

# **SPECIFICATION SHEET**

### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

SPECIFICATION SHEET NO.	S0409 - XF26M00000S415				
ORIGINAL MFG/PART NO.	TGS Crystals/CM32 26M0	0A10-15-30-40-60 TLF			
NEXTGEN PART CODE	XF26M00000S415	Indicate This Code For RFQ/Order			
DATE	Apr. 9, 2025				
REVISION	A2 Updated With Most Recent Data				
DESCRIPTION AND	MHz SMD Crystal 4 pads, XF series, Seam Seal,				
MAIN PARAMETRICS	Frequency stability ±30p	10ppm, Load Capacitor 15pF pm; Operating Temp. Range -40°C ~+85°C Profile Condition 260°C Max.			
CUSTOMER					
CUSTOMER PART NUMBER					
CROSS REF. PART NUMBER					
МЕМО					

### **VENDOR APPROVE**

Issued/Checked/Approved







Effective Date: Apr. 9, 2025

JSTOMER APPROVE	
te:	

NextGen Components, Inc.



### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

#### **MAIN FEATURE**

- MHz SMD Crystal L3.2\*W2.5\*H0.7mm 4 Pads
- · Low Cost, High Precision, High Frequency Stability
- Short Lead time
- Reflow Profile Condition 260 ° C Max.
- Cross More Competitors Part
- REACH/RoHS/RoHS III Compliant

### **APPLICATION**

- Bluetooth, Wireless Communication Set
- Communication Electronics



Image shown is a representation only.

Exact specifications should be obtained from the product dimension.





### **ELECTRICAL CHARACTERISTICS**

- See Page 6~10 For Different Part Code.
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **HOW TO ORDER**

• Please Follow Up Part Code Guide And Indicate NextGen Part Code <u>XF26M00000S415</u> For RFQ and Order.

### **PART CODE GUIDE**

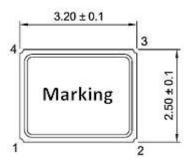


CODE	NAME	KEY SPECIFICATION OPTION
XF	Product Series Code	MHz SMD Crystal, Seam Seal, 4 Pads Case Dimension L3.2*W2.5*H0.7mm
26M0	Frequency Range Code	26M0: 26.0MHz
0000\$415	Internal Control Code	Letter A~Z, a~z or digits (0~9)
XX	Special/Custom Parameters Code	Blank: N/A  XX: Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters

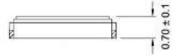
## MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **DIMENSION** - Unit: mm

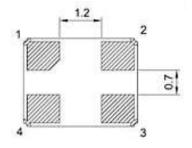
Top View



Side View



**Bottom View** 



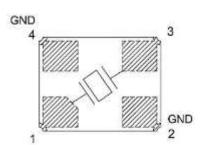
Connection

#1 Crystal

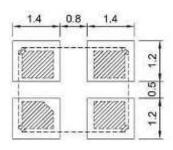
#2 Ground

#3 Crystal

#4 Ground



Recommend Pad Layout





### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **GENERAL SPECIFICATION**

24244555	0,440.01	VALUE				CONDITION	
PARAMETER	SYMBOL	MIN.	ТҮРЕ	MAX.	UNIT		
Mode of Vibration Code			Fundame	ental			
Frequency Tolerance	△F/F0	±10	-	±50	ppm	at 25°C±3°C	
Load Capacitance	CL	7	-	20	pF		
Frequency Stability	Тс	±10	-	±50	ppm		
Operating Temp. Range	TOPR	-40	-	+125	°C		
Storage Temp. Range	TSTG	-55	-	+125	°C		
Drive Level	DL	-	-	100	μW		
Insulation Resistance	IR	500	-		mΩ	@100V ± 15VDC	
Shunt Capacitance	CO	-	-	3.0	pF		
Aging per year	Fa	-3	-	+3	ppm	1st Year	

### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **ELECTRICAL PARAMETERS** – FOR DIFFERENT PART CODE- Ta = 25°C

PART CODE	FREQUENCY RANGE MHz	FREQUENCY TOLERANCE	LOAD CAPACITANCE pF	FREQUENCY STABILITY ppm	OPERATING TEMPE. RANGE	EQUIVALENT SERIES RESISTANCE Ω Max.
XF8M000000S410	8.000000	±10	10	±30	-40 ~ +85	350
XF8M000000S412	8.000000	±10	12	±30	-40 ~ +85	350
XF8M00000S4118	8.000000	±10	18	±50	-40 ~ +125	300
XF11M05920S420	11.05920	±10	20	±30	-40 ~ +85	100
XF12M00000S110	12.00000	±20	8	±30	-40 ~ +85	100
XF12M0000S4310	12.00000	±30	10	±30	-40 ~ +85	80
XF12M00000S410	12.00000	±10	10	±30	-40 ~ +85	100
XF12M00000S412	12.00000	±10	12	±30	-40 ~ +85	100
XF12M00000S101	12.00000	±30	18	±30	-20 ~ +70	100
XF12M00000S420	12.00000	±10	20	±30	-40 ~ +85	100
XF12M28800S412	12.28800	±10	12	±30	-40 ~ +85	100
XF12M28800S415	12.28800	±20	15	±30	-40 ~ +85	80
XF13M52127S420	13.52127	±10	20	±30	-40 ~ +85	100
XF13M56000S420	13.56000	±10	20	±30	-40 ~ +85	100
XF13M82400S412	13.82400	±10	12	±30	-40 ~ +85	100
XF14M31818S412	14.31818	±10	12	±30	-40 ~ +85	100
XF14M31818S420	14.31818	±10	20	±30	-40 ~ +85	100
XF14M74560S420	14.74560	±10	20	±30	-40 ~ +85	100
XF16M00000S110	16.00000	±20	8	±30	-40 ~ +85	80
XF16M00000S409	16.00000	±10	9	±30	-40 ~ +85	100

### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **ELECTRICAL PARAMETERS** – FOR DIFFERENT PART CODE- Ta = 25°C

PART CODE	FREQUENCY RANGE MHz	FREQUENCY TOLERANCE ppm	LOAD CAPACITANCE pF	FREQUENCY STABILITY ppm	OPERATING TEMPE. RANGE	EQUIVALENT SERIES RESISTANCE $\Omega$ Max.
XF16M00000S410	16.00000	±10	10	±30	-40 ~ +85	80
XF16M00000S412	16.00000	±10	12	±30	-40 ~ +85	100
XF16M00000S418	16.00000	±50	18	±30	-40 ~ +85	80
XF18M00000S412	18.00000	±10	12	±30	-40 ~ +85	80
XF18M43200S420	18.43200	±20	20	±30	-40 ~ +85	80
XF19M20000S407	19.20000	±10	7	±30	-40 ~ +85	60
XF20M00000S408	20.00000	±10	8	±30	-40 ~ +85	60
XF20M00000S409	20.00000	±10	9	±30	-40 ~ +85	60
XF20M00000S415	20.00000	±10	15	±30	-40 ~ +85	60
XF20M00000S416	20.00000	±10	16	±30	-40 ~ +85	60
XF20M00000S418	20.00000	±10	18	±30	-40 ~ +85	60
XF20M00000S420	20.00000	±10	20	±30	-40 ~ +85	60
XF22M11840S420	22.11840	±10	20	±30	-40 ~ +85	60
XF24M00000S409	24.00000	±10	9	±30	-40 ~ +85	60
XF24M00000S410	24.00000	±10	10	±30	-40 ~ +85	60
XF24M00000S412	24.00000	±10	12	±30	-40 ~ +85	60
XF24M0000S4112	24.00000	±20	12	±50	-40 ~ +125	50
XF24M00000S415	24.00000	±10	15	±30	-40 ~ +85	60
XF24M00000S416	24.00000	±10	16	±30	-40 ~ +85	60
XF24M000S12418	24.00000	±10	18	±20	-40 ~ +85	60

### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **ELECTRICAL PARAMETERS** – FOR DIFFERENT PART CODE- Ta = 25°C

PART CODE	FREQUENCY RANGE MHz	FREQUENCY TOLERANCE ppm	LOAD CAPACITANCE pF	FREQUENCY STABILITY ppm	OPERATING TEMPE. RANGE	EQUIVALENT SERIES RESISTANCE Ω Max.
XF24M000S13418	24.00000	±10	18	±30	-40 ~ +85	60
XF24M00000S418	24.00000	±30	18	±50	-40 ~ +85	60
XF24M00000S101	24.00000	±10	18	±10	-20 ~ +75	40
XF24M00000S002	24.00000	±50	20	±50	-20 ~ +70	50
XF24M00000S420	24.00000	±10	20	±30	-40 ~ +85	60
XF24M54545S001	24.54545	±30	12	±50	-40 ~ +85	80
XF24M57600S412	24.57600	±10	12	±30	-40 ~ +85	60
XF24M57600S420	24.57600	±10	20	±30	-40 ~ +85	60
XF25M00000S408	25.00000	±10	8	±30	-40 ~ +85	60
XF25M00000S410	25.00000	±10	10	±30	-40 ~ +85	60
XF25M00000S412	25.00000	±10	12	±30	-40 ~ +85	60
XF25M00000S416	25.00000	±10	16	±30	-40 ~ +85	60
XF25M00000S418	25.00000	±10	18	±30	-40 ~ +85	60
XF25M00000S420	25.00000	±10	20	±30	-40 ~ +85	60
XF25M00000S001	25.00000	±50	20	±50	-40 ~ +85	40
XF26M00000S409	26.00000	±10	9	±30	-40 ~ +85	60
XF26M00000S412	26.00000	±10	12	±30	-40 ~ +85	60
XF26M00000S415	26.00000	±10	15	±30	-40 ~ +85	60
XF26M00000S420	26.00000	±10	20	±30	-40 ~ +85	60
XF27M00000S410	27.00000	±10	10	±30	-40 ~ +85	60

### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **ELECTRICAL PARAMETERS** – FOR DIFFERENT PART CODE- Ta = 25°C

PART CODE	FREQUENCY RANGE MHz	FREQUENCY TOLERANCE		FREQUENCY STABILITY ppm	OPERATING TEMPE. RANGE	EQUIVALENT SERIES RESISTANCE Ω Max.
XF27M00000S412	27.00000	±10	12	±30	-40 ~ +85	60
XF27M00000S415	27.00000	±10	15	±30	-40 ~ +85	60
XF27M00000S418	27.00000	±10	18	±30	-40 ~ +85	60
XF27M00000S420	27.00000	±10	20	±30	-40 ~ +85	60
XF27M12000S410	27.12000	±10	10	±30	-40 ~ +85	60
XF27M12000S412	27.12000	±10	12	±30	-40 ~ +85	60
XF27M12000S420	27.12000	±10	20	±30	-40 ~ +85	60
XF28M00000S410	28.00000	±10	10	±30	-40 ~ +85	60
XF28M63636S420	28.63636	±10	20	±30	-40 ~ +85	60
XF30M00000S420	30.00000	±10	20	±30	-40 ~ +85	60
XF32M00000S409	32.00000	±10	9	±30	-40 ~ +85	40
XF32M00000S410	32.00000	±10	10	±30	-40 ~ +85	40
XF32M00000S411	32.00000	±10	11	±30	-40 ~ +85	40
XF37M40000S409	37.40000	±10	9	±30	-40 ~ +85	60
XF37M40000S412	37.40000	±10	12	±30	-40 ~ +85	40
XF37M40000S416	37.40000	±10	16	±30	-40 ~ +85	40
XF40M00000S408	40.00000	±10	8	±30	-40 ~ +85	40
XF40M00000S409	40.00000	±10	9	±30	-40 ~ +85	40
XF40M00000S410	40.00000	±10	10	±30	-40 ~ +85	40
XF40M00000S412	40.00000	±10	12	±30	-40 ~ +85	40



### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **ELECTRICAL PARAMETERS** – FOR DIFFERENT PART CODE- Ta = 25°C

PART CODE	FREQUENCY RANGE	FREQUENCY	LOAD CAPACITANCE	FREQUENCY STABILITY	OPERATING TEMPE. RANGE	EQUIVALENT SERIES RESISTANCE
	MHz	ppm	pF	ppm	°C	Ω Max.
XF40M00000S415	40.00000	±10	15	±30	-40 ~ +85	40
XF40M00000S420	40.00000	±10	20	±30	-40 ~ +85	40
XF48M00000S409	48.00000	±10	9	±30	-40 ~ +85	40
XF48M00000S420	48.00000	±10	20	±30	-40 ~ +85	40
XF50M00000S409	50.00000	±10	9	±30	-40 ~ +85	40
XF50M00000S420	50.00000	±10	20	±30	-40 ~ +85	40
XF50M00000S410	50.00000	±10	10	±30	-40 ~ +85	40
XF52M00000S420	52.00000	±10	20	±30	-40 ~ +85	60
XF54M00000S415	54.00000	±10	15	±30	-40 ~ +85	40

4/9/2025

NextGen Components, Inc.

