SPECIFICATION SHEET

SMD CRYSTAL OSCILLATOR 3225 TYPE RE SERIES

SPECIFICATION SHEET NO.	S0331 – RE32M00000S321	
ORIGINAL MFG/PART NO.	TGS Crystals/COM3231AGI01 TLF-32M000	
NEXTGEN PART CODE	RE32M00000S321	Indicate This Code For RFQ /Order
DATE	Mar. 31, 2025	
REVISION	A3	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Crystal Oscillator, 3225 Type, 4 Pads, RE series, Case Dimension L3.2*W2.5*H1.0mm 32.000MHz, Supply Voltage 3.3V, Tolerance ±25ppm @25℃±3℃ Symmetry 45/55; Output Waveform HCMOS, Output Load 15pF Tri-State (Output Enable) Via Pin 1 Operating Temp. Range -40°C ~+85°C Package in Tape/Reel, 3000pcs/Reel REACH/RoHS/RoHS III Compliant	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE
Issued/Checked/Approved NextGen Components, Inc. Mandy Xu NextGen Components, Inc. Ruby Zhang NextGen Components, Inc. Jack Zhang
Effective Date: Mar. 31, 2025

CUSTOMER APPROVE
Date:

MAIN FEATURE

Image shown is a representation only. Exact specifications should be obtained from the product dimension.

- SMD Package, Seam Sealed, 3225 Type, 4 Pads
- Case Dimension L3.2*W2.5*H1.0mm
- Low Noise And Low Current
- Industry Standard
- Reflow Profile Condition 260 ℃ Max.
- Tristate Function – Enable/Disable or Tri-State (Output Enable) Via Pin 1
- Cross More Competitor's Part
- REACH/RoHS/RoHS III Compliant

APPLICATION

- PDA, PND, DSC, Smart phone, WiLAN, Bluetooth and more
- Communication Electronics

ELECTRICAL CHARACTERISTICS

- See Page 6 ~ Page 9 For Different Part Code.
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code RE32M00000S321 For RFQ and Order.

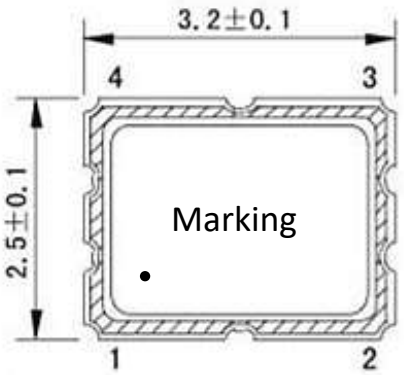
PART CODE GUIDE

RFQ
Request For Quotation

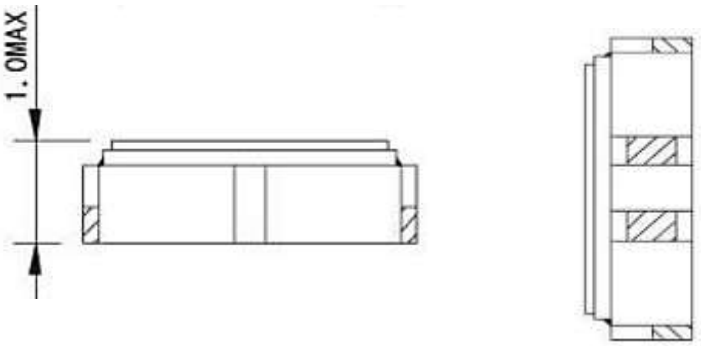
CODE	NAME	KEY SPECIFICATION OPTION
RE	Series Code	SMD Crystal Oscillator 3225 Type, 4Pads Case Dimension L3.2*W2.5*H1.0mm
32M0	Frequency Range Code	32M0: 32.0MHz or Custom Frequency Range
0000S	Internal Control Code	Letter A~Z, a~z or Digits (0~9)
321	Parameters Code	Special Parameters Code Letter A~Z, a~z or Digits (1-9)
XX	Special/Custom Parameters Code	Blank: N/A XX: Letter A~Z, a~z or Digits (0~9) for Special/Custom Parameters

