

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	Q0113- RA4M096000L515
DATE	Jan. 13, 2023
REVISION	A0
DESCRIPTION	<p>MHz Thru-Hole Crystal Oscillator, L20.8*W13.2*H5.08mm</p> <p>Full- Size/14 pin, CO14 series</p> <p>4.096000MHz, 5.0V, +/-50ppm, Symmetry 45/55,</p> <p>Operating Temp. Range -40°C ~+85°C,</p> <p>HCMOS//50pF, Supply Current 20mA Max, Tristate function - Enable</p> <p>Thru-Hole type, Packed in Tube, 25pcs/Tube</p> <p>RoHS/RoHS III compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS CO1451BGI05 BLF-4M0960
PART CODE	RA4M096000L515

VENDOR APPROVE

Issued/Checked/Approved



DATE: Jan. 13, 2023

CUSTOMER APPROVE

DATE:

1/13/2023

MHZ THRU-HOLE CRYSTAL OSCILLATOR CO14 SERIES

MAIN FEATURE

- MHz Thru-Hole Crystal Oscillator L20.8*W13.2*H5.08mm
- Industry-standard
- Hermetically sealed package for reliability
- Tristate function -Enable
- Cross more competitors part
- RoHS/RoHS III compliant



APPLICATION

- Communication Electronics

PART CODE GUIDE

RFQ

[Request For Quotation](#)

RA	4M096000	L	515
1	2	3	4

- 1) RA: Part family Code for MHz Thru-Hole Crystal Oscillator, L20.8*W13.2*H5.08mm, Full-Size/14 pin, CO14 series
- 2) 4M096000 Frequency range code for 4.096000MHz
- 3) L: Thru Hole type, Packed in Tube, 25pcs/Tube
- 4) 515: Specification code for original part No.: **TGS CO1451BGI05 BLF-4M0960**

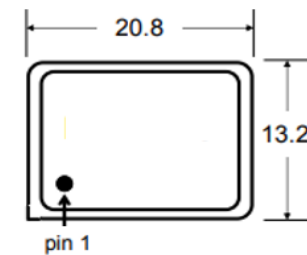
MHZ THRU-HOLE CRYSTAL OSCILLATOR CO14 SERIES

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

Image for reference

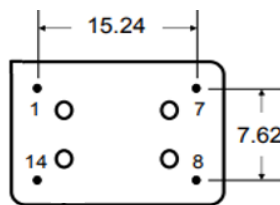
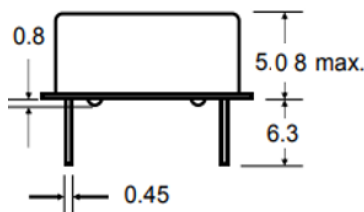


CO14



Marking

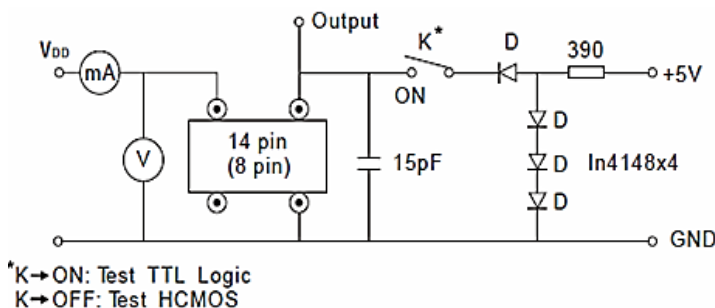
Line 1: 4.0960
Line 2: Special Code



Pin Function

- #1 Tristate Enable Via #1
- #4 Ground
- #5 Output
- #8 VDD

Circuit Principle



MHZ THRU-HOLE CRYSTAL OSCILLATOR CO14 SERIES
ELECTRICAL PARAMETERS

Parameter		Part No. Symbol	Units	Value			Condition
				Min.	Typical	Max.	
Original Manufacturer		TGS	TGS Crystals				
Holder Type		CO14	MHz Thru-Hole Crystal Oscillator, CO14 Series, L20.8*W13.2*H5.08mm, Full-Size/14 pin				
Supply Voltage		5	V	5.0		+/-10%	
Enable/Disable -Tristate Function		1		Tristate function - Enable		@ 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	50			
Output Waveform		05		HCMOS			@OutputLoad 50pF
Startup Time			ms			10	
Supply Current			mA			20	
Rise/ Fall time			ns			10	
Phase Jitter			ps		N/A		
Aging			ppm/year			±3	@1 st year
Others	Package	B	Thru - Hole type, Packed in Tube, 25pcs/Tube				
	RoHS Status	LF-	RoHS III compliant				
	Add Value		N/A				
	Internal Control Code *		N/A				
Frequency Range		4M0960	4.09600MHz				

Note: 1) Original Part Number: TGS CO1451BGI05 BLF-4M0960

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

1/13/2023

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MHZ THRU-HOLE CRYSTAL OSCILLATOR CO14 SERIES

ENVIRONMENTAL AND TECHNICAL CONDITIONS

Test Items	Test Method And Conditions
Temperature Cycle	Mil-std 883, Method 1010, 10 Cycles -20° C To 85° C
Shock	Mil-std-202, Method 213, Test Condition C
Vibration	Mil-std-202, Method 204, Test Condition A
Resistance To Soldering Heat	Mil-std-202, Method 210, Test Condition B
Humidity	85% Relative Humidity At 85° C 250 Hours
Gross Leak Test	Mil-std-883, Method 1014, Test Condition C
Fine Leak Test	Mil-std-883, Method 1014, Test Condition A
Terminal Strength	Mil-std-202, Method 211, Test Condition A And C
Moisture Resistance	Moisture Resistance Mil-std 202, Method 106, Omit Step 7b
Solderability	Mil-std-202, Method 208, 95% Coverage
Solvent Resistance	Mil-std-202, Method 2002, Method 215

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