10



### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

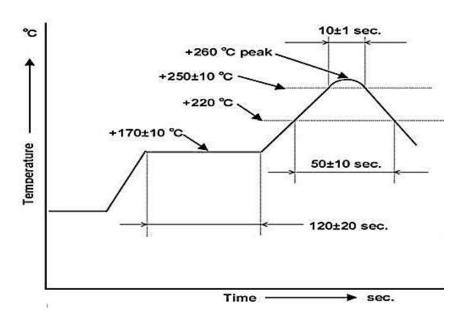
### **RELIABILITY** - MECHANICAL AND ENVIRONMENTAL ENDURANCE

TEST ITEMS	TEST METHOD AND CONDITIONS	REQUIREMENTS
Drop	Free drop from 75cm height on a hard wooden board for 3 times. (Board is thickness more than 30mm.)	Frequency change: ≤5ppm Rr as specification
Shake	Shake frequency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
Airproof	Put crystal into the pressure cabin with alcohol, keep pressure 0.4~0.5mpa 10 minutes, then take out and blow for 5 minutes	IR≥500MΩ
Weld	Temperature: 260±5°C Time: 3 seconds	90% exhibit tin ok
Humidity	Temperature: +40±2°C Humidity: 90%~95% R.H. Time: 250 hours	Frequency change: ≤5ppm Rr as specification
Low temperature	Temperature: -30±2°C  Time: 250 hours  put in room temperature, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
High Temperature	Temperature: +85±2°C  Time: 250 hours  put in room temperature, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
Temperature cycling	-30±3°C/30±3 min~+85±2°C/30±3min, 5 cycles	Frequency change: ≤5ppm Rr as specification

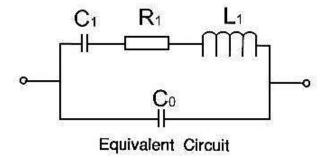


### **SUGGESTED REFLOW PROFILE** - FOR REFERENCE ONLY

### Condition:

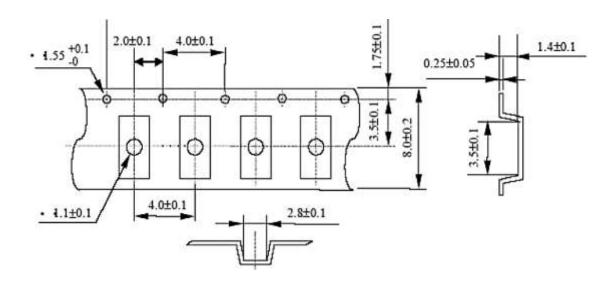


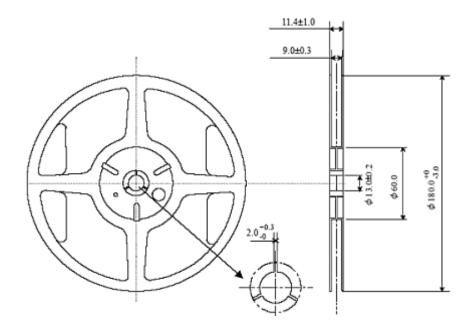
### **EQUIVALENT CIRCUIT**



## MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### TAPE AND REEL - Unit: mm, 3000pcs/Reel





### MHZ SMD CRYSTAL SEAM SEAL 3225 TYPE XF SERIES

### **IMPORTANT NOTES AND DISCLAIMER**

- ROHS COMPLIANCE: The levels of RoHS restricted materials in this product are below the maximum
  concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an
  exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for
  this product can be obtained can be obtained at Download Center.
- REACH COMPLIANCE: REACH substances of high concern (SVHCs) information is available for this product.
   Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
- All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test
  conditions, unless otherwise noted. Product performance may not be indicated by the Electrical
  Characteristics if operated under different conditions.
- 4. NextGen Component, Inc (*NextGen*) reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- 5. NextGen makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does NextGen assume any liability for application assistance or customer product design.
- 6. NextGen does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application. No license is granted by implication or otherwise under any intellectual property rights of NextGen.
- 7. NextGen products are not authorized for use as critical components in life support devices or systems without express written approval by NextGen.
- 8. NextGen requires that customers first obtain an RMA (Returned Merchandise Authorization) number prior to returning any products. Returns must be made within 30 days of the date of invoice, be in the original packaging, unused and like-new condition. At the time of quoting or purchasing, a product may say that it is Non-Cancelable/ Non-Returnable (NCNR). These products are not returnable and not refundable.