

APPROVAL SHEET

Customer Name : _____
 Customer P/N : _____
 Frequency : 27.000000 MHz
 Aker Approved P/N: CXAF-027000-3-AL-04
 Aker MPN : CXAF-027000-3-AL-04
 Rev. : 1
 ISSUE DATE : Oct.25.2022

APPROVED	CHECKED	PREPARED
<i>Lee</i>		<i>Kika</i>
APPROVED BY CUSTOMER		

AKER TECHNOLOGY CO., LTD.

ADDRESS : NO 11-3, Jianguo Rd., Tanzi Dist., Taichung City 427, Taiwan.

TEL : 886-4-25335978 FAX : 886-4-25336011

Web: www.aker.com.tw

MSL:Level 1

RoHS compliant

IATF 16949 Certified

AEC-Q200 Qualified



Aker Approved P/N : CXAF-027000-3-AL-04

APPROVED : Xtal

SHEET : 2 of 8

PREPARED : Kiku

REV. : 1

Confidential

SMD CRYSTAL SPECIFICATION

1 . ELECTRICAL CHARACTERISTICS

■ Standard atmospheric conditions

Unless otherwise specified , the standard range of atmospheric conditions for making measurement and tests are as follow :

Ambient temperature : 25±5°C

Relative humidity : 40%~70%

If there is any doubt about the results , measurement shall be made within the following limits :

Ambient temperature : 25±3°C

Relative humidity : 40%~70%

■ AKER Model : CXAF-321

■ Oscillation Mode : Fundamental

■ Cutting Mode : AT CUT

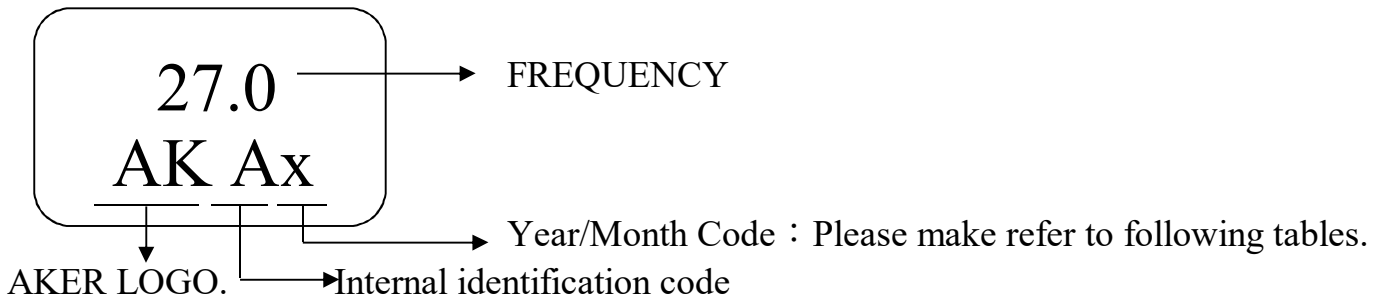
■ Measurement Equipment : 250B(Measured FL)

■ Insulation Resistance : More than 500M ohms at DC 100V

Parameters	Symbol	Electrical Spec				Notes
		Min.	Typ.	Max.	Units.	
Nominal Frequency	FL	27.000000			MHz	
Frequency Tolerance		±20			ppm	at 25°C ± 3°C
Frequency Stability		±30			ppm	Operating Temp (Refer 25°C)
Load Capacitance	CL	9			pF	
Aging		±3			ppm	First Year
Operating Temperature		-40	~	105	°C	
Storage Temperature Range		-55	~	150	°C	
Drive Level	DL			300	uW	
Equivalent Series Resistance	ESR			30	Ω	@Series
Shunt Capacitance	C0			5	pF	

Please kindly be noted that AKER DO NOT guarantee parts quality which involves human security application.

