SPECIFICATION SHEET

SMD CRYSTAL OSCILLATOR CASE 7050 RC SERIES

SPECIFICATION SHEET NO.	S0418 – RC2M000000S302	
ORIGINAL MFG/PART NO.	TGS Crystals/COM7531AGI01TLF-2M000	
NEXTGEN PART CODE	RC2M000000S302	Indicate This Code For RFQ /Order
DATE	Apr. 18, 2025	
REVISION	A3	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Crystal Oscillator, Case 7050 Type, 4 Pads, RC series, Case Dimension L7.0*W5.0*H1.3mm 2.0000MHz, 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, 1000pcs/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: Apr. 18, 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, 7050 Type, 4 Pads
- Case Dimension L7.0*W5.0*H1.3mm
- 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 10 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 RC2M000000S302 For RFQ and Order.

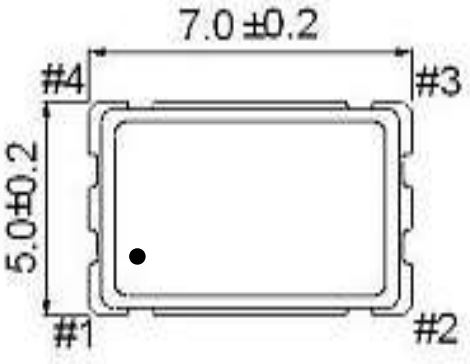
PART CODE GUIDE

RFQ
Request For Quotation

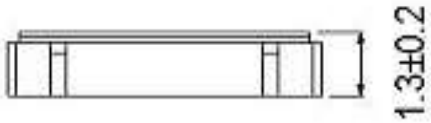
CODE	NAME	KEY SPECIFICATION OPTION
RC	Series Code	SMD Crystal Oscillator 7050 Type, 4Pads, Case Dimension L7.0*W5.0*H1.3mm
2M0	Frequency Range Code	2M0: 2.0MHz or Custom Frequency Range
00000S	Internal Control Code	Letter A~Z, a~z or Digits (0~9)
302	Parameters Code	Special Parameters Code Letter A~Z, 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

