




SPECIFICATION SHEET

| | |
|--------------------------------|--|
| SPECIFICATION SHEET NO. | N0504-RB20M48000L001 |
| DATE | May 04, 2021 |
| REVISION | A0 |
| DESCRIPTION | <p>MHz Thru-Hole Crystal Oscillator, L13.2*W13.2*H5.08mm, Half-Size/8 pin, CO8 series 20.48000MHz, 3.3V, +/-50ppm, Symmetry 40/60, Operating Temp. Range -40°C ~+85°C, 1-10TTL//15pF, Supply Current 10mA Max, Tristate function -Disable Thru-Hole type, Packed in Tube, 40pcs/Tube RoHS/RoHS III compliant</p> |
| CUSTOMER | |
| CUSTOMER PART NUMBER | |
| CROSS REF. PART NUMBER | |
| ORIGINAL PART NUMBER | TGS CO830BGH01 BLF-20M480 |
| PART CODE | RB20M48000L001 |

| | | | |
|-------------------------|---|--|---|
| VENDOR APPROVE | | | |
| Issued/Checked/Approved |  |  |  |
| DATE: May 04, 2021 | | | |

| | |
|-------------------------|--|
| CUSTOMER APPROVE | |
| | |
| DATE: | |

MHZ THRU-HOLE CRYSTAL OSCILLATOR CO8 SERIES

MAIN FEATURE

- MHz Thru-Hole Crystal Oscillator, L13.2*W13.2*H5.08mm
- Industry-standard
- Hermetically sealed package for reliability
- Tristate function -Disable
- Cross more competitors part
- RoHS/RoHS III compliant



APPLICATION

- Communication Electronics

RFQ

[Request For Quotation](#)

PART CODE GUIDE

| | | | |
|-----------|-----------------|----------|------------|
| RB | 20M48000 | L | 001 |
| 1 | 2 | 3 | 4 |

- 1) RB: Part family Code for MHz Thru-Hole Crystal Oscillator, L13.2*W13.2*H5.08mm, Half-Size/8 pin, CO8 series
- 2) 20M48000: Frequency range code for 20.48000MHz
- 3) L: Thru Hole type, Packed in Tube, 40pcs/Tube
- 4) 100: Specification code for original part No.: **TGS CO830BGH01 BLF-20M480**

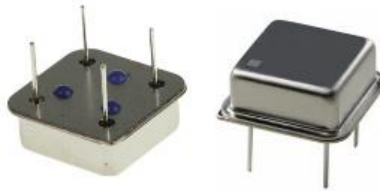
MORE FREQUENCY RANGE AVAILABLE (MHz)

| | | | | | | | | | |
|--------|--------|--------|--------|--------|---------|--------|--------|--------|---------|
| 2.0480 | 20.000 | 24.000 | 25.000 | 27.000 | 40.0000 | 48.000 | 50.000 | 100.00 | 125.000 |
| | | | | | | | | | |
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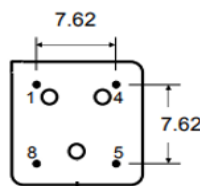
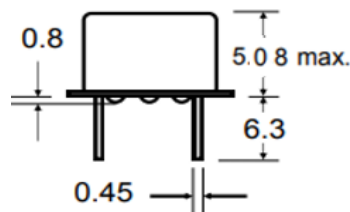
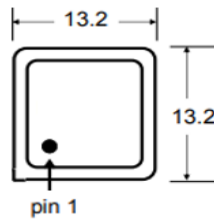
MHZ THRU-HOLE CRYSTAL OSCILLATOR CO8 SERIES

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

Image for reference



CO8



Marking 1

Line 1: TGS 30NM
Line 2: 20.480JL

or

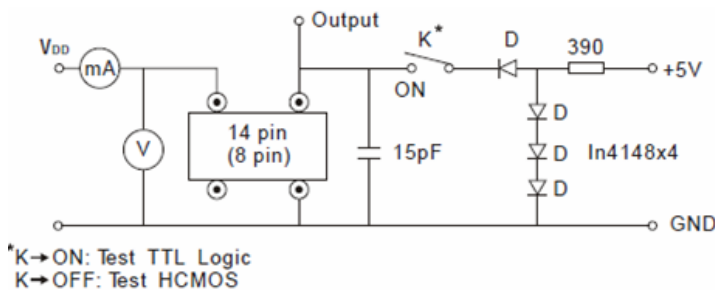
Marking 2

Line 1: TGS 30zM
Line 2: 20.480JL

Pin Function

- #1 Disable
- #4 Ground
- #5 Output
- #8 VDD

Circuit Principle



MHZ THRU-HOLE CRYSTAL OSCILLATOR CO8 SERIES

ELECTRICAL PARAMETERS

| Parameter | | Part No. Symbol | Units | Value | | | Condition |
|--|--------------------------------|-----------------|--|----------------------------|---------|---------------------|-----------------------|
| | | | | Min. | Typical | Max. | |
| Original Manufacturer | | TGS | TGS Crystals | | | | |
| Holder Type | | CO8 | MHZ Thru-Hole Crystal Oscillator, CO8 Series, L13.2*W13.2*H5.08mm, Half-Size/8 pin | | | | |
| Supply Voltage | | 3 | V | 3.3 | | +/-10% | |
| Enable/Disable -Tristate Function | | 0 | | Tristate function -Disable | | @ 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 | | H | % | 40 | | 60 | |
| Output | V OH | | V | 90% | | | High (Logic "1") |
| | V OL | | V | | | 10% | Low (Logic "0") |
| | Load | | pF | 15 | | | |
| Output Waveform | | 01 | | 1-10TTL | | | @OutputLoad 15pF |
| Startup Time | | | ms | | | 10 | |
| Supply Current | | | mA | | | 5 | |
| Rise/ Fall time | | | ns | | | 10 | |
| Phase Jitter | | | ps | | N/A | | |
| Aging | | | ppm/year | | | ±3 | @1 st year |
| Others | Package | L | Thru - Hole type, Packed in Tube, 40pcs/Tube | | | | |
| | RoHS Status | LF | RoHS III compliant | | | | |
| | Add Value | | N/A | | | | |
| | Internal Control Code * | | N/A | | | | |
| Frequency Range | | -20M480 | 20.4800MHz | | | | |

Note: 1) Original Part Number: **TGS CO830BGH01 BLF-20M480**

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

MHZ THRU-HOLE CRYSTAL OSCILLATOR CO8 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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