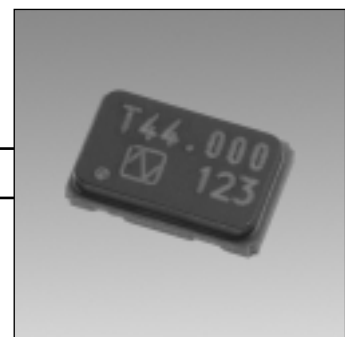


CRYSTAL CLOCK OSCILLATORS



2720T SERIES

■ Features

- Height compatible with slim IC package (TSSOP, TVSOP).
- Half the area and 1/3 the volume of 2500 Series package (7.0×5.0×1.7mm).
- Ultra light weight (0.05g).
- High precision Type ($\pm 30 \times 10^{-6}$ frequency stability).
- The best choice for video equipment miniaturization.
- Supply voltage 3.3V.
- Directly drives C-MOS IC.
- Frequency range : 2.5~70MHz.
- Current Consumption in stand-by state is 10 μ A or less.
- Embossed carrier tape and IR reflow are possible.

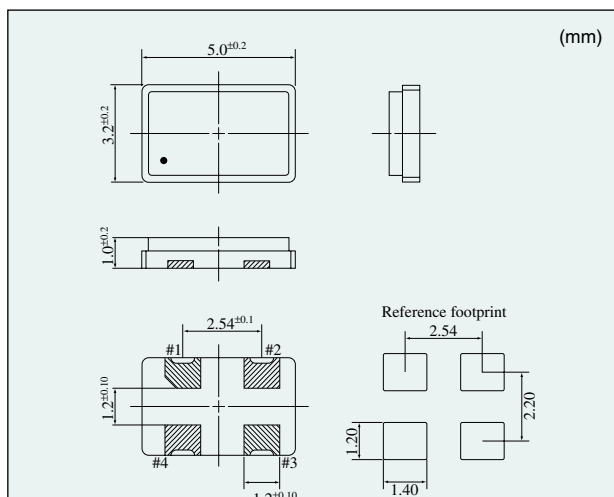
■ **Absolute Maximum Rating**
Supply Voltage (V_{DD}) -0.5~+7.0V DC
Storage Temperature Range -40~+85°C

| Item | | Model | 2720T | | |
|---|----------------------|-------|--|------------------|------------------|
| Output Level | | | C-MOS | | |
| Frequency Range | (MHz) | | 3.375 7.15909 | 3.579545 13.5 | 6.75 14.31818 |
| Frequency Stability | ($\times 10^{-6}$) | | ±30 | | |
| Operating Temp. Range | (°C) | | -10~+60 | | |
| Supply Voltage (V _{DD}) | (V) | | +3.3±0.3 | | |
| Current Consumption (+3.3V, at 25°C) | | | 8mA (max) | 15mA (max) | 22mA (max) |
| | stand-by | | 10 μ A (max) | | |
| V _{OL} max / V _{OH} min | (V) | | 0.1V _{DD} /0.9V _{DD} I _{OL} =4mA, I _{OH} =-4mA | | |
| Tr max/Tf max | (ns) | | 5/5 (0.1V _{DD} ~0.9V _{DD}) | | |
| Duty Cycle | (%) | | 45~55 (at 1/2V _{DD}) | | |
| Fanout (gate) | CL (pF) | | 15 | | |
| Stand-by Function | Tri-state | | Yes | | |

Note : For other frequency. please contact us.

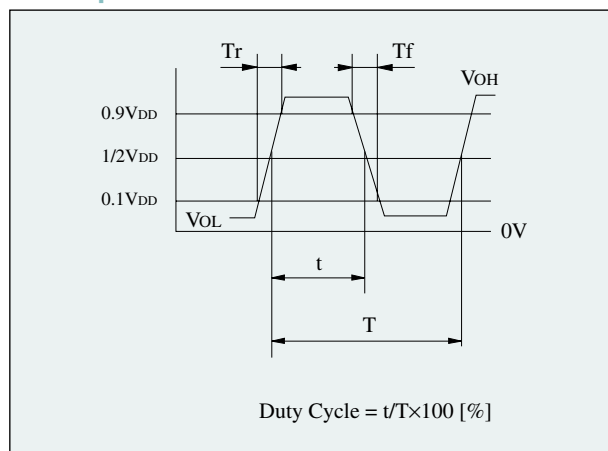
If requested, Operating Temp. Range -40 to + 85°C is available. Please contact us for detailed specifications.