DIMENSION - Unit: mm, Case Dimension L7.0*W5.0*H1.3mm

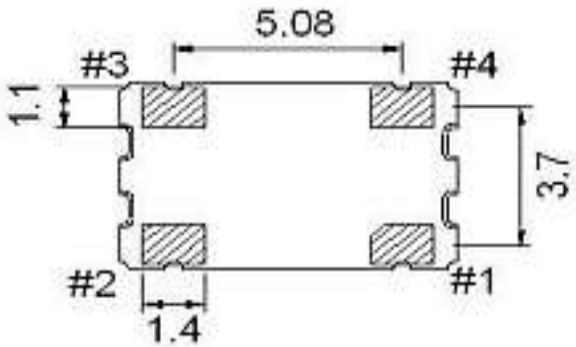
Top View



Side View



Bottom View



Pin Function

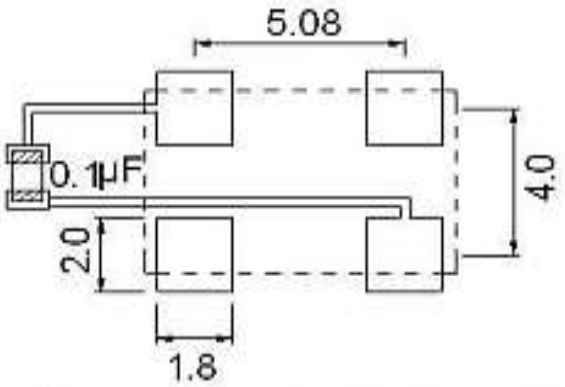
1 Tristate Enable Via #1

#2 Ground

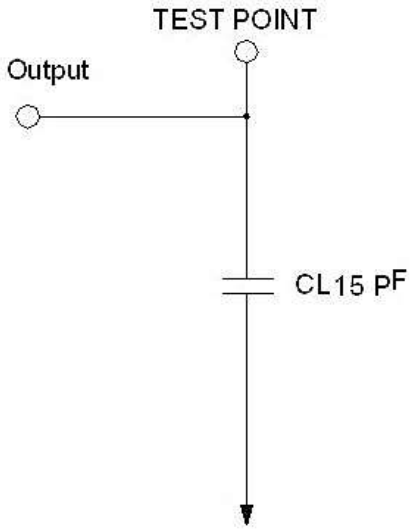
#3 Output

#4 VDD

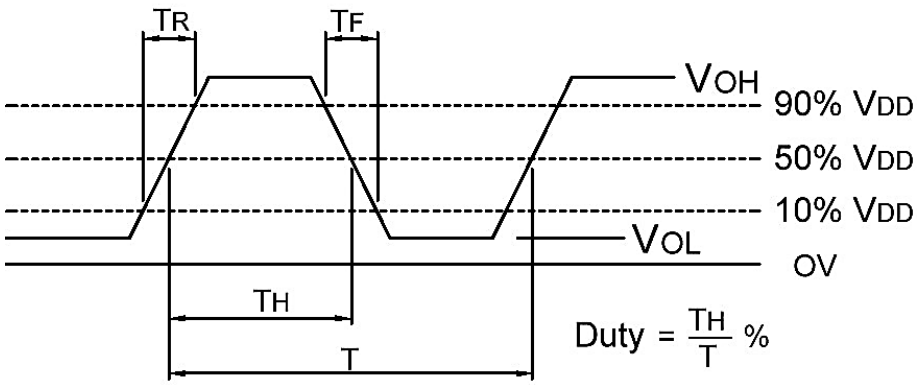
SUGGESTED LAYOUT– Unit: mm, For Reference Only



CIRCUIT PRINCIPLE – For Reference Only



OUTPUT WAVEFORM - HCMOS LOAD



GENERAL ELECTRICAL PARAMETERS

PARAMETER		SYMBOL	VALUE			UNIT	CONDITION
			MIN.	TYPE	MAX.		
Frequency Range		F0	0.032768	-	125.00	MHz	Please specify
Frequency Tolerance		△F/F0	±20	-	±50	ppm	at 25℃±3℃
Tristate Function		INHN	Enable/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	1.65		5.0	V	Please specify
	Current	IDD	-	-	5	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			TTL, HCMOS				Please specify
Duty Cycle		Duty	45	-	55	%	
Phase Noise			-	-90	-	dBc/Hz	100Hz offset
			-	-115	-	dBc/Hz	1KHz offset
			-	-130	-	dBc/Hz	10KHz offset
			-	-135	-	dBc/Hz	100KHz offset
			-	-140	-	dBc/Hz	1MHz offset
			-	-145	-	dBc/Hz	10MHz offset
Start-up Time		Tosc	-	-	5	mSec.	
Rise/ Fall time		Tr/Tf	-	-	5	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	
RC1M000000S302	1.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC2M000000S302	2.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC2M048000S302	2.048000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC2M048000S300	2.048000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC2M048000S002	2.048000	3.3	±50	TTL	15	Enable/Disable
RC4M000000S302	4.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC4M096000S302	4.096000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC6M000000S302	6.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC8M000000S302	8.000000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC9M375000S100	9.375000	3.3	±50	TTL	15	Enable/Disable
RC10M00000S502	10.00000	5.0	±25	HCMOS	15	Tri-State (Output Enable)
RC10M00000S302	10.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC11M05920S302	11.05920	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC11M28960S302	11.28960	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC12M00000S302	12.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC12M28800S302	12.28800	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC14M31818S302	14.31818	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC14M74560S302	14.74560	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC15M00000S302	15.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC16M00000S302	16.00000	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	
RC20M00000S302	20.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC20M00000S300	20.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC20M48000S001	20.48000	3.3	±50	TTL	15	Enable/Disable
RC20M48000S100	20.48000	5.0	±25	HCMOS	15	Tri-State (Output Enable)
RC22M11840S302	22.11840	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC24M00000S302	24.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC24M00000S300	24.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC24M57600S302	24.57600	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC24M57600S100	24.57600	3.3	±50	TTL	15	Enable/Disable
RC25M00000S502	25.00000	5.0	±25	HCMOS	15	Tri-State (Output Enable)
RC25M00000S302	25.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC25M00000S300	25.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC26M00000S302	26.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC27M00000S302	27.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC27M00000S300	27.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC30M00000S302	30.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC32M00000S302	32.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC32M76800S302	32.76800	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC33M00000S302	33.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC33M79200S001	33.79200	3.3	±25	TTL	15	Tri-State (Output Enable)