2 . MARKING :



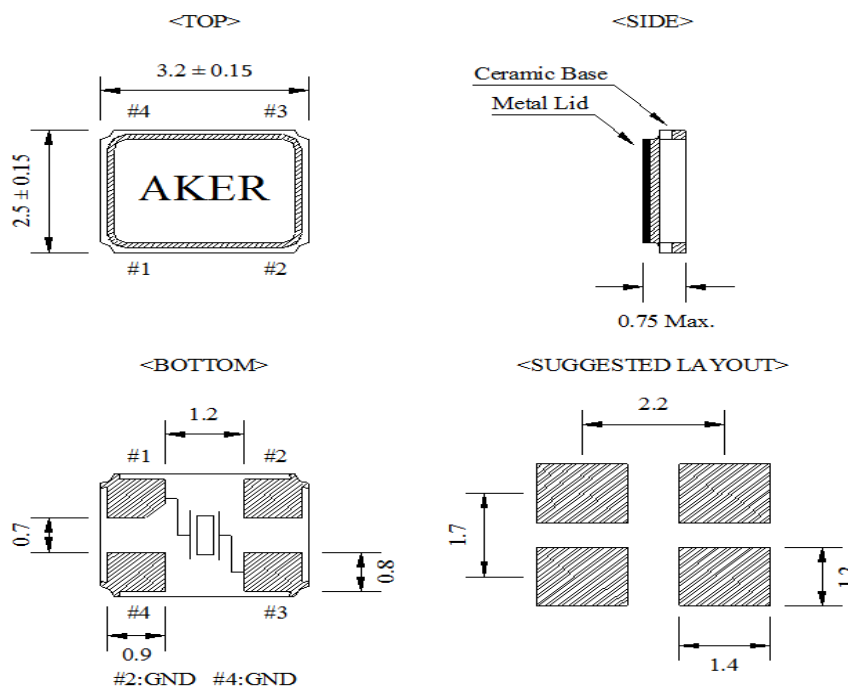
Date Code Guide

Year	2021	2022	2023	2024
	2025	2026	2027	2028
Month	(4N+1)	(4N+2)	(4N+3)	(4N+0)
JAN	a	n	A	N
FEB	b	p	B	P
Mar	c	q	C	Q
Apr	d	r	D	R
May	e	s	E	S
Jun	f	t	F	T
Jul	g	u	G	U
Aug	h	v	H	V
Sep	j	w	J	W
Oct	k	x	K	X
Nov	l	y	L	Y
Dec	m	z	M	Z

