NextGen Components,Inc.

PART CODE: XP12M000S32418

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q1128 - XP12M000S32418	
DATE	Nov. 28, 2023	
REVISION	A0	Updated With Most Recent Data - Official First Release
DESCRIPTION AND MAIN PARAMETRICS	MHz SMD Crystal, L6.0*W3.5*H1.2mm, Glass seal, 2 Pads, CMG632 Series 12.0MHz, Tol. +/-30ppm, CL: 18pF, Stability +/-20ppm @Operating Temperature Range -40°C ~+85°C, ESR 60 ohm Max, Tape/Reel, Reflow Profile Condition 260 °C Max. RoHS/RoHS III compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863)	
CUSTOMER		
CUSTOMER PART NO.		
CROSS REF. PART NO.		
ORIGINAL MFG/PART NO.	TGS/CMG632 12M0A30-18-20-40-60 TLH	
PART CODE	XP12M000S32418	

VENDOR APPROVE
Issued/Checked/Approved NextGen Components, Inc. Mandy Xu NextGen Components, Inc. Ruby Zhang NextGen Components, Inc. Jack Zhang
DATE: Nov. 28, 2023

CUSTOMER APPROVE
DATE:

NextGen Components,Inc.

PART CODE: **XP12M000S32418**

MHZ SMD CRYSTAL GLASS SEAL CMG632 SERIES

MAIN FEATURE

- MHz SMD Crystal, L6.0*W3.5*H1.2mm, Glass seal, 2 Pads, CMG632 Series
- Operating Temperature Range -40°C ~+85°C
- Low Cost, High Precision, High Frequency Stability
- Reflow Profile Condition 260 °C Max.
- Cross more competitors part
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863

APPLICATION

- Measurement Instrument
- Communication Electronics

PART CODE GUIDE

RFQ
Request For Quotation

XP	12M000	S	32418
1	2	3	4

1. XP: Part family Code for MHz SMD Crystal, L6.0*W3.5*H1.2mm, Glass seal, 2 Pads, CMG632 Series
2. 12M000: Frequency range code for 12.000MHz
3. S: SMD type, Package Tape/Reel,
4. 32418: Internal Control Code or special Parameters code letter A~Z or digits (1-9)

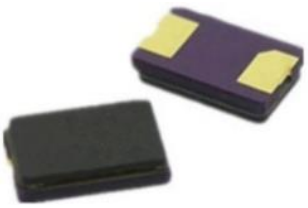
HOW TO ORDER

Please follow up **Part Code Guide** and indicate pat code when you order or RFQ.

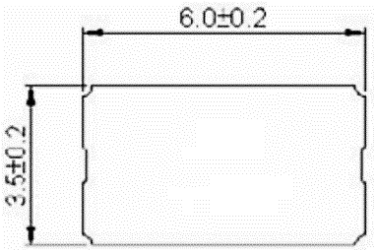
MHZ SMD CRYSTAL GLASS SEAL CMG632 SERIES

DIMENSION (Unit: mm)

