MHz Range Crystal unit FA2016AA

Product name FA2016AA 24.000000 MHz 8.0 +10.0-10.0 AEC-Q200 compliant

Product Number / Ordering code X1E000381A090xx

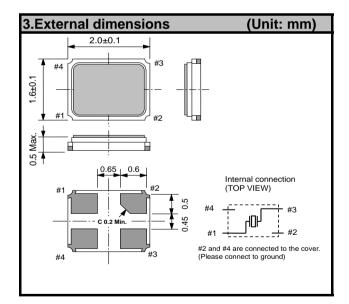
Please refer to the 5.Packing information about xx (last 2 digits)

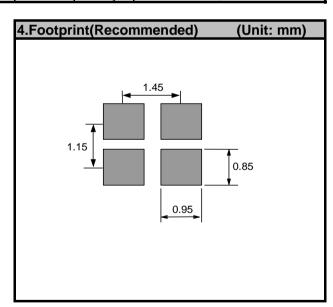
Pb free / Complies with EU RoHS directive

Reference weight Typ. 7 mg

1. Absolute maximum ratings						
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions / Remarks
Storage temperature	T_stg	-40	-	+125	°C	Storage as single product
Operating temperature	T_use	-40	-	+125	оС	

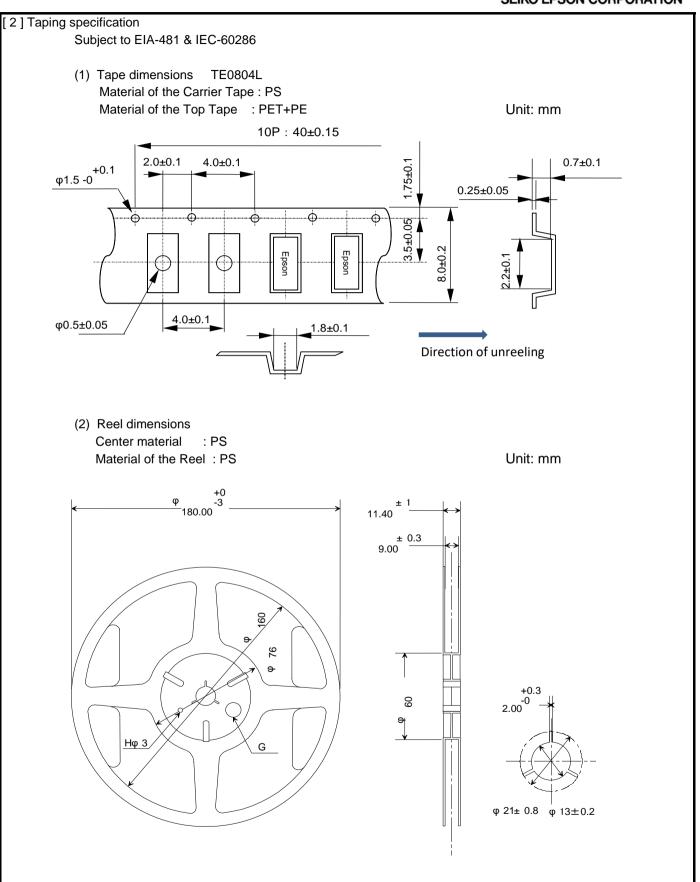
2.Specifications(characteristics)						
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions / Remarks
Nominal frequency	f_nom	-	24.000000	-	MHz	Fundamental
Frequency tolerance	f_tol	-10	-	+10	x 10- ⁶	@+25°C
Frequency Stability over temperature	f_tem	-30	-	+30	x 10 ⁻⁶	-40°C to +105°C
Operating temperature	T_use	-40	-	+105	°C	
Level of drive	DL	1	100	200	μW	
Load capacitance	CL	-	8	-	pF	
Motional resistance (ESR)	R1	-	-	80	Ω	
Motional capacitance	C1	-	1.92	-	fF	
Motional inductance	L1	-	22.63	-	mΗ	
Shunt capacitance	C0	-	0.62	-	pF	
Frequency aging	f_age	-3	-	+3	x10 ⁻⁶ /yea	@+25°C, First year