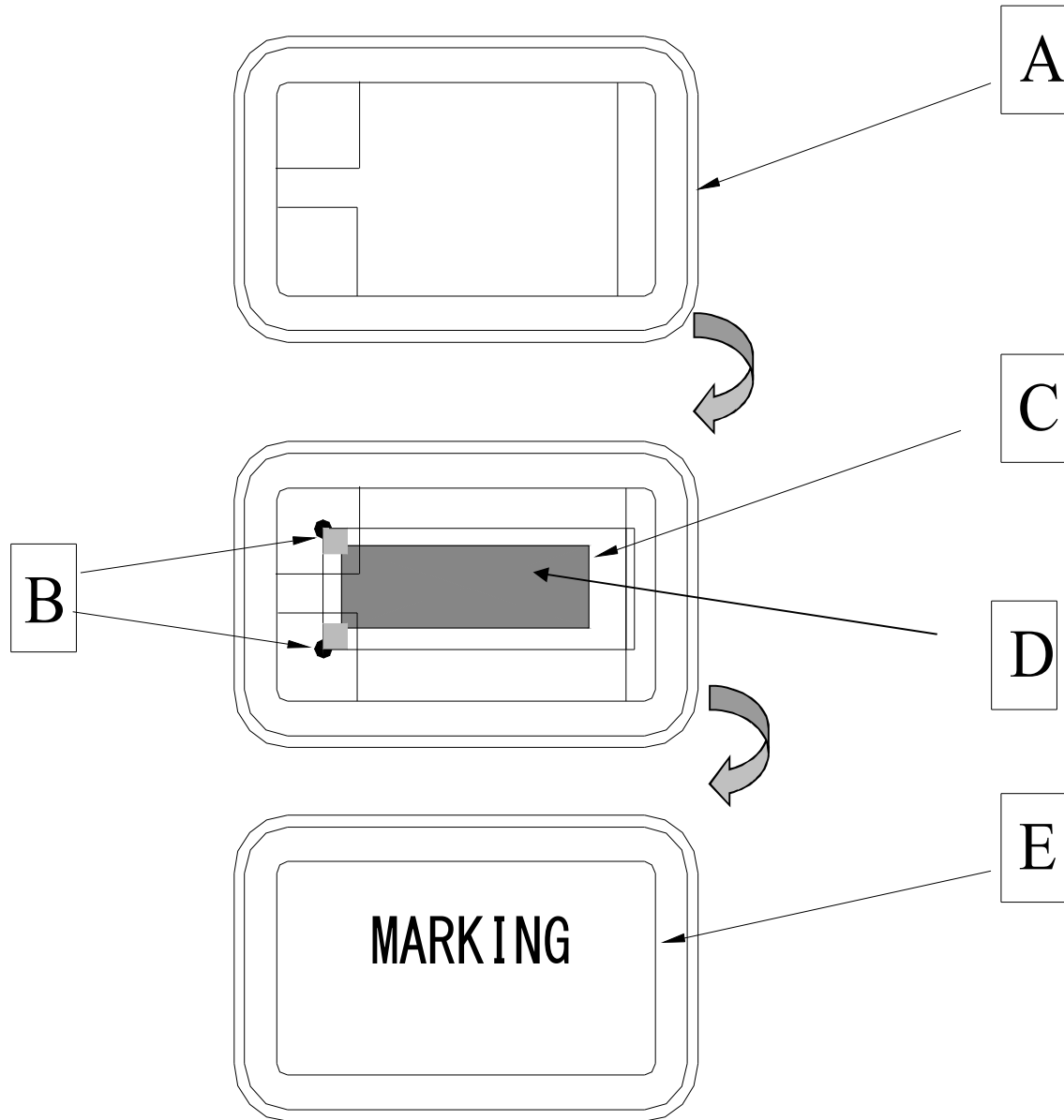
A cycle every four years

3 . DIMENSION :

(Unit : mm)