Image for reference



Top View

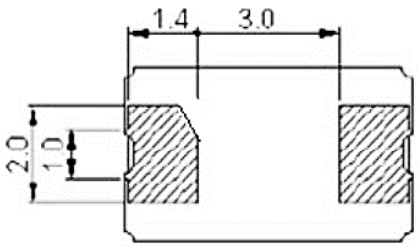


Marking

Frequency Range or

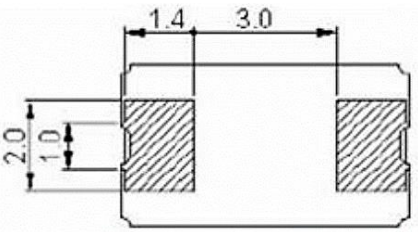
Internal control code

Bottom type 1 View



OR

Bottom Type 2 View

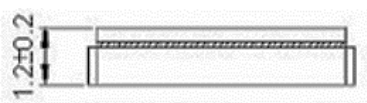


Pin Configuration

#1 Crystal

#2 Crystal

Side View



MHZ SMD CRYSTAL GLASS SEAL CMG632 SERIES

ELECTRICAL PARAMETERS

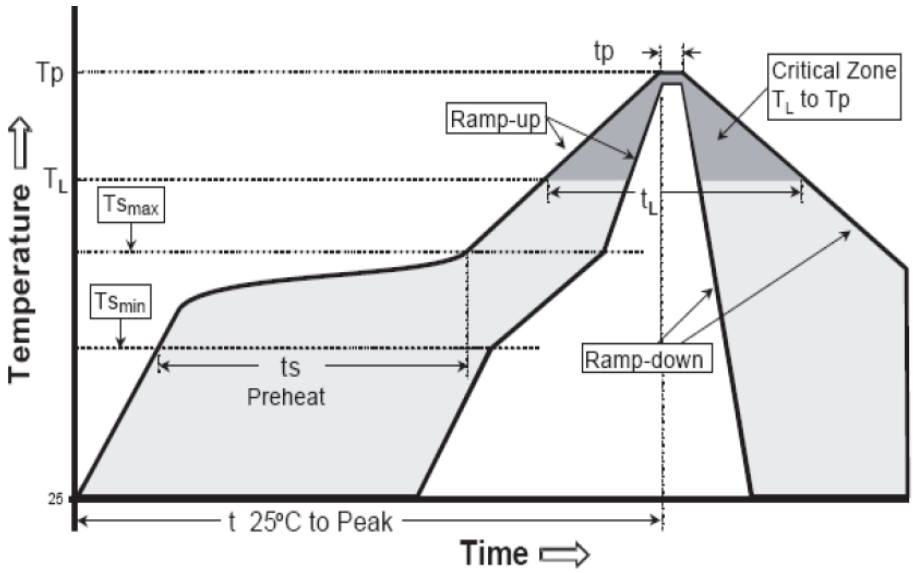
PARAMETER		PART NO. SYMBOL	UNITS	VALUE			CONDITION
				MIN.	TYPICAL	MAX.	
Original Manufacturer		TGS	TGS Crystals				
Holder Type		CMG632	MHz SMD Crystal, Glass Seal, L6.0*W3.5*H1.2mm, 2 pads				
Frequency Range		12M0	MHz	12.0000			
Mode of Oscillation		A		AT Fundamental			
Frequency Tolerance		30	ppm	-30		+30	@25°C
Load Capacitance		-18	pF	18			
Stability over Operation Temperance		-20	ppm	-20		+20	
Operation Temperance		-40	°C	-40		+85	
Storage Temperance			°C	-40		+85	
Equivalent Series Resistance (ESR)		60	Ω			60	
Drive Level			μW	100			
Shunt Capacitance (C0)			pF	0		5.0	
Motional Capacitance (C1)			fF	/			
DLD2			Ω	/			
FLD2			ppm	/			
RDL2			Ω	/			
SPDB			dB	/			
Aging			ppm/year			±5	@1st year
Insulation Resistance			MΩ	500			@100VDC ± 15VDC
Others	Package	T	Tape/Reel				
	RoHS Status	LH	RoHS III compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863				
	Add Value		N/A				
	Internal Control Code		N/A				

RELIABILITY SPECIFICATIONS

TEST ITEMS	TEST METHOD AND CONDITIONS	REFERENCE DOCUMENTS
High Temperature High Humidity Storage	Temperature: 85°C±3°C Relative Humidity:85%RH Time: 96 Hours	JIS C5023
High Temperature Storage	Temperature: 125°C±3°C Time: 96 Hours.	MIL-STD-883E Method 1005.8
Low Temperature Storage	Temperature: -40°C±3°C Time: 96 Hours.	MIL-STD-883E Method 1013
Thermal Shock	Temperature 1: -55°C±5°C Temperature 2: 85°C±5 °C Temperature change between T1 and T2 5 min 10cycles maintain T1 and T2 for 30 minutes each cycle	MIL-STD-202F Method 107 Condition A
Resistance to Solder Heat	Solder Temperature: 260°C±5°C Time: 10±1 Seconds	MIL-STD-202F Method 210E
Solderability	The solder pot temperature is 245±5°C , dwell time 5±0.5sec	J-STD-002B
Drop Test	3 Times Free Fall from 50cm height table to 3cm thickness hard wood board	J-STD-002B
Mechanical Shock	Half sine wave,1000 G 3 Times for all 3 directions(X,Y Z)	MIL STD 202F Method 213B
Vibration	Frequency Range: 10Hz ~ 55Hz Amplitude: 0.75mm 2 Hours in each direction, total 6 Hours	MIL-STD-883E Method 2007.3
Leakage Test	Take measurements with a helium Leakage detector Leakage Rate≤1×10^{-3}Pa cm^3/s	MIL-STD-883E