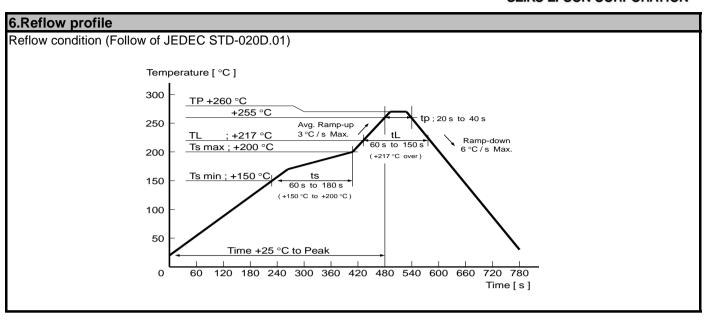




5.Packing	informat	ion		
[1]Product number last 2 digits code (xx) description		The recommended code is "18"		
	X1E0003	81A090xx		
	Code	Condition	Code	Condition
	01	Any Q'ty vinyl bag(Tape cut)	00	3000pcs / Reel
	11	Any Q'ty / Reel	18	5000pcs / Reel
	12	250pcs / Reel		
	14	1000pcs / Reel		

SEIKO EPSON CORPORATION





7.Notice

- 1. The content of this document is subject to change without notice. Before purchasing or using Epson products, please contact with sales representative of Seiko Epson Corporation ("Epson") for the latest information and be always sure to check the latest information published on Epson's official web sites
- 2. This document may not be copied, reproduced, or used for any other purposes, in whole or in part, without Epson's prior consent.
- 3. Information provided in this document including, but not limited to application circuits, programs and usage, is for reference purpose only. Epson makes no guarantees against any infringements or damages to any third parties' intellectual property rights or any other rights resulting from the information This document does not grant you any licenses, any intellectual property rights or any other rights with respect to Epson products owned by Epson or any
- 4. Using Epson products, you shall be responsible for safe design in your products; that is, your hardware, software, and/or systems shall be designed enough to prevent any critical harm or damages to life, health or property, even if any malfunction or failure might be caused by Epson products. In designing your products with Epson products, please be sure to check and comply with the latest information regarding Epson products (including, but not limited to this document, specifications, data sheets, manuals, and Epson's web site). Using technical contents such as product data, graphic and chart, and technical information, including programs, algorithms and application circuit examples under this document, you shall evaluate your products thoroughly both in stand-alone basis and within your overall systems. You shall be solely responsible for deciding whether to adopt/use Epson products with your products.
- Epson has prepared this document carefully to be accurate and dependable, but Epson does not guarantee that the information is always accurate and complete. Epson assumes no responsibility for any damages you incurred due to any misinformation in this document.
 No dismantling, analysis, reverse engineering, modification, alteration, adaptation, reproduction, etc., of Epson products is allowed.
- 7. Epson products have been designed, developed and manufactured to be used in general electronic applications and specifically designated applications ("Anticipated Purpose"). Epson products are NOT intended for any use beyond the Anticipated Purpose that requires particular quality or extremely high reliability in order to refrain from causing any malfunction or failure leading to critical harm to life and health, serious property damage, or severe impact or society, including, but not limited to listed below ("Specific Purpose"). Therefore, you are strongly advised to use Epson products only for the Anticipated Purpose. Should you desire to purchase and use Epson products for Specific Purpose, Epson makes no warranty and disclaims with respect to Epson products, whether express or implied, including without limitation any implied warranty of merchantability or fitness for any Specific Purpose. Please be sure to contact our sales representative in advance, if you desire Epson products for Specific Purpose:
- Space equipment (artificial satellites, rockets, etc.) / Transportation vehicles and their control equipment (automobiles, aircraft, trains, ships, etc.) / Medical equipment/ Relay equipment to be placed on sea floor/ Power station control equipment / Disaster or crime prevention equipment/Traffic control equipment/ Financial equipment
- Other applications requiring similar levels of reliability as the above
- 8. Epson products listed in this document and our associated technologies shall not be used in any equipment or systems that laws and regulations in Japan or any other countries prohibit to manufacture, use or sell. Furthermore, Epson products and our associated technologies shall not be used for the purposes of military weapons development (e.g. mass destruction weapons), military use, or any other military applications. If exporting Epson products or our associated technologies, please be sure to comply with the Foreign Exchange and Foreign Trade Control Act in Japan, Export Administration Regulations in the U.S.A (EAR) and other export-related laws and regulations in Japan and any other countries and to follow their required procedures.
- 9. Epson assumes no responsibility for any damages (whether direct or indirect) caused by or in relation with your non-compliance with the terms and conditions in this document or for any damages (whether direct or indirect) incurred by any third party that you give, transfer or assign Epson products. 10. For more details or other concerns about this document, please contact our sales representative.
- 11. Company names and product names listed in this document are trademarks or registered trademarks of their respective companies.

Contact us

https://www.epsondevice.com/crystal/en/