

TX257A-D3-0.28-24.576-3-TR



ELECTRICAL SPECIFICATIONS

| PARAMETER | SYMBOL | CONDITION | VALUE | | | UNIT |
|--|--------------------------------|---|----------------|------|----------------|--------------------|
| | | | Min. | Typ. | Max. | |
| Nominal Frequency | f_0 | | 24.576 | | | MHz |
| Supply Voltage | V_{CC} | $T_a=25^{\circ}\text{C}$ | -5% | 3.3 | +5% | V |
| Supply Current | I | $T_a=25^{\circ}\text{C}$ | | | 6 | mA |
| Initial Frequency Calibration | $\Delta f/f_0$ | V_{CC} at 25°C | -1.0 | | +1.0 | ppm |
| Frequency Stability vs. Temperature | $\Delta f/f_0 (T_a)$ | Referenced at 25°C | -0.28 | | +0.28 | ppm |
| Frequency Stability vs. Supply Voltage | $\Delta f/f_0 (\Delta V_{CC})$ | $V_{CC} \pm 5\%$ | -0.2 | | +0.2 | ppm |
| Frequency Stability vs. Load Change | $\Delta f/f_0 (\Delta I)$ | $V_{CC} \pm 10\%$ | -0.2 | | +0.2 | ppm |
| Overall Stability | | All conditions including 20 years aging | -4.6 | | +4.6 | ppm |
| Aging, after 30 days of operation | $\Delta f/\Delta t_y$ | 1 day 1 year | -0.01 -1.00 | | +0.01 +1.00 | ppm |
| Operating Temperature | T_a | | -40 | | +85 | $^{\circ}\text{C}$ |
| Storage Temperature | $T_{(stg)}$ | Absolute max | -55 | | +125 | $^{\circ}\text{C}$ |

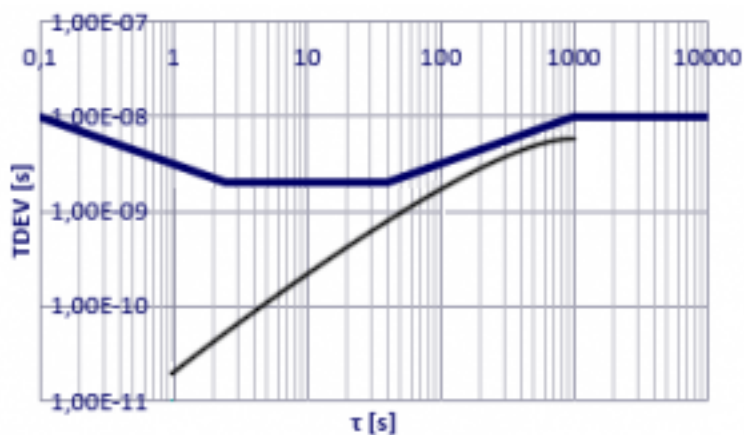
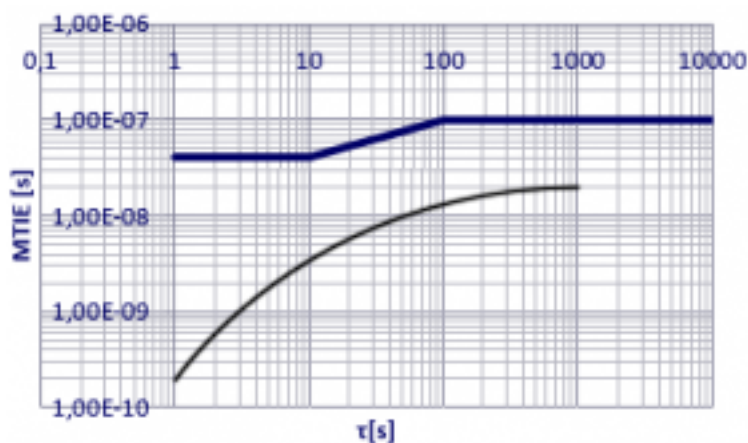
PHASE NOISE

| PARAMETER | SYMBOL | CONDITION | VALUE | | | UNIT |
|----------------|--------------------------|-----------|-------|------|------|--------|
| | | | Min. | Typ. | Max. | |
| @100 Hz Offset | $\mathcal{E} (\Delta f)$ | | | -120 | | dBc/Hz |
| @1 kHz Offset | $\mathcal{E} (\Delta f)$ | | | -142 | | dBc/Hz |
| @10 kHz Offset | $\mathcal{E} (\Delta f)$ | | | -152 | | dBc/Hz |

