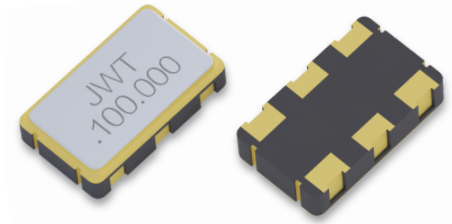




# 7.0x5.0 mm SMD Oscillator

## DYA Series



### Product Features

1. Output type : LVDS/LVPECL/HCSL
2. Excellent low phase noise and jitter
3. Tri-State function available

### Applications

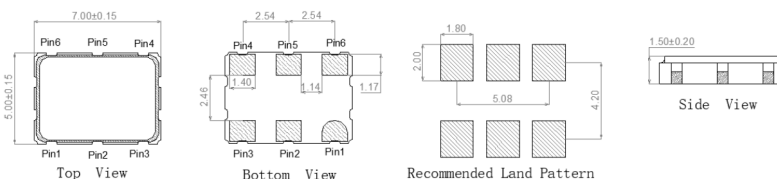
1. Telecom&Netcom (Optical communication/  
RF units/Switches/Servers/Base stations)
2. Automotive

### Specifications

| Model                                             |                | DYA7050                     |            |                  |            |                        |            |
|---------------------------------------------------|----------------|-----------------------------|------------|------------------|------------|------------------------|------------|
|                                                   |                | LVDS                        |            | LVPECL           |            | HCSL                   |            |
| Output type                                       |                | 1.71~1.89V/2.375~3.63V      |            | 2.97~3.63V       |            | 1.71~1.89V/2.375~3.63V |            |
|                                                   |                | Min                         | Max        | Min              | Max        | Min                    | Max        |
| Frequency range                                   |                | 20MHz~156.250MHz            |            | 20MHz~156.250MHz |            | 20MHz~156.250MHz       |            |
| Oscillation mode                                  |                | Fundamental or 3rd overtone |            |                  |            |                        |            |
| Frequency tolerance at 25°C±3°C                   |                | ±20ppm                      |            | ±20ppm           |            | ±20ppm                 |            |
| Operating temperature range                       |                | -40°C~125°C                 |            | -40°C~125°C      |            | -40°C~125°C            |            |
| Frequency stability over temperature(Ref.to 25°C) |                | ±30ppm                      |            | ±30ppm           |            | ±30ppm                 |            |
| Storage temperature range                         |                | -55°C~125°C                 |            | -55°C~125°C      |            | -55°C~125°C            |            |
| High-level output voltage                         |                | -                           | 1.6V       | VDD-1.025        | VDD-0.88   | 0.50V                  | 1.00V      |
| Low-level output voltage                          |                | 0.9V                        | -          | VDD-1.810        | VDD-1.62   | -0.15V                 | 0.15V      |
| Supply current                                    |                | -                           | 40mA       | -                | 60mA       | -                      | 40mA       |
| Rise time                                         |                | -                           | 0.4ns      | -                | 0.4ns      | -                      | 0.8ns      |
| Fall time                                         |                | -                           | 0.4ns      | -                | 0.4ns      | -                      | 0.8ns      |
| Duty cycle                                        |                | 40%                         | 60%        | 40%              | 60%        | 40%                    | 60%        |
| Start-up time                                     |                | -                           | 10ms       | -                | 10ms       | -                      | 10ms       |
| Output load                                       |                | 99Ω                         | 101Ω       | 49.5Ω            | 50.5Ω      | 49.5Ω                  | 50.5Ω      |
| Tri-State                                         | Output enable  | 70%VDD                      | -          | 70%VDD           | -          | 70%VDD                 | -          |
|                                                   | Output disable | -                           | 30%VDD     | -                | 30%VDD     | -                      | 30%VDD     |
| Oscillation enable time                           |                | -                           | 10ms       | -                | 10ms       | -                      | 10ms       |
| Oscillation disable time                          |                | -                           | 0.2us      | -                | 0.2us      | -                      | 0.2us      |
| RMS Phase Jitter (12KHz ~ 20MHz)                  |                | -                           | 0.5ps      | -                | 0.5ps      | -                      | 0.5ps      |
| Phase noise@156.25MHz                             | 100Hz          | -                           | -90dBc/Hz  | -                | -90dBc/Hz  | -                      | -90dBc/Hz  |
|                                                   | 1KHz           | -                           | -120dBc/Hz | -                | -120dBc/Hz | -                      | -120dBc/Hz |
|                                                   | 10KHz          | -                           | -140dBc/Hz | -                | -140dBc/Hz | -                      | -140dBc/Hz |
| Aging at first year                               |                | ±3.0ppm                     |            | ±3.0ppm          |            | ±3.0ppm                |            |

Notes: The above parameters are for normal demands, If you have any different demands, Please contact us.

### Dimensions (Unit: mm)



| Pin | Function |
|-----|----------|
| #1  | CE Or NC |
| #2  | NC       |
| #3  | GND      |
| #4  | OUT      |
| #5  | OUTN     |
| #6  | VDD      |