DIMENSION - Unit: mm, Case Dimension L3.2*W2.5*H1.0mm

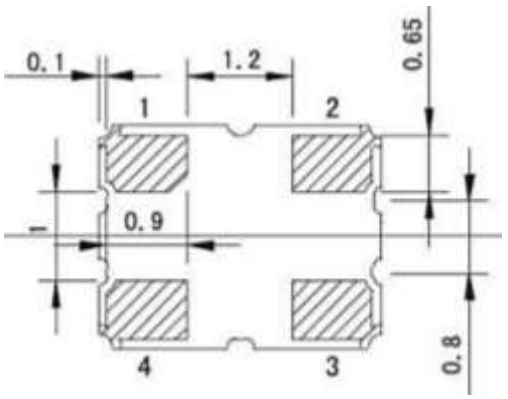
Top View



Side View



Bottom View



Pin Function

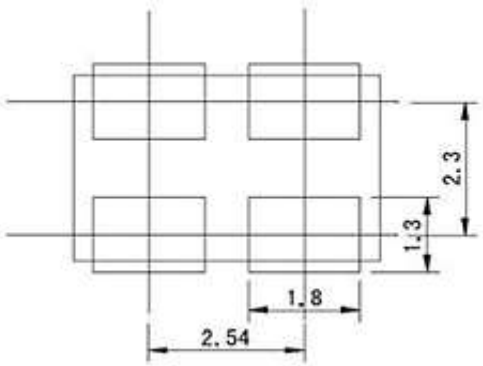
1 Tristate Enable Via #1

#2 Ground

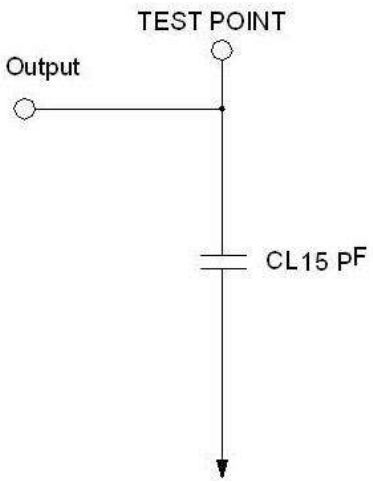
#3 Output

#4 VDD

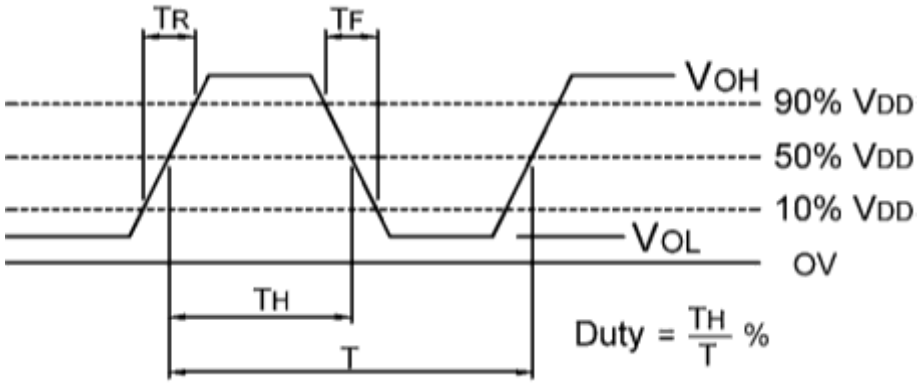
SUGGESTED LAYOUT– Unit: mm, For Reference



CIRCUIT PRINCIPLE – For Reference



OUTPUT WAVEFORM - HCMOS LOAD



GENERAL SPECIFICATION

PARAMETER		SYMBOL	VALUE			UNIT	CONDITION
			MIN.	TYPE	MAX.		
Frequency Range		F0	1.0	-	150.0	MHz	Please specify
Frequency Tolerance		△F/F0	±10	-	±50	ppm	at 25℃±3℃
Tristate Function		INHN	Disable or Tri-State (Output Enable) Via Pin 1				Please specify
Operating Temp. Range		TOPR	-40	-	+85	˚C	
Storage Temp. Range		TSTG	-55	-	+125	˚C	
Power Supply	Voltage	VDD	1.8, 2.5, 3.3, 5.0			V	Please specify
	Current	IDD	-	-	10	mA	@ Max. Supply Voltage
Output Level		VOH	90% Vdd	-	-	V	Output High(Logic “1”)
		VOL	-	-	10% Vdd	V	Output Low(Logic “0”)
		Load	15, 30, 50			pF	Please specify
Output Waveform			HCMOS				Please specify
Duty Cycle		Duty	45	-	55	%	
Phase Jitter		rms	-	-	1	ps	
Start-up Time		Tosc	-	-	10	mSec.	
Rise/ Fall time		Tr/Tf	-	-	8	nSec.	
Aging		FA	-3	-	+3	ppm	Frequency drift in 1st year

ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25℃

PART CODE	FREQUENCY RANGE	SUPPLY VOLTAGE	FREQUENCY TOLERANCE	OUTPUT WAVEFORM	OUTLOAD	TRISTATE FUNCTION
	MHz	V	ppm @25℃		pF	
RE3M579545S321	3.579545	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE8M000000S321	8.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE8M192000S321	8.192000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE10M00000S321	10.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE11M28960S321	11.289600	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE12M00000S351	12.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE12M00000S321	12.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE12M28800S351	12.288000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE12M28800S321	12.288000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE16M00000S351	16.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE16M00000S321	16.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE19M20000S321	19.200000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE20M00000S321	20.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE24M00000S121	24.000000	1.8	±25	HCMOS	15	Tri-State (Output Enable)
RE24M00000S351	24.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE24M00000S321	24.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE24M57600S351	24.576000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE24M57600S321	24.576000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE25M00000S121	25.000000	1.8	±25	HCMOS	15	Tri-State (Output Enable)
RE25M00000S351	25.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)

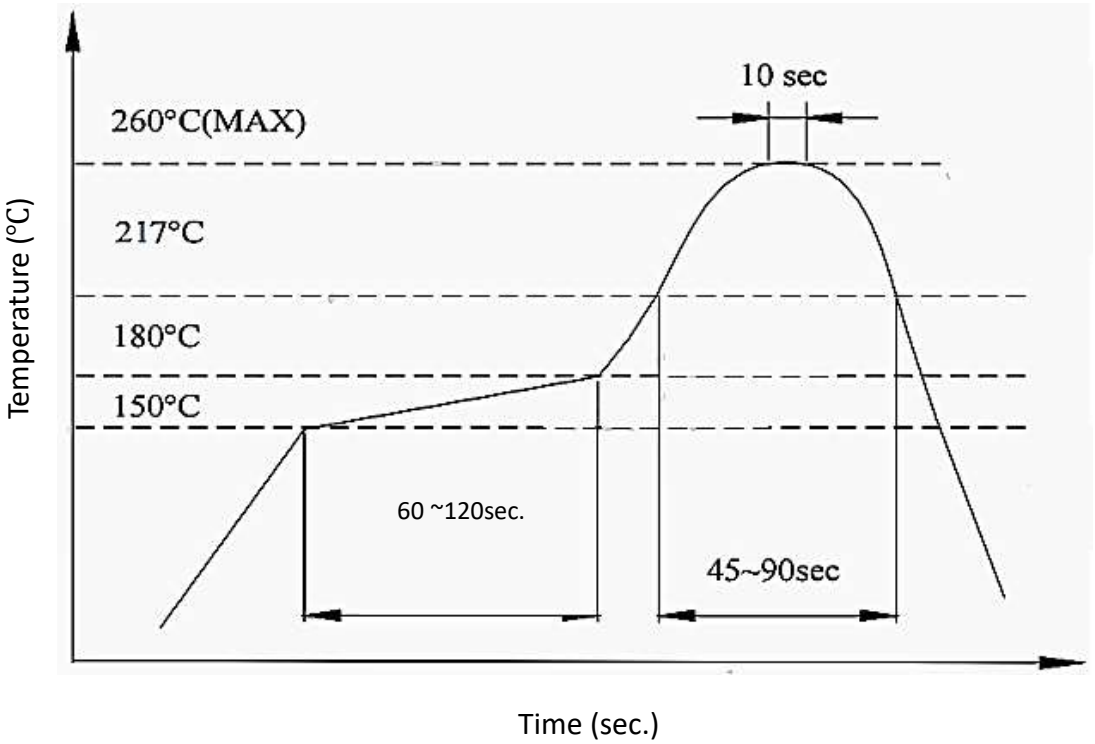
ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25℃

PART CODE	FREQUENCY RANGE	SUPPLY VOLTAGE	FREQUENCY TOLERANCE	OUTPUT WAVEFORM	OUTLOAD	TRISTATE FUNCTION
	MHz	V	ppm @25℃		pF	
RE25M00000S321	25.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE26M00000S321	26.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE26M00000S351	26.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE27M00000S351	27.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE27M00000S321	27.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE30M00000S321	30.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE32M00000S351	32.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE32M00000S321	32.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE33M00000S321	33.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE33M33300S321	33.333000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE37M12500S351	37.125000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE37M12500S321	37.125000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE40M00000S351	40.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE40M00000S321	40.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE40M00000S311	40.000000	3.3	±10	HCMOS	15	Tri-State (Output Enable)
RE48M00000S351	48.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE48M00000S321	48.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE49M15200S321	49.152000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE50M00000S351	50.000000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE50M00000S321	50.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)

ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25℃

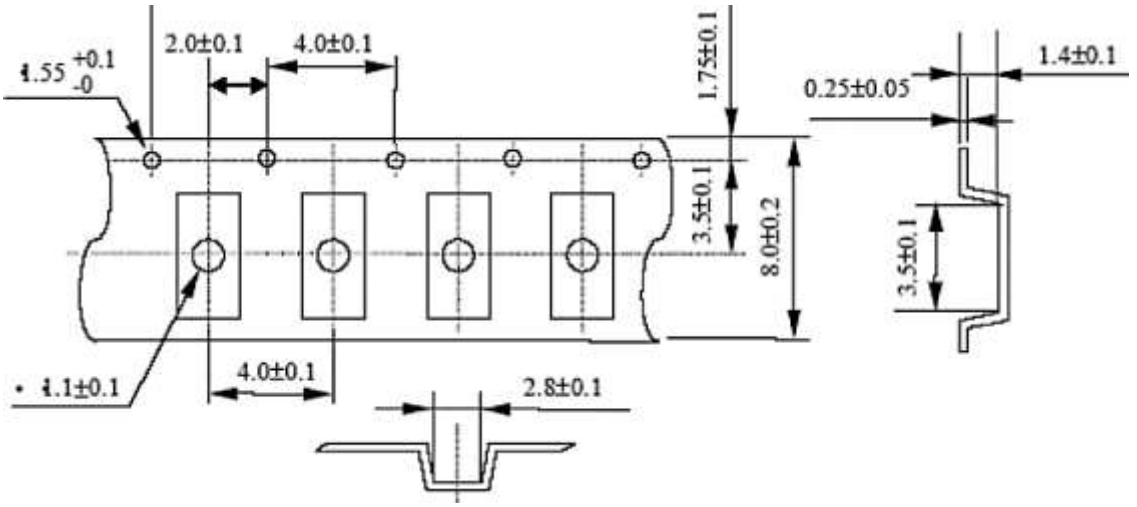
PART CODE	FREQUENCY RANGE	SUPPLY VOLTAGE	FREQUENCY TOLERANCE	OUTPUT WAVEFORM	OUTLOAD	TRISTATE FUNCTION
	MHz	V	ppm @25℃		pF	
RE54M00000S321	54.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE72M00000S321	72.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE100M0000S351	100.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE100M0000S321	100.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RE125M0000S351	125.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RE125M0000S321	125.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)

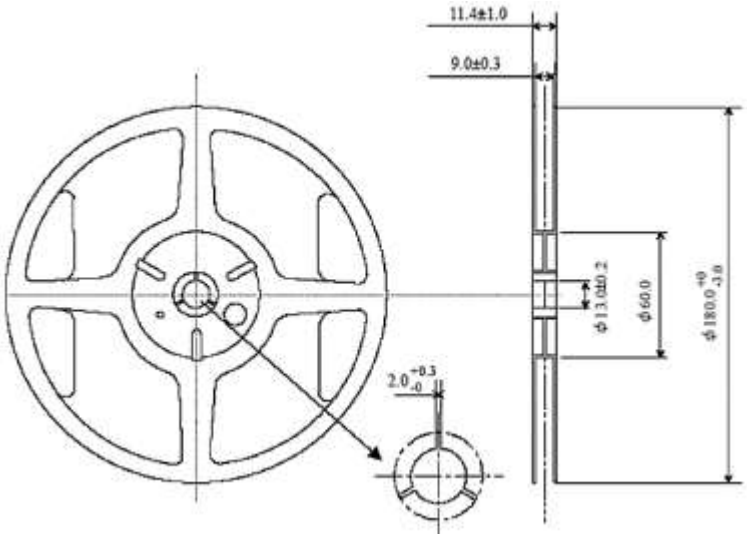
SUGGESTED REFLOW PROFILE - For Reference Only



TAPE/REEL -Unit: mm

All Devices are packed in accordance with EIA standard RS-481-2 and specifications, 3000pcs/Reel





IMPORTANT NOTES AND DISCLAIMER

1. 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.
2. 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 can be obtained at Download Center.
3. 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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