




**SPECIFICATION SHEET**

<b>SPECIFICATION SHEET NO.</b>	N0216-RC20M00000S300
<b>DATE</b>	Feb. 16, 2021
<b>REVISION</b>	A0
<b>DESCRIPTION</b>	SMD Oscillator, 0705 Type, L7.0*W5.0*H1.50mm, 4 Pads, COM75 series 20.0000MHz, 3.3V, +/-50ppm, Symmetry 45/55, Operating Temp. Range -40°C ~+85°C, Reflow Profile Condition 260 °C Max. HCMOS//15pF, Supply Current 25mA Max, Tristate via Pad 1, Tape/Reel, RoHS/RoHS III compliant
<b>CUSTOMER</b>	
<b>CUSTOMER PART NUMBER</b>	
<b>CROSS REF. PART NUMBER</b>	
<b>ORIGINAL PART NUMBER</b>	TGS COM7531BGI03 TLF-20M000
<b>PART CODE</b>	RC20M00000S300

<b>VENDOR APPROVE</b>			
Issued/Checked/Approved			
DATE: Feb. 16, 2021			

<b>CUSTOMER APPROVE</b>
DATE:

**MHZ SMD OSCILLATOR 0705 TYPE 4 PADS**

**MAIN FEATURE**

- SMD Package, Seam Sealed, 0705 Type, L7.0\*W5.0\*H1.50mm, 4 Pads,
- Low noise and Low current
- Industry standard
- Reflow Profile Condition 260 °C Max.
- Cross more competitors part
- RoHS/RoHS III compliant



**APPLICATION**

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

**PART CODE GUIDE**

**RFQ**  
Request For Quotation

<b>RC</b>	<b>20M00000</b>	<b>S</b>	<b>300</b>
1	2	3	4

- 1) RC: Part family Code for SMD Oscillator, 0705 Type, L7.0\*W5.0\*H1.50mm, 4 Pads, COM75 series
- 2) 20M00000: Frequency range code for 20.00000MHz
- 3) S: SMD type, Package Tape/Reel, 1000pcs/Reel
- 4) 300: Specification code for original part No.: **TGS COM7531BGI03 TLF-20M000**

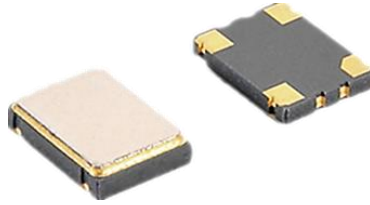
**MORE FREQUENCY RANGE AVAILABLE (MHz)**

2.0480	20.000	24.000	25.000	27.000	40.0000	48.000	50.000	100.00	125.000

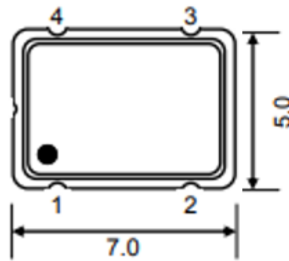
**MHZ SMD OSCILLATOR 0705 TYPE 4 PADS**

**DIMENSION (Unit: mm, Tol. +/-0.15mm)**

Image for reference



COM75

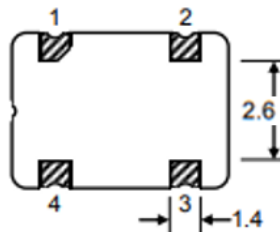


**Marking 1**

Line 1: Company Code + Supply Voltage  
Line 2: Freq. Range + QC Code (A~Z)

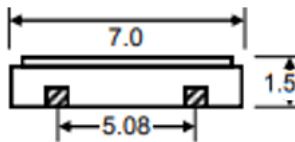
**Marking 2**

Line 1: Frequency Range

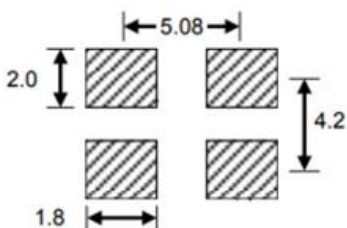


**Pin Function**

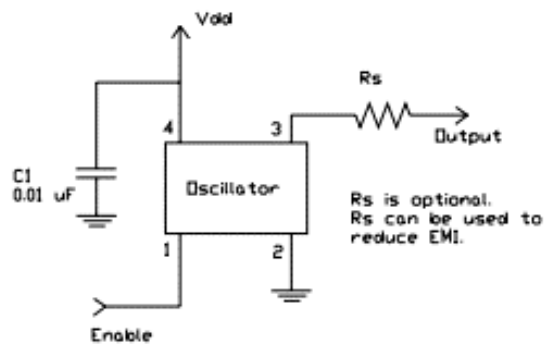
- #1 Enable (Tri-State)
- #2 Ground
- #3 Output
- #4 VDD



