




SPECIFICATION SHEET

| | |
|--------------------------------|---|
| SPECIFICATION SHEET NO. | P1020 - YQ19M66080S420 |
| DATE | Oct.20, 2022 |
| REVISION | A0 |
| DESCRIPTION | MHz SMD Crystal, Plastic case, L12.5*W4.6*H3.7mm, 19.66080MHz, +/-30ppm, 20pF, Stability +/-50ppm @Operating Temp. Range -40°C ~+85°C, ESR 400Ω Max, Tape/Reel, 1000pcs/Reel , Reflow Profile Condition 260 °C Max. RoHS/RoHS III compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863) |
| CUSTOMER | |
| CUSTOMER PART NUMBER | |
| CROSS REF. PART NUMBER | |
| ORIGINAL PART NUMBER | TGS CCME 19M6608A30-20-50-40-40 TLH |
| PART CODE | YQ19M66080S420 |

| | | | |
|-------------------------|---|--|---|
| VENDOR APPROVE | | | |
| Issued/Checked/Approved |  |  |  |
| Date: Oct.20, 2022 | | | |

| | |
|-------------------------|--|
| CUSTOMER APPROVE | |
| | |
| Date: | |

10/20/2022

MHZ SMD CRYSTAL PLASTIC CASE CCME SERIES

MAIN FEATURE



- MHz SMD Crystal, Plastic case, Glass seal, L12.5*W4.6*H3.7mm
- Low cost, High precision, High frequency stability
- Reflow Profile Condition 260 °C Max.
- Cross more competitors part
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863)

APPLICATION

- Measurement Instrument
- Communication Electronics

PART CODE GUIDE

RFQ
Request For Quotation

| | | | |
|-----------|-----------------|----------|------------|
| YQ | 19M66080 | S | 420 |
| 1 | 2 | 3 | 4 |

- 1) YQ: Part family Code for SMD Crystal, Plastic case, L12.5*W4.6*H3.7mm, CCME series
- 2) 19M66080: Frequency range code for 19.660800MHz
- 3) S: SMD type, Package Tape/Reel, 1000pcs/Reel
- 4) 420: Specification code for original part no. **TGS CCME 19M6608A30-20-50-40-40 TLH**

MHZ SMD CRYSTAL PLASTIC CASE CCME SERIES

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

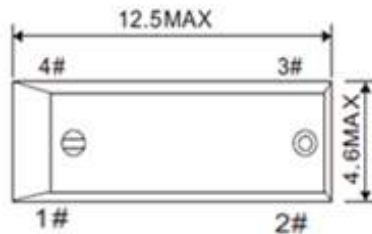
Image for reference



Note

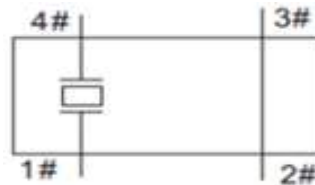
Metal (Crystal inside) may be exposed on the top or bottom of CCME's plastic case. That will not be affect performance and reliability of the part in question

CCME



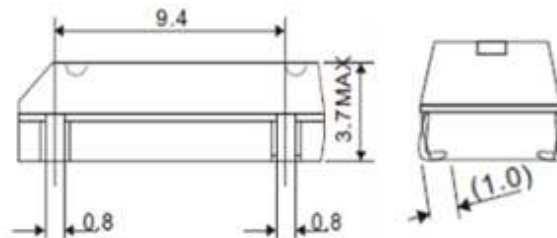
Marking

Frequency Range

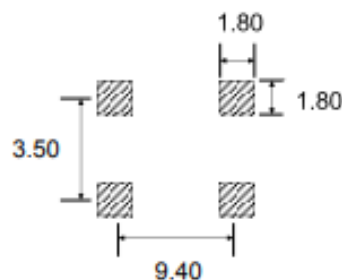


Connection

- 1# Crystal
- 2# Ground
- 3# Ground
- 4# Crystal



Recommend Pad Layout



MHZ SMD CRYSTAL PLASTIC CASE CCME SERIES
ELECTRICAL PARAMETERS

| Parameter | Part No. Symbol | Units | Value | | | Condition |
|--------------------------------------|-----------------|--|---|---------|------|-----------------------|
| | | | Min. | Typical | Max. | |
| Original Manufacturer | TGS | TGS Crystals | | | | |
| Holder Type | CCME | MHz SMD Crystal, Plastic case, L12.5*W4.6*H3.7mm | | | | |
| Frequency Range | 19M6608 | MHz | 19.66080 | | | |
| Mode of Oscillation | A | AT Fundamental | | | | |
| Frequency Tolerance | 30 | ppm | -30 | | +30 | @25°C |
| Load Capacitance | -20 | pF | 20 | | | |
| Stability over Operation Temperature | -50 | ppm | -50 | | +50 | |
| Operation Temperature | -40 | °C | -40 | | +85 | |
| Storage Temperature | | °C | -55 | | +125 | |
| Equivalent Series Resistance (ESR) | -40 | Ω | | | 40 | |
| Drive Level | | μW | | | 100 | |
| Shunt Capacitance (C0) | | pF | 0 | | 7.0 | |
| Motional Capacitance (C1) | | fF | N/A | | | |
| DLD2 | | Ω | N/A | | | |
| FLD2 | | ppm | N/A | | | |
| RDL2 | | Ω | N/A | | | |
| SPDB | | dB | N/A | | | |
| Aging | | ppm/year | | | ±5 | @1 st year |
| Insulation Resistance | | MΩ | 500 | | | @100VDC ± 15Vdc |
| Others | Package | T | Tape/Reel | | | |
| | RoHS Status | LH | RoHS III compliant, RoHS Annex III lead Exemption (exempt per RoHS EU 2015/863) | | | |
| | Add Value | | N/A | | | |
| | Code * | | N/A | | | |