SUGGESTED REFLOW PROFILE (For Reference Only)

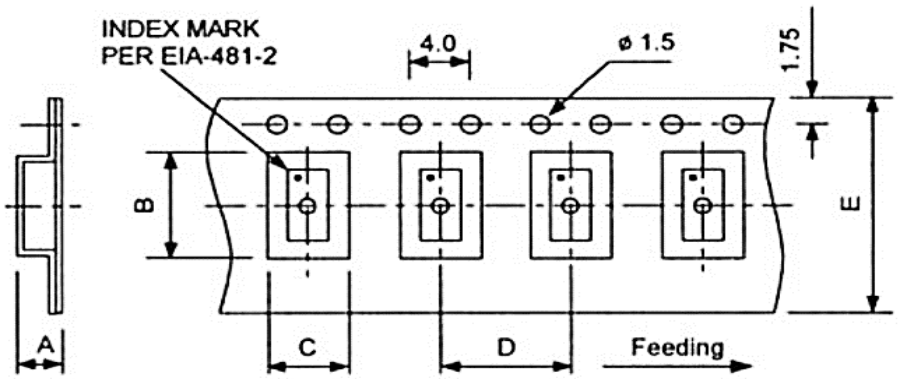
Total time: 200 Sec. Max. Solder melting point: 220℃



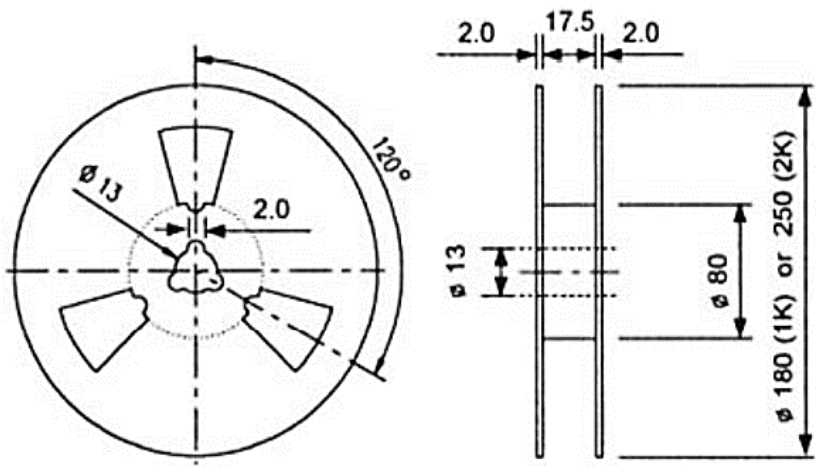
PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (Ts Max to Tp)		3℃/second Max
Preheat	Temperature Min (Ts Min.)	125℃
	Temperature Max (Ts Max.)	200℃
	Time (ts Min. to ts Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217℃
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (Tp)		260 ℃
Time within 5℃ of actual Peak Temperature (tp)		20 ~ 40 seconds
Ramp-down rate		6 ℃ /Second Max.
Time 25 ℃ to Peak Temperature		8 minutes Max.
Suggest reflow times		3 Times Max.

TAPE/REEL (Unit: mm, 1000pcs/Reel)

All Devices are packed in accordance with EIA standard RS-481-2 and specifications., 1000pcs/Reel



Code	Dimension
A	1.70
B	5.45
C	3.65
D	8.00
E	12.0



IMPORTANT NOTES AND DISCLAIMER

1. 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.
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