**Recommend Pad Layout**



**Circuit Principle**



**MHZ SMD OSCILLATOR 0705 TYPE 4 PADS**
**ELECTRICAL PARAMETERS**

Parameter		Part No. Symbol	Units	Value			Condition
				Min.	Typical	Max.	
Original Manufacturer		TGS	TGS Crystals				
Holder Type		COM75	SMD Oscillator, 0705 Type, L7.0*W5.0*H1.50mm, 4 Pads				
Supply Voltage		3	V	3.3		+/-10%	
Enable/Disable Function		1		Tri-State		@ Control via pin 1	
Overall Freq. Tolerance		B	ppm	-50		+50	@25°C
Operating Temp. Range		G	°C	-40		+85	
Storage Temp. Range			°C	-55		+125	
Symmetry		I	%	45		55	
Output	V OH		V	90%			High (Logic "1")
	V OL		V			10%	Low (Logic "0")
	Load		pF	15			
Output Waveform		03		HCMOS			@OutputLoad 15pF
Startup Time			ms			10	
Supply Current			mA			25	
Rise/ Fall time			ns			10	
Phase Jitter			ps			1.0	@12KHz~20MHz
Aging			ppm/year			±3	@1 <sup>st</sup> year
Others	Package	T	Tape/Reel				
	RoHS Status	LF	RoHS III compliant				
	Add Value		N/A				
	Internal Control Code *		N/A				
Frequency Range		-20M00	20.0000MHz				

Note: 1) Original Part Number: **TGS COM7531BGI03 TLF-20M00**

2) \* Internal Control Code- 2 letter or digits; Blank: N/A

**MHZ SMD OSCILLATOR 0705 TYPE 4 PADS**

**RELIABILITY**

Test Items	Test Method And Conditions	Reference Documents
<b>High Temperature High Humidity Storage</b>	Temperature: 85°C±3°C Relative Humidity:85%RH Time: 96 Hours	JIS C5023
<b>High Temperature Storage</b>	Temperature: 125°C±3°C Time: 96 Hours.	MIL-STD-883E Method 1005.8
<b>Low Temperature Storage</b>	Temperature: -40°C±3°C Time: 96 Hours.	MIL-STD-883E Method 1013
<b>Thermal Shock</b>	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
<b>Resistance to Solder Heat</b>	Solder Temperature: 260°C±5°C Time: 10±1 Seconds	MIL-STD-202F Method 210E
<b>Solderability</b>	The solder pot temperature is 245±5°C , dwell time 5±0.5sec	J-STD-002B
<b>Drop Test</b>	3 Times Free Fall from 50cm height table to 3cm thickness hard wood board	J-STD-002B
<b>Mechanical Shock</b>	Half sine wave,1000 G 3 Times for all 3 directions(X,Y Z)	MIL STD 202F Method 213B
<b>Vibration</b>	Frequency Range: 10Hz ~ 55Hz Amplitude: 0.75mm 2 Hours in each direction, total 6 Hours	MIL-STD-883E Method 2007.3
<b>Leakage Test</b>	Take measurements with a helium Leakage detector Leakage Rate≤1×10 <sup>-3</sup> Pa cm <sup>3</sup> /s	MIL-STD-883E