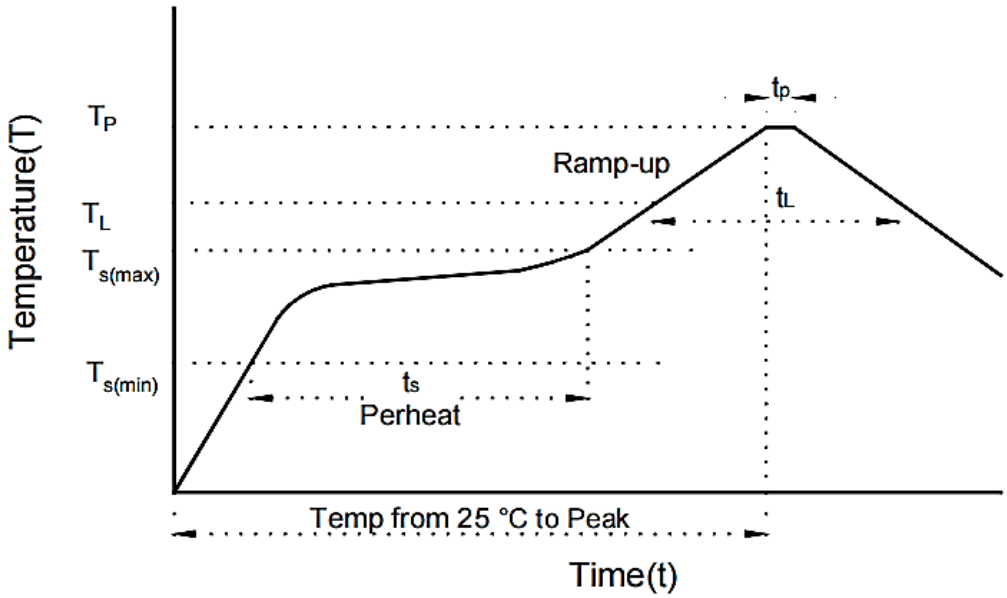
ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25℃

PART CODE	FREQUENCY RANGE	SUPPLY VOLTAGE	FREQUENCY TOLERANCE	OUTPUT WAVEFORM	OUTLOAD	TRISTATE FUNCTION
	MHz	V	ppm @25℃		pF	
RC34M36800S302	34.36800	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC34M56000S302	34.56000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC40M00000S302	40.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC40M00000S300	40.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC40M96000S001	40.96000	3.3	±50	TTL	15	Tri-State (Output Enable)
RC41M66000S001	41.66000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC44M00000S302	44.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC48M00000S502	48.00000	5.0	±25	HCMOS	15	Tri-State (Output Enable)
RC48M00000S302	48.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC48M00000S300	48.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC49M15200S302	49.15200	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC50M00000S302	50.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC50M00000S300	50.00000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC54M00000S302	54.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC65M53600S002	65.53600	3.3	±50	TTL	15	Enable/Disable
RC66M00000S302	66.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC66M66670S302	66.66670	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC66M66700S302	66.66700	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC70M65600S302	70.65600	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC75M00000S302	75.00000	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	
RC80M00000S302	80.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC96M00000S302	96.00000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC100M0000S302	100.0000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC100M0000S300	100.0000	3.3	±50	HCMOS	15	Tri-State (Output Enable)
RC117M6750S100	117.6750	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC125M0000S302	125.0000	3.3	±25	HCMOS	15	Tri-State (Output Enable)
RC125M0000S300	125.0000	3.3	±50	HCMOS	15	Tri-State (Output Enable)

