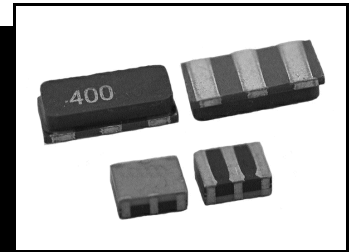


# HIGH FREQUENCY, WITH BUILT-IN CAPACITORS SMD WASHABLE CERAMIC RESONATORS AWSCR



7434, 4741, 3731, 2520

## FEATURES:

- Low resonant impedance.
- Excellent environmental resistance.
- Reflow capable.
- High stability washable type.
- Industrial grade.
- Built-in load capacitance.

## APPLICATIONS:

- Remote controls.
- Electric appliances.
- Mobile phones, DVD, CD-Rom.
- Microprocessor clocks.
- Automotive controllers.
- Industrial controllers.

## STANDARD SPECIFICATIONS

Abrakon P/N	Freq. range (MHz)	Resonant Impedance $\Omega$ max.	Frequency tolerance	Frequency stability @-20°C to +80°C	Aging in 10 years	Operating temperature	Package Style *
AWSCR[ ] MGS MGD MGA	2.0~7.99	100 $\Omega$ for $2.0 < F < 3.0$ MHz 50 $\Omega$ for $3.0 \leq F < 3.5$ MHz 30 $\Omega$ for $3.5 \leq F \leq 7.99$ MHz	$\pm 0.5\%$	$\pm 0.3\%$	$\pm 0.3\%$	-20°C to +80°C -40°C to +85°C -40°C to +125°C	7434
AWSCR[ ] MTS MTD MTA	8.0~13.0	25 $\Omega$	$\pm 0.5\%$	$\pm 0.3\%$	$\pm 0.3\%$	-20°C to +80°C -40°C to +85°C -40°C to +125°C	4741
AWSCR[ ] MVS MVD MVA	8.0~13.0	25 $\Omega$	$\pm 0.5\%$	$\pm 0.3\%$	$\pm 0.3\%$	-20°C to +80°C -40°C to +85°C -40°C to +125°C	3731
AWSCR[ ] MXS MXD MXA	13.01~50.0	40 $\Omega$	$\pm 0.5\%$	$\pm 0.3\%$	$\pm 0.3\%$	-20°C to +80°C -40°C to +85°C -40°C to +125°C	4741
AWSCR[ ] MCS MCD MCA	13.01~50.0	40 $\Omega$	$\pm 0.5\%$	$\pm 0.3\%$	$\pm 0.3\%$	-20°C to +80°C -40°C to +85°C -40°C to +125°C	3731
AWSCR[ ] MSS MSD MSA	20.0~50.0	40 $\Omega$ For $\leq 32$ MHz 50 $\Omega$ For $\leq 40$ MHz 60 $\Omega$ For $\leq 50$ MHz	$\pm 0.5\%$	$\pm 0.3\%$	$\pm 0.3\%$	-20°C to +80°C -40°C to +85°C -40°C to +125°C	2520

\*Please see package options and dimensions on page 35A

Please check for availability on M[ ]D and M[ ]A Series

Frequency stability: M[ ]D:  $\pm 0.5\%$  typ. -40°C to +85°C  
M[ ]A:  $\pm 0.7\%$  typ. -40°C to +125°C

Storage temperature: -40°C to +125°C

**We perform IC characterization to match your application.**

**Please call us for details.**

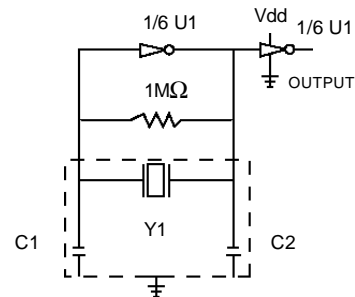
Packaging: Option Tape and Reel (1,000 pcs.) see appendix H.

Marking, see appendix G. Application notes, see appendix A.

Environmental and mechanical specification, see appendix C. Group 6.

Recommended handling, see appendix F.