**MHZ SMD OSCILLATOR 0705 TYPE 4 PADS**

**SUGGESTED REFLOW PROFILE (For Reference Only)**

Total time: 200 Sec. Max. Solder melting point: 220°C

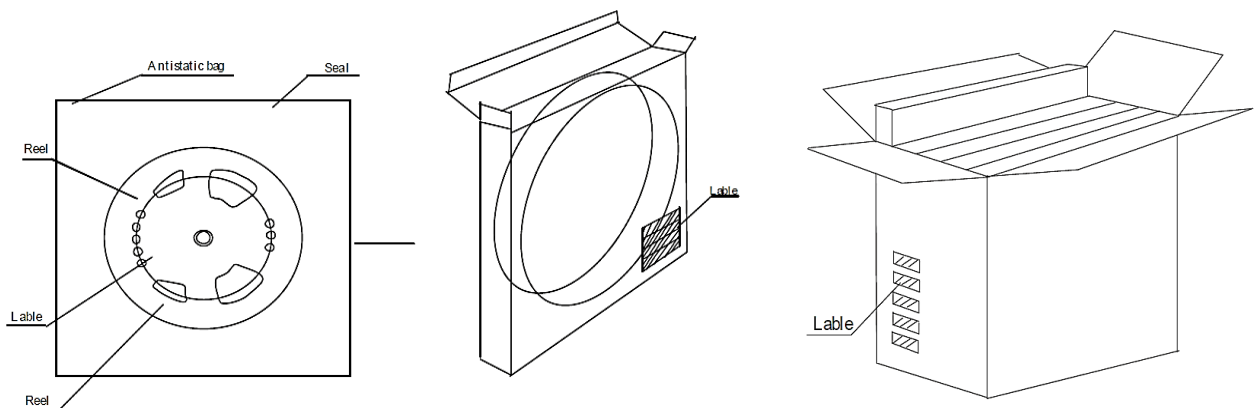
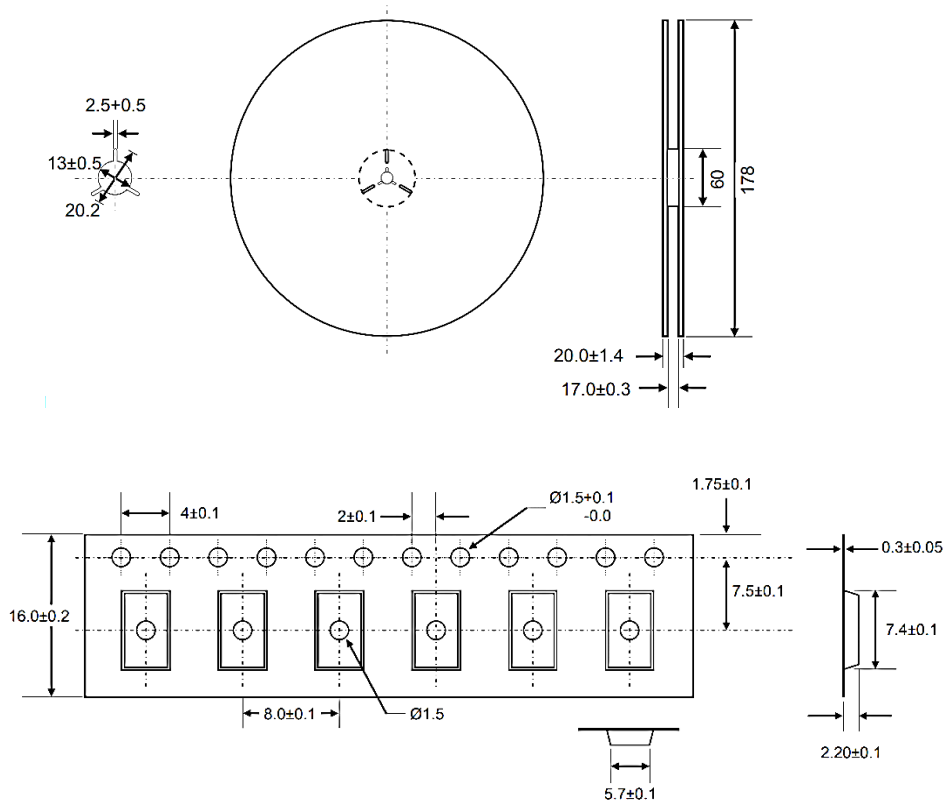


<b>Profile Feature</b>		Pb-Free Assembly
<b>Average Ramp-up Rate (Ts Max to Tp)</b>		3°C/second Max
<b>Preheat</b>	<b>Temperature Min (Ts Min.)</b>	125°C
	<b>Temperature Max (Ts Max.)</b>	200°C
	<b>Time (ts Min. to ts Max.)</b>	60 ~ 180 seconds
<b>Time maintained above</b>	<b>Temperature (T<sub>L</sub>)</b>	217°C
	<b>Time (t<sub>L</sub>)</b>	60 ~ 150 seconds
<b>Peak/Classification Temperature (T<sub>p</sub>)</b>		260 °C
<b>Time within 5°C of actual Peak Temperature (t<sub>p</sub>)</b>		20 ~ 40 seconds
<b>Ramp-down rate</b>		6 °C /Second Max.
<b>Time 25 °C to Peak Temperature</b>		8 minutes Max.
<b>Suggest reflow times</b>		3 Times Max.

**MHZ SMD OSCILLATOR 0705 TYPE 4 PADS**

**TAPE/REEL (Unit: mm)**

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



**DISCLAIMER**

NextGen Components, Inc. reserves the right to make changes to the product(s) and or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information