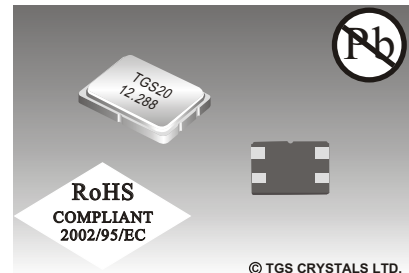


FEATURES

- Ultra Low Height ● 4 pads ● Tight Tolerance and Stability ● Lead Free available
- Dimension 7.0x5.0x1.2mm ● Tape & Reel ● Seam Weld Sealing

APPLICATIONS

- PCMCIA Applications ● Data Communications
- Telecommunications ● Automotive Electronics



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SPECIFICATION \*

| Parameters   | Product                         | Option Code      |
|--|---------------------------------|------------------|
|  | SMD0705                         | CM75             |
| Frequency Range:                                   | 8.000~70.0MHz                   | △ Specify        |
| Oscillation Mode:                                  | AT Fund. (8~20MHz)              | △ A              |
|  | BT Fund. (12~40MHz)             | △ B              |
|  | 3rd OT (40~70MHz)               | △ C              |
| Frequency Tolerance:                               | ± 10ppm                         | △ 10             |
|  | ± 20ppm                         | △ 20             |
|  | ± 30ppm                         | △ 30             |
|  | ± 50ppm                         | ▲ 50             |
|  | Other Values                    | △ Specify        |
| Load Capacitance:                                  | 12pF                            | △ 12             |
|  | 16pF                            | △ 16             |
|  | 18pF                            | △ 18             |
|  | 20pF                            | ▲ 20             |
|  | 30pF                            | △ 30             |
|  | Series Resonant<br>Other Values | △ S<br>△ Specify |
| Frequency Stability:                               | ± 10ppm                         | △ 10             |
|  | ± 20ppm                         | △ 20             |
|  | ± 30ppm                         | △ 30             |
|  | ± 50ppm                         | ▲ 50             |
|  | Other Values                    | △ Specify        |
| Operating Temp. Range:                             | 0℃~+50℃                         | △ 0              |
|  | -10℃~+60℃                       | ▲ 10             |
|  | -20℃~+70℃                       | △ 20             |
|  | -40℃~+85℃                       | △ 40             |
|  | Other Values                    | △ Specify        |
| Storage Temp. Range:                               | -40℃~+85℃                       | ▲                |
| Equivalent Series Resistance (ESR):<br>See Table 1 | △                               | Specify          |
| Drive Level:                                       | 100 uW Max.                     | ▲                |
| Shunt Capacitance (C 0):                           | 7.0 pF Max.                     | ▲                |
| Aging:   | ± 5ppm Max.                     | ▲                |
| Package:   | Tape/Reel                       | △ T              |
| Other Values:                                      | Lead Free                       | △ LF             |

▲ Standard \* Specifications Subject to Change Without Notice  
△ Optional: please specify required code when inquiring or ordering

PACKAGE

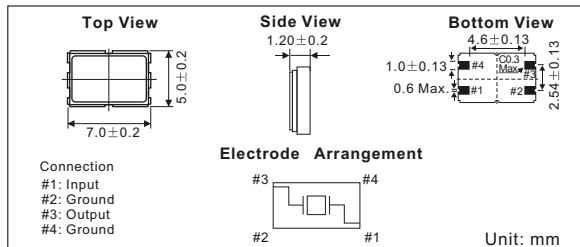
- Standard package in T/R: 1000pcs/Reel, 2Reel/ box, 5 box/carton
- See page 117 for detail dimensions

PARTNUMBER GUIDE

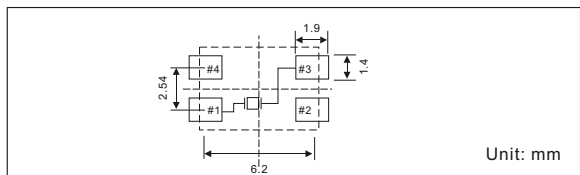
|      |                 |          |               |             |                  |                 |                  |                 |                       |      |         |
|------|-----------------|----------|---------------|-------------|------------------|-----------------|------------------|-----------------|-----------------------|------|---------|
| TGS  | C               | M        | 75            | 12M288      | A                | 50              | - 20             | - 50            | - 10                  | - 50 | - T     |
| Mark | Quartz Crystals | SMD Type | 7.0X5.0X1.2mm | Freq. Range | Oscillation Mode | Freq. Tolerance | Load Capacitance | Freq. Stability | Operating Temp. Range | ESR  | Package |

e.g. Full P/N.: TGS CM75 12M288A50-20-50-10-50T  
Short P/N.: CM75 12M288A20T (Others is standard Spec.)

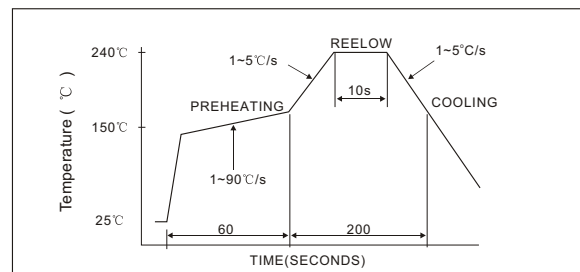
DIMENSIONS



RECOMMENDED SOLDER PAD LAYOUT



SOLDER REFLOW PROFILE



ESR VALUES

Table 1

| Frequency Range (MHz) | ESR Max (ohm) | Frequency Range (MHz) | ESR Max (ohm) |
|-----------------------|---------------|-----------------------|---------------|
| 8.0000 ~ 9.8000       | 80            | 13.000 ~ 19.999       | 40            |
| 9.8300 ~ 9.9990       | 60            | 20.000 ~ 23.999       | 40            |
| 10.000 ~ 12.999       | 50            | 24.0000 ~ 70.0000     | 100           |