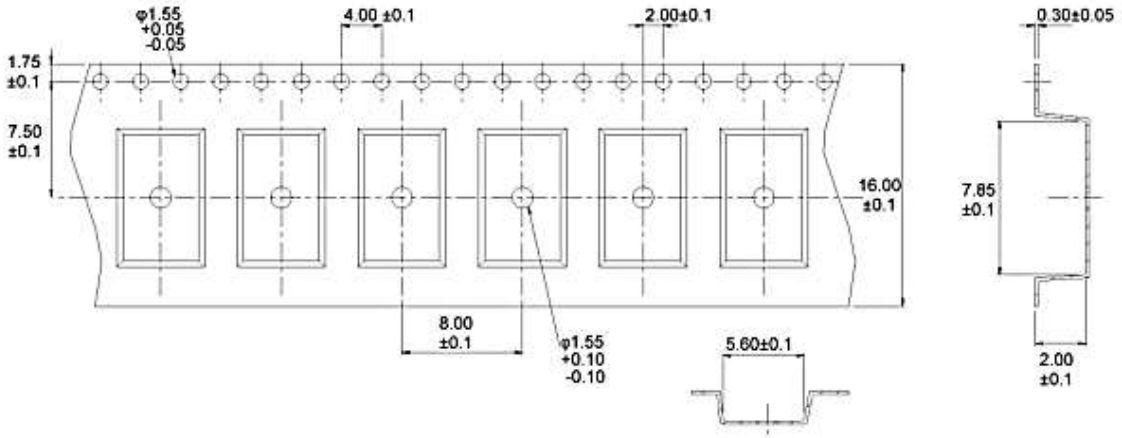
SUGGESTED REFLOW PROFILE - For Reference Only



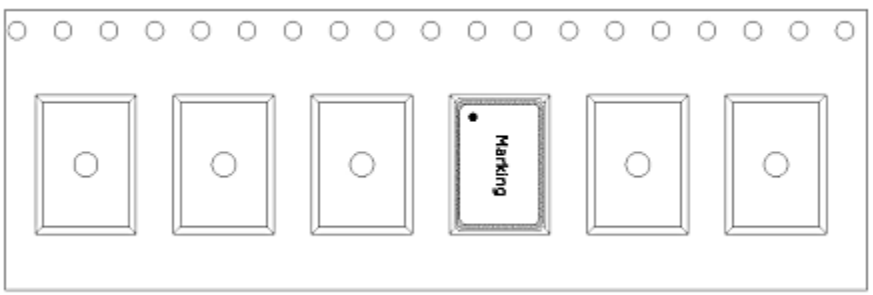
PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		10 seconds Max.
Ramp-down Rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 Minutes Max.
Suggest reflow times		3 Times Max.

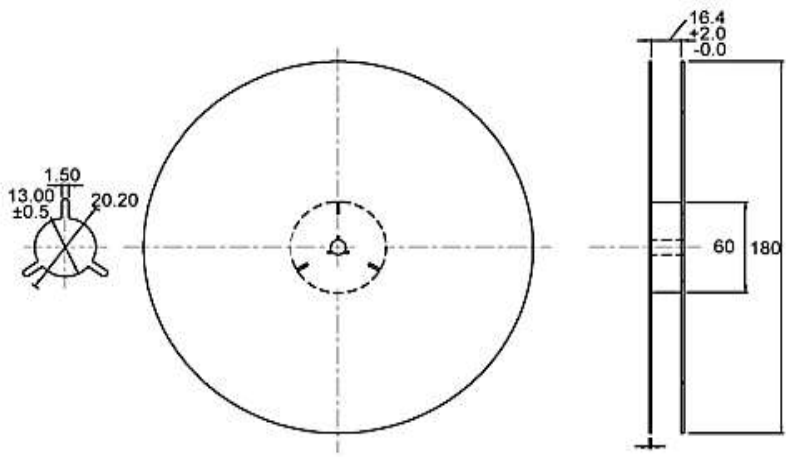
TAPE/REEL - Unit: mm

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



The Direction Of Packing





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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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.