4. STRUCTURE ILLUSTRATION

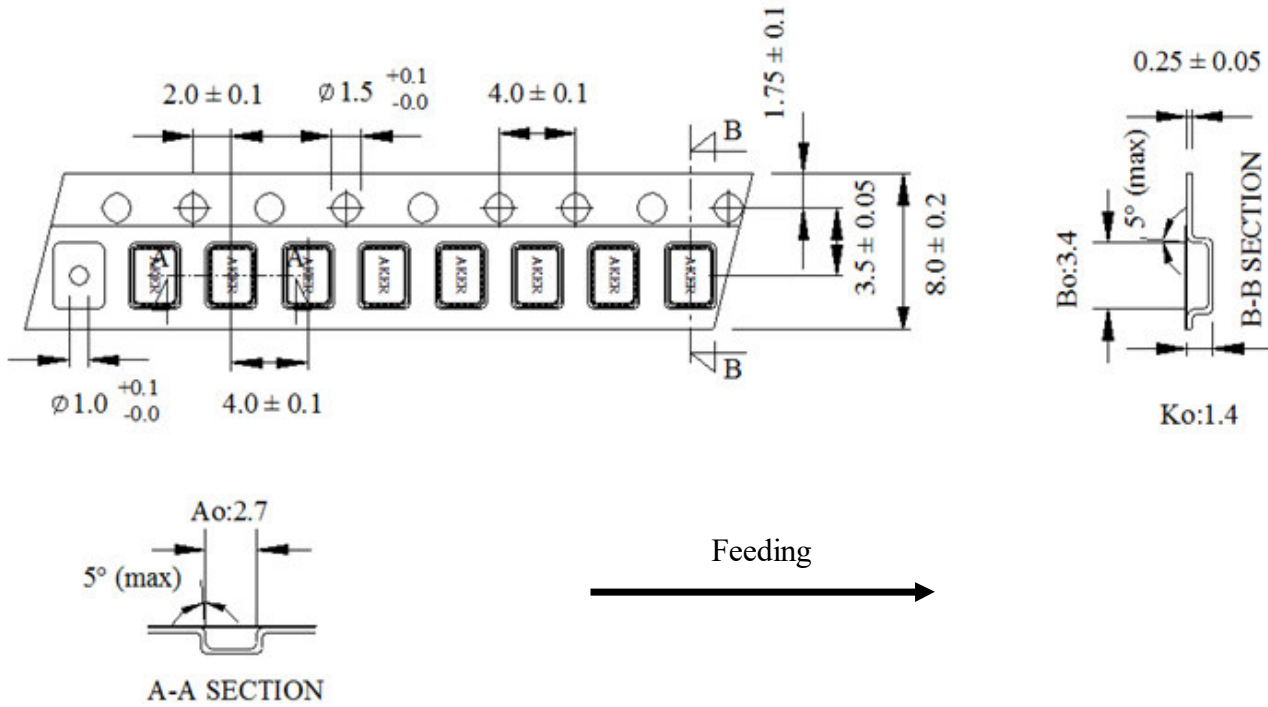


COMPONENTS		MATERIALS	COMPONENTS		MATERIALS
A	Base (Package)	Ceramic(Al_2O_3)+Kovar(Fe/Co/Ni)	D	Electrode	Cr / Ag
B	Conductive adhesive	Ag / Silicon resin	E	Lid	Fe/Co/Ni
C	Crystal blank	SiO_2			

5. PACKING :

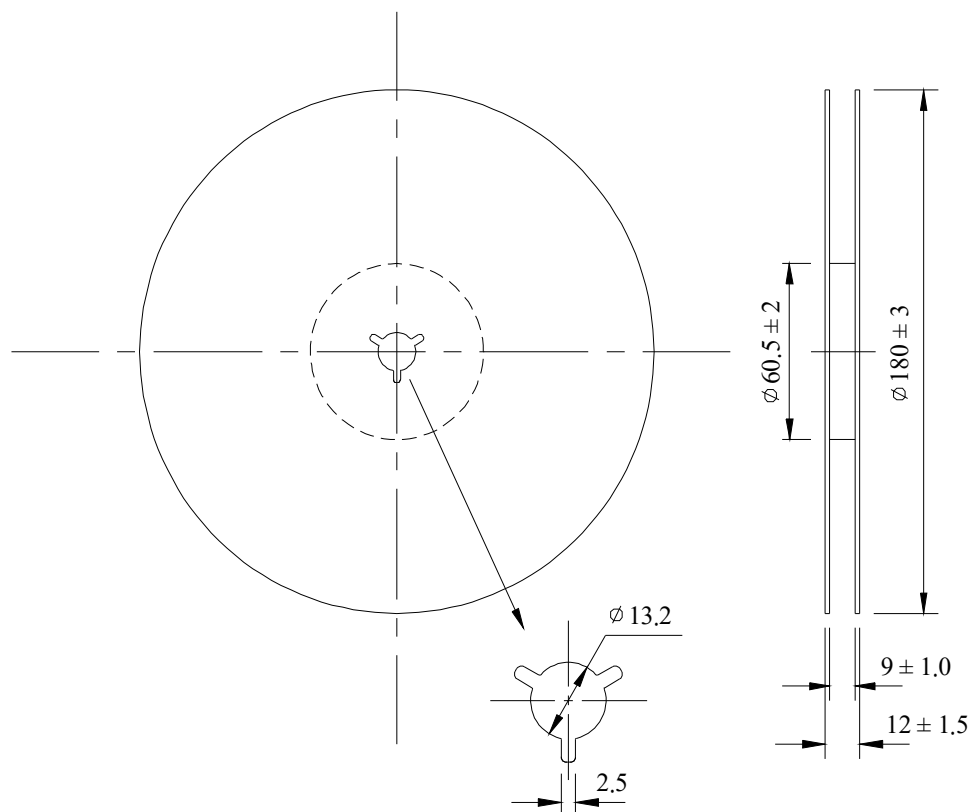
TAPE SPECIFICATION

(Unit : mm)

