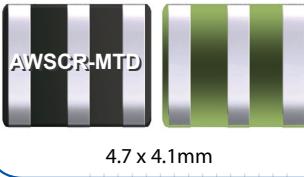


# 4.7 x 4.1mm BUILT-IN CAPACITANCE CERAMIC RESONATOR

AWSMR-MTD

Pb in ceramic  
(exempt per RoHS 2002/95/EC Annex (7))

**RoHS**  
Compliant



4.7 x 4.1mm

## FEATURES:

- Low resonant impedance
- Built-in load capacitors
- IR reflow capable

## APPLICATIONS:

- Remote controls, Microprocessor clocks, Mobile phones, DVD & CD-Roms, Electric appliances, Industrial controllers
- Consumer electronics

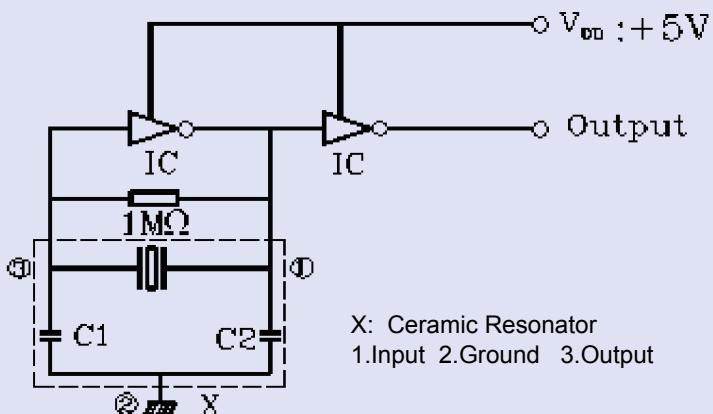
## STANDARD SPECIFICATIONS:

Item	Requirement
Frequency Range	6.00MHz to 50.00MHz
Resonant Impedance	See Table 2.1
Frequency Tolerance	± 0.5%
Frequency Stability max. (-25°C to +85°C)	±0.4% (6.00 MHz~13.00 MHz)* ±0.3% (13.01 MHz~50.00 MHz)
Withstanding Voltage (V)	50 (DC, 1 min)
Rating Voltage (1) D.C.Voltage	6 V.D.C. max
(2) A.C. Voltage	15 Vp-p. max
Built-in Capacitance	See Table 2.1
Insulation Resistance	100MΩ min. (10V, 1min)
Operation Temperature	-25°C to +85°C*
Storage Temperature	-55°C to +85°C
Aging Rate (Fosc)	±0.3% max. (10 years)

Table 2.1		
Frequency Range (MHz)	Resonant Impedance (Ro)(Ω)	Standard Built-in Capacitance C1=C2 (pF)
6.00 MHz - 13.00 MHz	30	22pF ±20%
13.01 MHz - 16.00 MHz	40	22pF ±20%
16.01 MHz - 25.99 MHz	40	10pF ±20%
26.00 MHz - 50.00 MHz	40	5pF ±20%

\* Please contact ABRACON for tighter stability and/or wider temperature range

## TEST CIRCUIT:



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:

AWSMR - XX.XXMTD - C□□ - □

Frequency

Frequency in MHz

Load Capacitance

Contact ABRACON for Load Capacitance options

Packaging

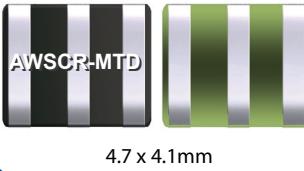
T for Tape and Reel  
(1,000pcs/reel)

# 4.7 x 4.1mm BUILT-IN CAPACITANCE CERAMIC RESONATOR

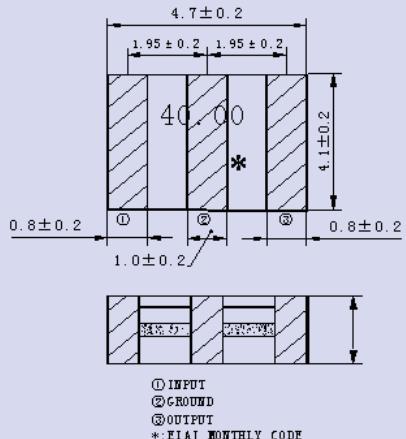
AWSMR-MTD

Pb in ceramic  
(exempt per RoHS 2002/95/EC Annex (7))