## Test Circuit



U1: CD4069UB  
74HCU04  
Y1: RESONATOR  
C1 C2 (Built-in)  
30pF  $\pm 20\%$  (MG and MT Series)  
15pF  $\pm 20\%$  (MV Series)  
15pF  $\pm 20\%$  for  $F < 26$ M (MX series)  
10pF  $\pm 20\%$  for  $26\text{M} \leq F \leq 50\text{M}$  (MX series)  
10pF  $\pm 20\%$  (MC Series)  
8pF  $\pm 20\%$  (MS Series)

## ORDERING OPTIONS

AWSCRMXX - Packaging

G, T, V, X, C or S      - T (Tape and reel)  
S, D or A

NOTE: Left blank if standard • All specifications and markings subject to change without notice

ABRACON IS  
ISO 9001 / QS 9000  
CERTIFIED

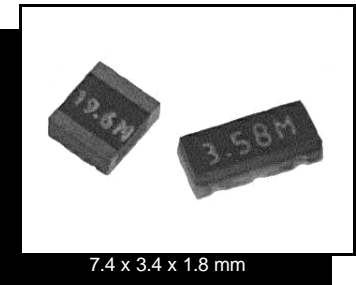
29 Journey • Aliso Viejo, CA 92656 • USA  
(949) 448-7070 • FAX: (949) 448-8484

E-MAIL: [abinfo@abracon.com](mailto:abinfo@abracon.com) • INTERNET ADDRESS: [www.abracon.com](http://www.abracon.com)

ABRACON  
CORPORATION

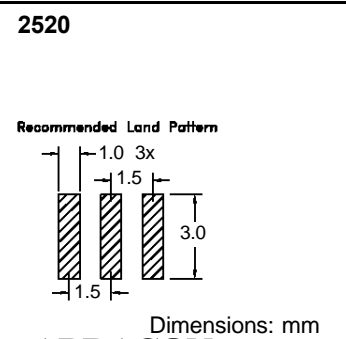
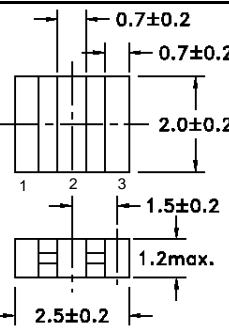
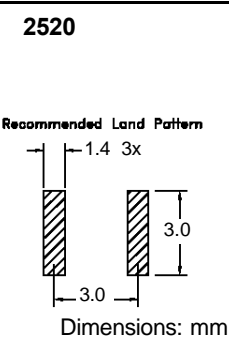
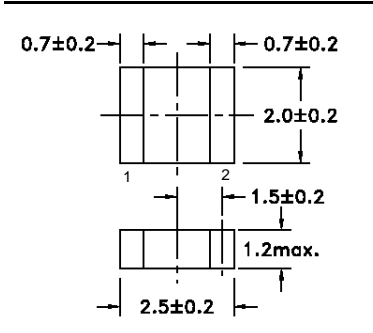
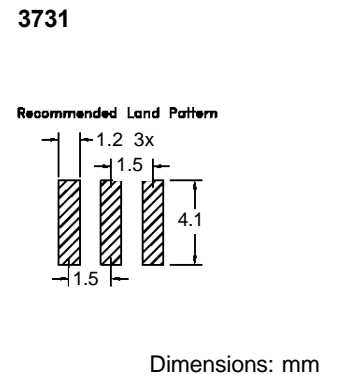
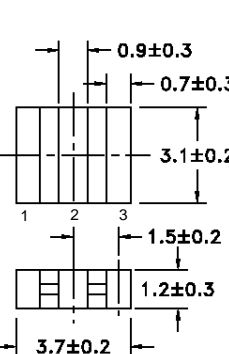
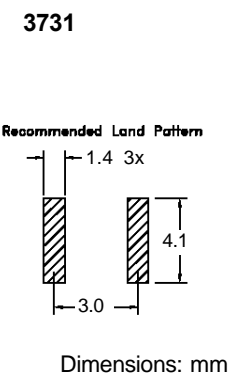
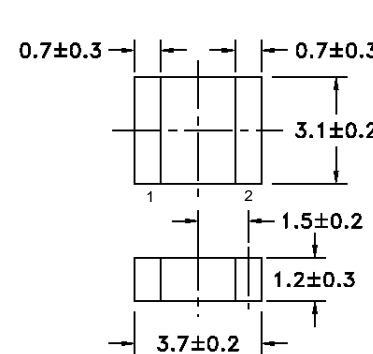
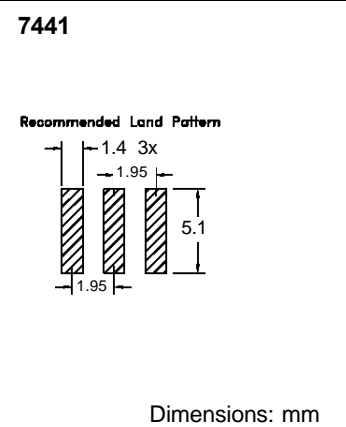
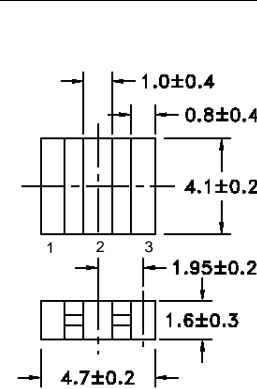
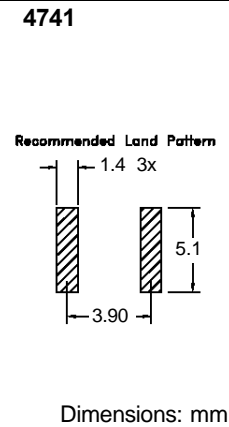
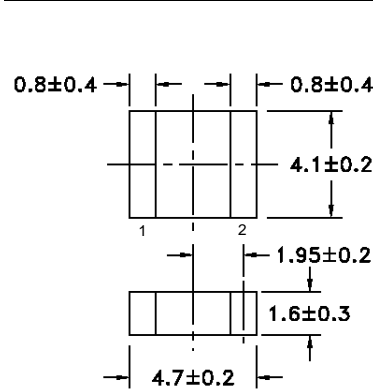
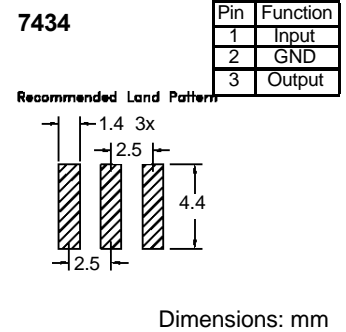
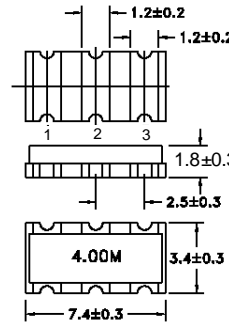
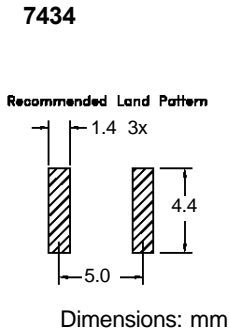
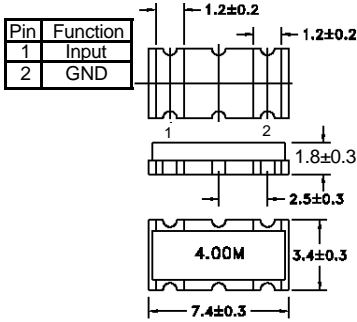
37  
Rev. B  
01/2003