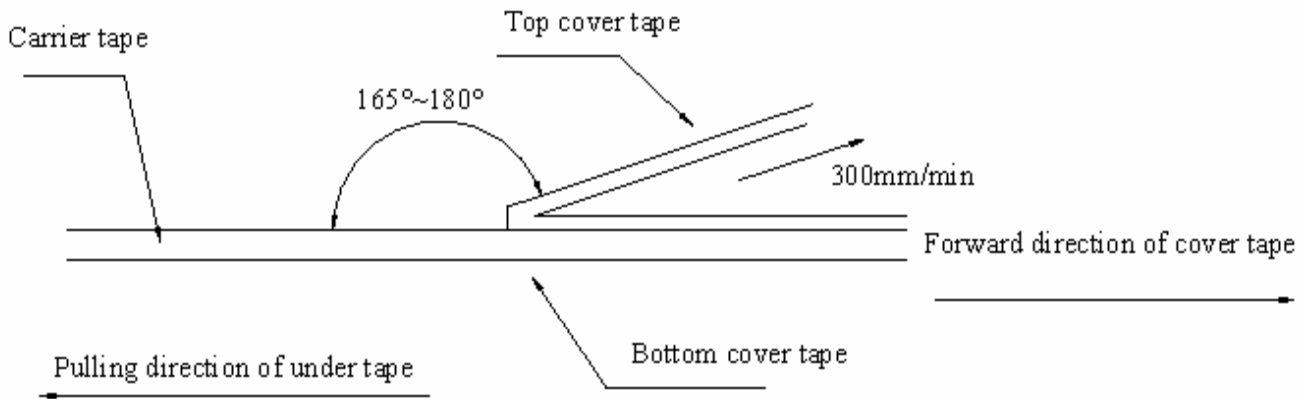


OUTLINE DIMENSION

(Unit : mm)



