REV.	ECO	REVISIONS		
		DESCRIPTION	DATE	APPROVED
-		Initial Release	10/9/2003	RW

SPECIFICATIONS

Part Number (XX.X denotes freq. in MHz)	Frequency Tolerance at 25°C	Frequency Stability at - 20°C to +80°C	Aging in 10 years	Operating temperature	Res. Imp. (Ω) max.
AWSZT-XX.XMWS 8.00 MHz - 13.0 MHz	**± 0.5%**	**± 0.3%**	**± 0.3%**	**-20° to +80°C**	**25**
AWSZT-XX.XMWD 8.00 MHz - 13.0 MHz	**± 0.5%**	**± 0.3%** **± 0.5% (- 40C to 85C)**	**± 0.3%**	**-40° to +85°C**	**25**
AWSZT-XX.XMWA 8.00 MHz - 13.0 MHz	**± 0.5%**	**± 0.3%** **± 0.7% (- 40C to 125C)**	**± 0.3%**	**-40° to +125°C**	**25**

Storage temperature: **- 40°C to + 125°C**
Insulation resistance: **500Mohms min. at 10Vdc**

OPTIONS AND PART IDENTIFICATION(Left blank if standard)
AWSZT - XX.XXMWY - Packaging
XX.XX: Frequency in MHz
Y: **S, D, or A**

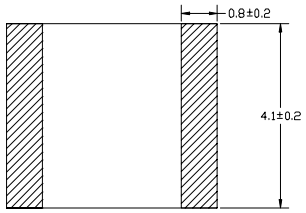
Packaging option:
T for Tape and Reel (4,000pcs/reel)

MARKING:

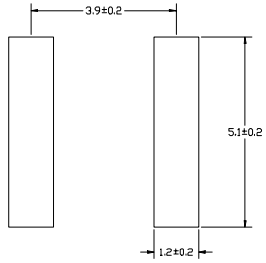
X.XXZY

X.XX Frequency
Z month code
Y year code

OUTLINE DRAWING

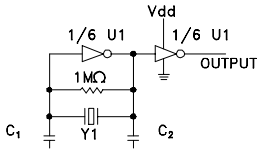


Recommended Land Pattern



Dimensions: mm

TEST CIRCUIT



U1: 74HCU04
Y1: RESONATOR
C_1 C_2: 15pF ± 20% (20M ~ 25.99M)
10pF ± 20% (26M ~ 50M)

ENVIRONMENTAL AND MECHANICAL CHARACTERISTICS

Temperature Cycling: Subject the resonator to -40°C±2°C for 30 min. followed by +85°C±2°C.Cycling for 5 times.
1 hour stabilization at room temp prior to measurement.
High Temperature: Subject the resonator at 85°C ± 2 °C for 100 hours, release to room temp. 1 hour prior to measurment.
Low Temperature: Subject the resonator at -40°C for 100 hours, release to room temp. 1 hour prior to measurment.
Humidity: Subject the resonator to 60 ± 2°C at 90-95%RH for 100hours, release the resonator into the room condition for 1 hour prior to measurement.
Drop test: Drop onto concrete floor from the height of 1 meter 3 times.No visible damage.
Solder Heat Resistance: Reflow:Preheat 140°C ~160°C for 1 min.max.temp. 230°C ± 5°C and above 200°C for 20s max. then in natural condition for 1 hour before measurement.
Washability: Ultrasonic wash 1 minute at 60°C in TCE,IPA and DI water (Frequency 28kHz,Output 20W/L)
Vibration: Apply the resonator to vibration for 2 hours in X,Y, Z axes with 1.5 mm amplitude.Vibration should be varied uniformly between the limits,returned to 10Hz in 1 min.
Terminal strength:1kg pulling force along direction of leads for 10±1s, shall be subjected to withstand against 90° bending in the direction of thickness.No visible damage.
Solderability: Dip the leads into the solution of 25% rosin and etchl alcohol then into solder bath (60/40 Sn/Pb) for 2 ± 0.5 s at 235°C.Then release the resonator into the room condition for 1 hour prior to measurement. 95% min. lead terminals shall be wet with solder.
PCB bend strength: After soldered on the PCB, press it by up to 1mm for 5s, 5times repeatedly

Table 1

ITEM	Specification
Oscillation Frequency Change	± 0.3 % max.
Capacitance Change	± 20% max.

All specifications subject to change without notice.

TOLERANCES:
UNLESS OTHERWISE SPECIFIED:
.XXX: ± 0.005
.XX: ± 0.01 ANGLE:
.X: ± 0.10 ± 1°

APPROVALS		DATE
DRAWN	LD	10/9/2003
PROD. MGR.	RD	10/9/2003
ENGR. MGR.	RD	10/9/2003
QUALITY	RW	10/9/2003
PURCH.	CB	10/9/2003

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P/N **AWSZT[ ] MW SERIES**

TITLE HIGH FREQUENCY MHz SMD WASHABLE, CERAMIC RESONATORS

DWG. NO.	REV.	SIZE	SHEET
451616	-	A	1 of 1