics for the product prior to use.
- This product is not recommended for use in the following applications: Automotive, Medical, Military, Safety, or any other high-reliability, life-dependant application. Contact Abracon Corporation prior to using this product when in doubt.

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Revised: 04.03.13

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- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
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- Входной контроль качества.
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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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