6. COVER TAPE ADHESION STRENGTH :

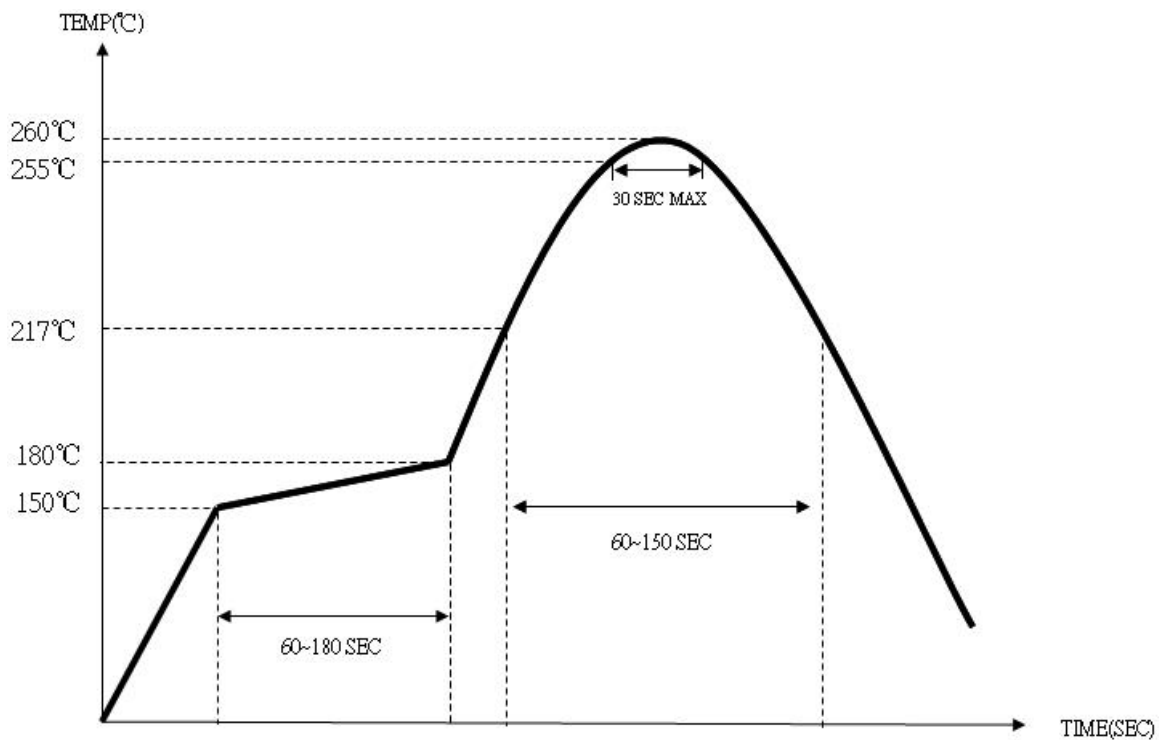


*** In the case, the cover tape is pulled off under the above conditions, the cover tape adhesion strength should be 10.2g~71.4g

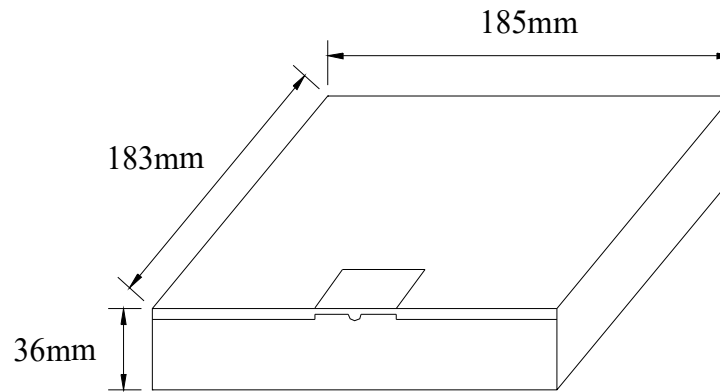
Plastic tape: 10.2g~71.4g

(Cover tape adhesion strength)

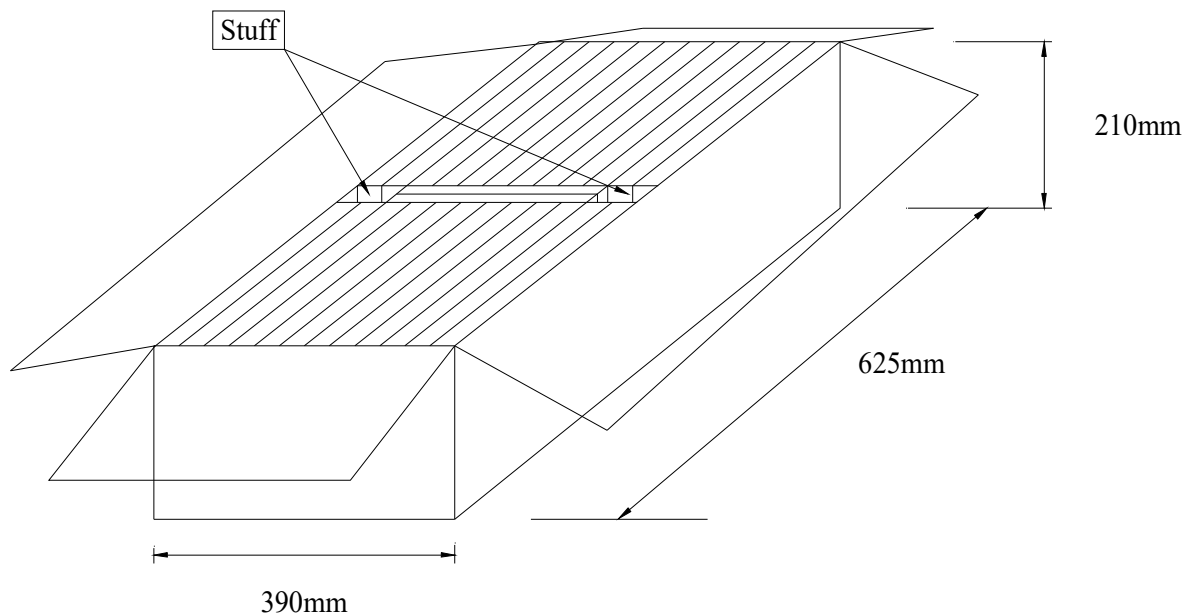
7. SOLDERING REFLOW PROFILE



8. PACKING :



BOX = 3000 PCS / REEL(MAX)