HIGH FREQUENCY, WITH OR WITHOUT BUILT-IN CAPACITORS  
**SURFACE MOUNT CERAMIC RESONATORS**  
**ASZT, ASCR, AWSZT, AWSCR**



**ASZT or AWSZT**

**ASCR or AWSCR**



**ABRACON IS**  
**ISO 9001 / QS 9000**  
**CERTIFIED**

NOTE: Left blank if standard • All specifications and markings subject to change without notice  
**29 Journey • Aliso Viejo, CA 92656 • USA**  
**(949) 448-7070 • FAX: (949) 448-8484**  
 E-MAIL: [abinfo@abracon.com](mailto:abinfo@abracon.com) • INTERNET ADDRESS: [www.abracon.com](http://www.abracon.com)



## **Washability Specification**

**This product can be washed using the following solvents  
under the suggested conditions:**

<b>Solvents:</b>
HCFC, Isopropyl Alcohol, Trichloroethane, Tap water, Demineralized Water, Pine Alpha ST-100S
<b>Ultrasonic Wash:</b>
Less than 1 min. (Frequency:28KHz,Ouput:20W/L) Immersion Wash or others: Less than 5 min.
<b>Solvents temperature should be at 60°C or under 60°C</b>
<b>Drying:</b>
By air blow at 80°C max.