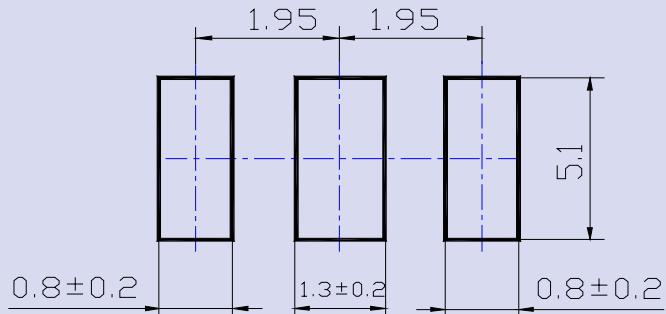
**RoHS**  
Compliant



## OUTLINE DRAWING:

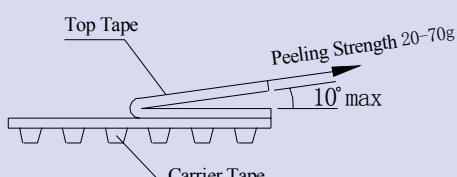
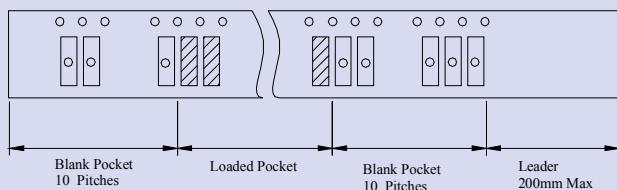
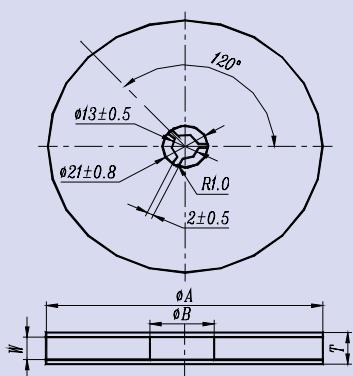


## RECOMMENDED LAND PATTERN



Dimension : mm

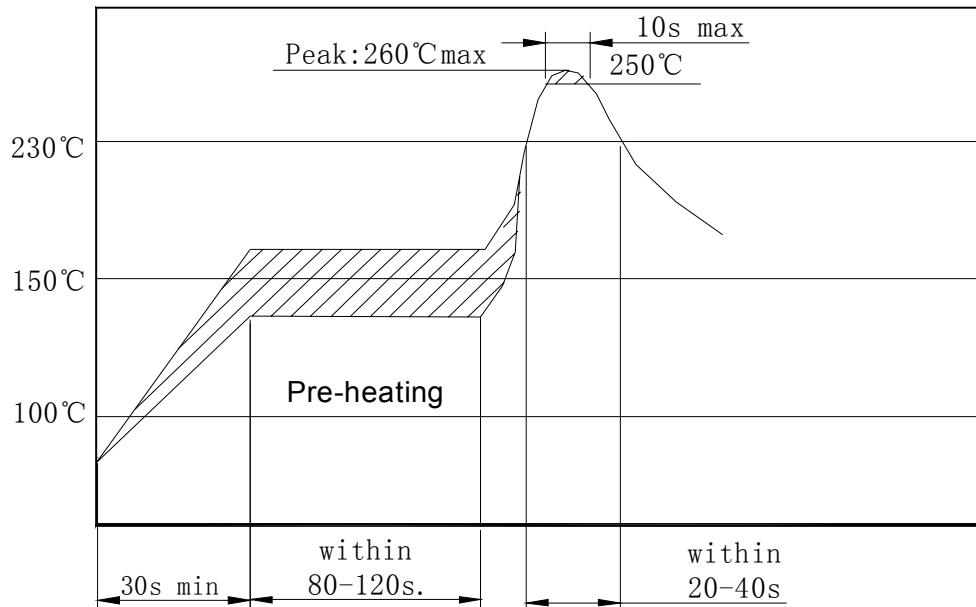
## TAPE & REEL: (1,000pcs/reel)



Φ A	Φ B	W	T	Pieces per reel	Carrier tape size
180 ± 3	60min	12.4min	19.4max	1000typ.	12

Dimension : mm

## ➤ REFLOW PROFILE:



## ➤ 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.
- Shelf life: The warranted shelf life of this product is six months after the delivery date under the conditions of sealed, unopened, original packaging.
- 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 Abracor Corporation prior to using this product when in doubt.

**ATTENTION:** Abracor Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracor's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracor Corporation is required. Please contact Abracor Corporation for more information.