 Note: 1) Original Part Number: **TGS CCME 19M6608A30-20-50-40-40 TLH**

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

MHZ SMD CRYSTAL PLASTIC CASE CCME SERIES

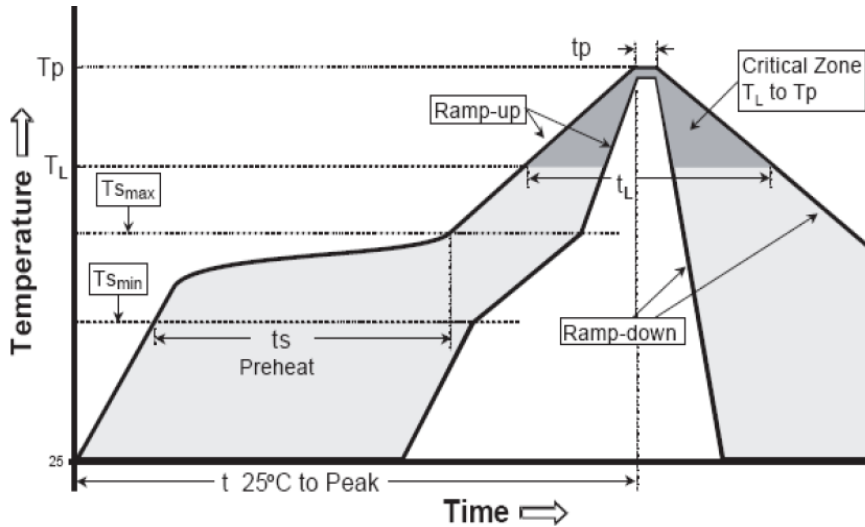
RELIABILITY

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

MHZ SMD CRYSTAL PLASTIC CASE CCME SERIES

SUGGESTED REFLOW PROFILE (For Reference Only)

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

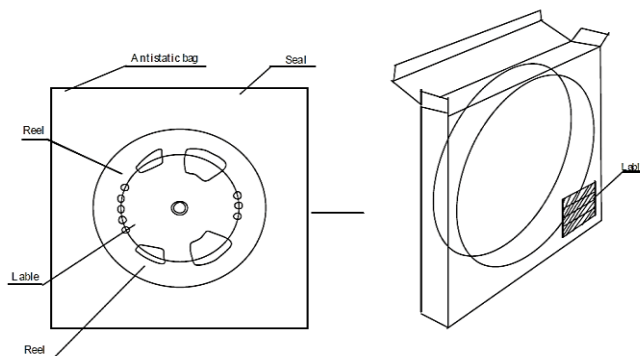
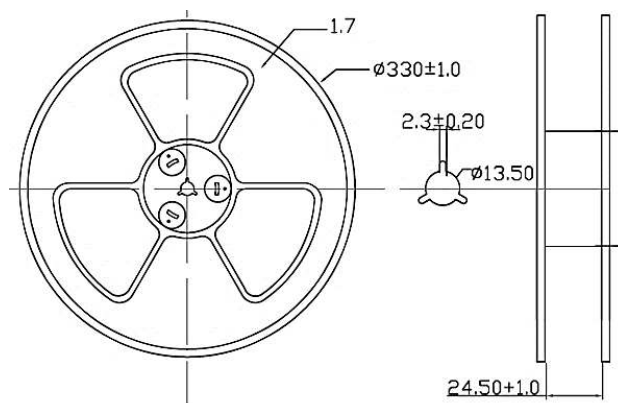
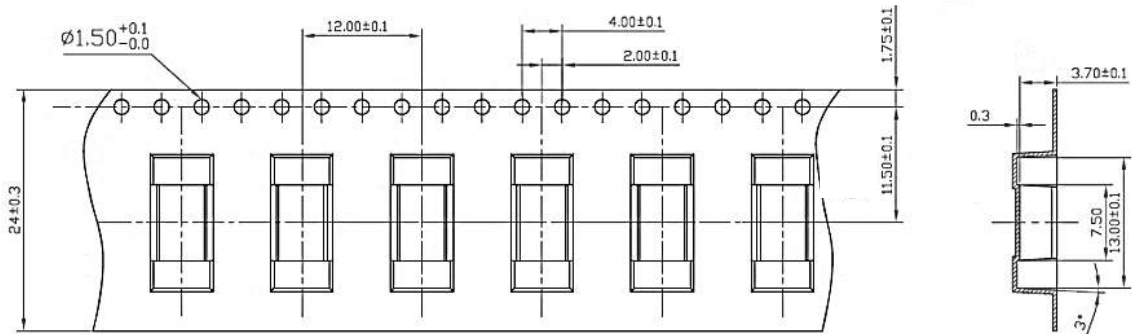


| | | |
|--|----------------------------------|-------------------|
| Profile Feature | | Pb-Free Assembly |
| Average Ramp-up Rate (Ts Max to Tp) | | 3°C/second Max |
| Preheat | Temperature Min (Ts Min.) | 125°C |
| | Temperature Max (Ts Max.) | 200°C |
| | Time (ts Min. to ts Max.) | 60 ~ 180 seconds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

MHZ SMD CRYSTAL PLASTIC CASE CCME SERIES

TAPE/REEL (Unit: mm)

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



DISCLAIMER

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10/20/2022