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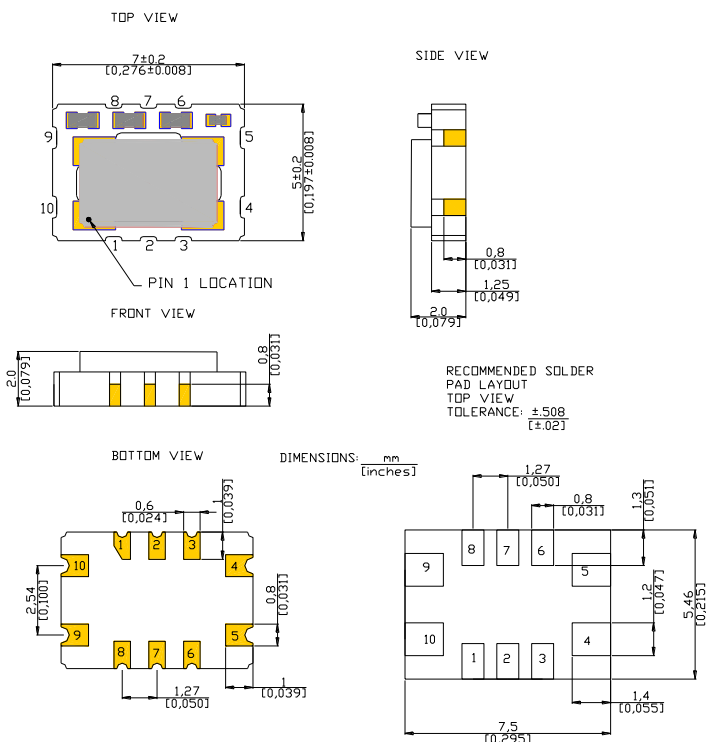
OUTPUT CHARACTERISTICS

| PARAMETER | SYMBOL | CONDITION | VALUE | | | UNIT |
|------------------|-----------|------------------------|--------------|----------------------------|--------------|------|
| | | | Min. | Typ. | Max. | |
| Output Levels | VOH/VOL | V_{CC} , load = 15pF | | 0.9 V_{CC} /0.1 V_{CC} | | V |
| Duty Cycle | DC | load = 15pF | 48 | | 52 | % |
| Rise/Fall Time | t_r/t_f | 10% ~ 90% V_{out} | | | 5 | ns |
| Enable / Disable | E/D | load = 15pF | 0.8 V_{CC} | | 0.2 V_{CC} | V |



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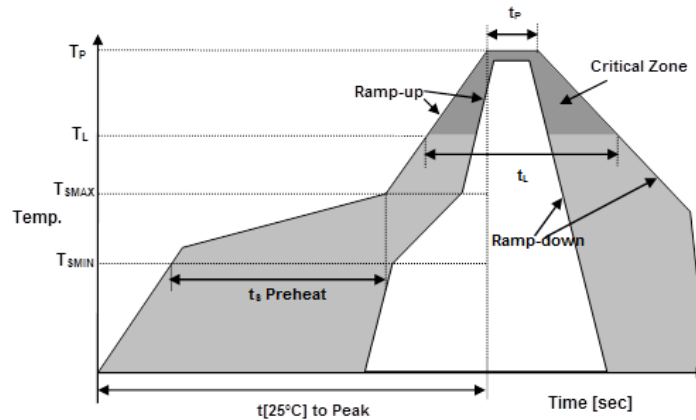
MECHANICAL DIMENSIONS AND PIN FUNCTIONING



| PIN | SYMBOL | FUNCTION |
|-----|-----------------|----------------------|
| 1 | N/C | No connect |
| 2 | N/C | No connect |
| 3 | N/C | No connect |
| 4 | GND | Ground |
| 5 | OUTPUT | Output |
| 6 | N/C | No connect |
| 7 | N/C | No connect |
| 8 | E/D | Enable/Disable |
| 9 | V _{CC} | Supply Voltage |
| 10 | N/C or GND | No connect or Ground |

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REFLOW PROFILE



Reflow profile IPC/JEDEC J-STD-020 REV. C

| Parameter | Symbol | Value |
|--|-------------------------------|--------------|
| Temperature Min Preheat | T_{SMIN} | 150°C |
| Temperature Max Preheat | T_{SMAX} | 200°C |
| Time (T_{SMIN} to T_{SMAX}) | t_s | 60-180 sec. |
| Temperature | T_L | 217°C |
| Peak Temperature | T_P | 260°C |
| Ramp-up rate | R_{UP} | 3°C/sec max. |
| Ramp-down rate | R_{DOWN} | 6°C/sec max. |
| Time within 5°C of Peak Temperature | t_p | 20-40 sec. |
| Time $t[25^\circ\text{C}]$ to Peak Temperature | $t[25^\circ\text{C}]$ to Peak | 480 sec. |
| Time | t_L | 60-150 sec. |

March, 2017