SMD product packs 32 BOX=The outside box packs (3000 PCS *32 BOX = 96000 PCS)(MAX)



Aker Approved P/N : CXAF-027000-3-AL-04	
APPROVED : Xtal	SHEET : 8 of 8
PREPARED : Kiku	REV . : 1
Confidential	

9 . MECHANICAL PERFORMANCE

TEST ITEMS	TEST METHODS AND TEST CONDITION	PERFORMANCE
9.1 Temperature Cycling	-55±3°C/30min maximum~+125±3°C/30min maximum , 1000cycles	To satisfy the electrical performance .
9.2 Operational Life	125°C±3°C , 1000hrs±12hrs	
9.3 Biased Humidity	85°C±5°C&85%±5%R.H. , 1000±12hrs	
9.4 Resistance To Soldering Heat Test	Reflow test 2 times.	
9.5 High Temperature Exposure	150°C±3°C , 1000hrs±12hrs	
9.6 Vibration Test	Freq.range: 10~2000Hz , Peak to peak amplitude:1.52mm Peak acceleration:5G (49m/s ²) , 3 direction(X, Y,Z) , 20min 12cycles each of 3 orientations.	
9.7 Mechanical Shock	100G , 6mS , 3 times for each direction(X, Y, Z) , 3 cycles	
9.8 Physical Dimension	Verify physical dimensions to the applicable device detail specification.	
9.9 Solderability	260°C , Coated > 95%	
9.10 Board Flex	PCB=100*40(mm) , Bending=2 mm (min) , Duration=60+5/-0 sec	
9.11 External Visual	Inspect device construction and marking.	
9.12 Terminal Strength	A force of 17.7N for 60 seconds.	

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Crystals](#) category:

Click to view products by [Aker](#) manufacturer:

Other Similar products are found below :

[CX3225GB25000M0PPSZ1](#) [718-13.2-1](#) [7A-40.000MAAE-T](#) [FL2000085](#) [99-BU](#) [9B-15.360MBBK-B](#) [9C-7.680MBBK-T](#) [H10S-12.000-18-EXT-TR](#) [ABC2-6.000MHZ-D4Z-T](#) [ABLS-20.000MHZ-D2-T](#) [ABS071-32.768KHZ-6-T](#) [R38-32.768-12.5-5PPM-NPB](#) [BTD1062E05A-513](#) [21U15A-21.4MHZ](#) [RTX-781DF1-S-20.950](#) [LFXTAL066198Cutt](#) [9C-14.31818MBBK-T](#) [A-11.000MHZ-27](#) [ABL-27.000MHZ-B4Y-T](#) [ABM11-132-24.000MHZ-T3](#) [ABM3B1-25.000MHZ-D2Y-T](#) [SPT2A-.032768B](#) [SPT2A.032768G](#) [LFXTAL065253Cutt](#) [LFXTAL066431Cutt](#) [XT9S20ANA14M7456](#) [XT9SNLANA16M](#) [7A-24.576MBBK-T](#) [7B-30.000MBBK-T](#) [CX2520DB16000H0HPQCC](#) [MMCC2R32.7680KHZ](#) [6504-202-1501](#) [6526-202-1501](#) [ABLS-12.000MHZ-B2Y-T](#) [7A-10.000MBBK-T](#) [SG636PCE-20.000MC](#) [3404](#) [CM315D32768EZFT](#) [C1E-24.000-7-2020-R](#) [C1E-19.200-12-1530-X-R](#) [C1E-16.000-12-1530-X-R](#) [ABM11-16.000MHZ-9-B1U-T](#) [FL5000014](#) [EUCA18-3.1872M](#) [FX0800015](#) [425F35E027M0000](#) [FP0800018](#) [MS3V-T1R-32.768kHz-7pF-20PPM-TA-QC-Au](#) [VXM7-1C1-16M000](#) [MS3V-T1R-32.768kHz-9pF-20PPM-TA-QC-Au](#)