■ 2720T Series Outline



| PAD No. | Connection |
|---------|-----------------|
| # 1 | STAND-BY |
| # 2 | GND |
| # 3 | OUTPUT |
| # 4 | V _{DD} |

■ Output Wave <C-MOS>



■ Stand-by Function <Tri-state>

| # 1 pin input | # 3 pin output |
|---|----------------|
| H level (+0.7 V _{DD} min) or open | Operating |
| L level (+0.3 V _{DD} max) | High impedance |

2720T SERIES

■ Features

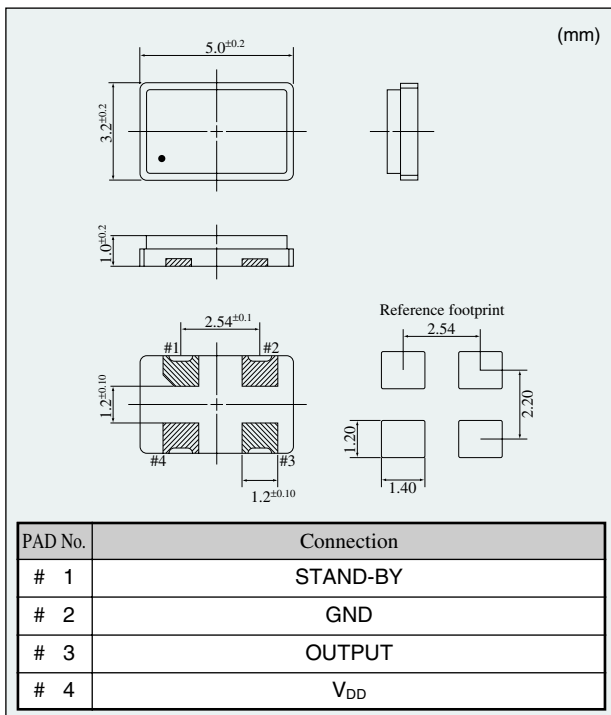
- Height compatible with slim IC package (TSSOP, TVSOP).
- Half the area and 1/3 the volume of 2500 Series package (7.0×5.0×1.7mm).
- Ultra light weight (0.05g).
- The best choice for portable PC, PDA and PC card.
- Supply voltage 3.3V.
- Directly drives C-MOS IC.
- Frequency range : 2.5~75MHz.
- Current Consumption in stand-by state is 10μA or less.
- Embossed carrier tape and IR reflow are possible.

■ Absolute Maximum Rating
Supply Voltage (V_{DD}) -0.5~+7.0V DC
Storage Temperature Range -40~+85°C

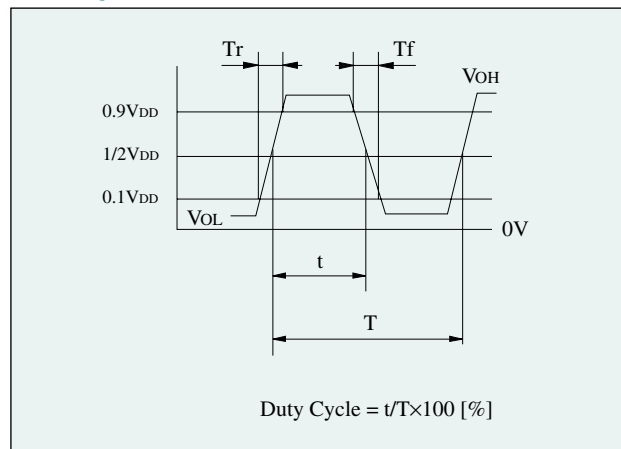
| Item | | Model | | | |
|--|---------------------------|--|------------|------------|------------|
| Output Level | | 2720T | | | |
| | | C-MOS | | | |
| Frequency Range | (MHz) | 2.5≤F<20 | 20≤F≤40 | 40<F<60 | 60≤F≤75 |
| Frequency Stability /Operating Temp. Range | (×10 ⁻⁶)/(°C) | ±100/-20~+70 (Standard Model), ±50/-10~+70 | | | |
| Supply Voltage (V _{DD}) | (V) | +3.3±0.3 | | | |
| Current Consumption (+3.3V, at 25°C) | | 8mA (max) | 15mA (max) | 22mA (max) | 25mA (max) |
| | stand-by | 10μA (max) | | | |
| V _{OL} max / V _{OH} min | (V) | 0.1V _{DD} /0.9V _{DD} I _{OL} =4mA, I _{OH} =-4mA | | | |
| Tr max/Tf max | (ns) | 5/5 (0.1V _{DD} ~0.9V _{DD}) | | | |
| Duty Cycle | (%) | 45~55 (at 1/2V _{DD}) | | | |
| Fanout (gate) | CL (pF) | 15 | | | |
| Stand-by Function | Tri-state | Yes | | | |

Note : If requested, Operating Temp. Range -40 to + 85°C is available. Please contact us for detailed specifications.

■ 2720T Series Outline



■ Output Wave <C-MOS>



■ Stand-by Function <Tri-state>

| # 1 pin input | # 3 pin output |
|---|----------------|
| H level (+0.7 V _{DD} min) or open | Operating |
| L level (+0.3 V _{DD} max) | High impedance |