



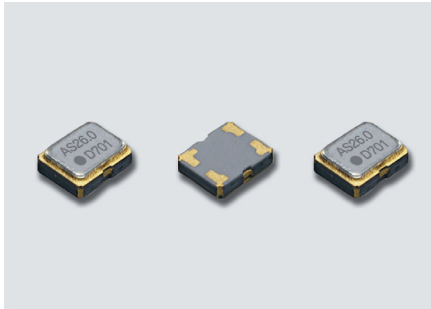
# Ark.h.2G



## High-precision SMD TCXO

Under Development

### DA2016AS/DB2016AS



Actual size

#### Features

- Supply Voltage : 1.8V/2.6V/2.8V/3.0V/3.3V
- Available Frequency range: 26MHz, 52MHz
- Clipped Sinewave
- Low phase noise
- Single package structure
- AEC-Q200 Compliant (Option: Equivalent to AEC-Q100)

#### Applications

- GPS/GNSS, Mobile devices, Satellite communication devices, industrial wireless communication devices, etc.



#### Standard Specification

| Item                 | Type | VC-TCXO<br>DA2016AS                                                                                                                                                                        | TCXO<br>DB2016AS                                                                                                                                            |
|----------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      |      |                                                                                                                                                                                            |                                                                                                                                                             |
| Standard Frequency   |      | 26MHz/52MHz                                                                                                                                                                                |                                                                                                                                                             |
| Supply Voltage Range |      | +1.68 to +3.5V                                                                                                                                                                             |                                                                                                                                                             |
| Supply Voltage       |      | +1.8V/+2.6V/+2.8V/+3.0V/+3.3V                                                                                                                                                              |                                                                                                                                                             |
| Current Consumption  |      | +1.5mA max. (26MHz) / +2.0mA max. (52MHz)                                                                                                                                                  |                                                                                                                                                             |
| Output Level         |      | 0.8Vp-p min. (Clipped Sinewave / DC-coupled)                                                                                                                                               |                                                                                                                                                             |
| Output Load          |      | 10kΩ/10pF                                                                                                                                                                                  |                                                                                                                                                             |
| Frequency Stability  |      | $\pm 1.5 \times 10^{-6}$ max. (After 2 reflows)                                                                                                                                            |                                                                                                                                                             |
| Tolerance            |      | $\pm 1.5 \times 10^{-6}$ max. (After 2 reflows)                                                                                                                                            |                                                                                                                                                             |
| vs. Temperature      |      | $\pm 1.0 \times 10^{-6}$ , $\pm 2.5 \times 10^{-6}$ max. / -30 to +85°C<br>$\pm 1.0 \times 10^{-6}$ , $\pm 2.5 \times 10^{-6}$ max. / -40 to +85°C (Option)                                | $\pm 0.5 \times 10^{-6}$ , $\pm 2.5 \times 10^{-6}$ max. / -30 to +85°C<br>$\pm 0.5 \times 10^{-6}$ , $\pm 2.5 \times 10^{-6}$ max. / -40 to +85°C (Option) |
| vs. Supply Voltage   |      | $\pm 0.2 \times 10^{-6}$ max. (Vcc $\pm 5\%$ )                                                                                                                                             |                                                                                                                                                             |
| vs. Load Variation   |      | $\pm 0.2 \times 10^{-6}$ max. (10kΩ/10pF $\pm 10\%$ )                                                                                                                                      |                                                                                                                                                             |
| vs. Aging            |      | $\pm 1.0 \times 10^{-6}$ max. /year                                                                                                                                                        |                                                                                                                                                             |
| Frequency Control    |      |                                                                                                                                                                                            |                                                                                                                                                             |
| Control Sensitivity  |      | $\pm 3.0 \times 10^{-6}$ , $\pm 5.0 \times 10^{-6}$ /Vcont=+1.4V $\pm 1.0$ V @Vcc $\geq +2.6$ V<br>$\pm 3.0 \times 10^{-6}$ , $\pm 5.0 \times 10^{-6}$ /Vcont=+0.9V $\pm 0.6$ V @Vcc=+1.8V | —                                                                                                                                                           |
| Response Slope       |      | Positiv                                                                                                                                                                                    | —                                                                                                                                                           |
| Start up Time        |      | 2.0ms max.                                                                                                                                                                                 |                                                                                                                                                             |
| Phase Noise          |      | [26MHz]                                                                                                                                                                                    | [52MHz]                                                                                                                                                     |
| Offset 100Hz         |      | -115dBc/Hz max.                                                                                                                                                                            | -105dBc/Hz max.                                                                                                                                             |
| Offset 1kHz          |      | -130dBc/Hz max.                                                                                                                                                                            | -125dBc/Hz max.                                                                                                                                             |
| Offset 10kHz         |      | -150dBc/Hz max.                                                                                                                                                                            | -145dBc/Hz max.                                                                                                                                             |
| Offset 100kHz        |      | -155dBc/Hz max.                                                                                                                                                                            | -150dBc/Hz max.                                                                                                                                             |
| Packing Unit(1)      |      | 3000pcs./reel ( $\phi 180$ )                                                                                                                                                               |                                                                                                                                                             |

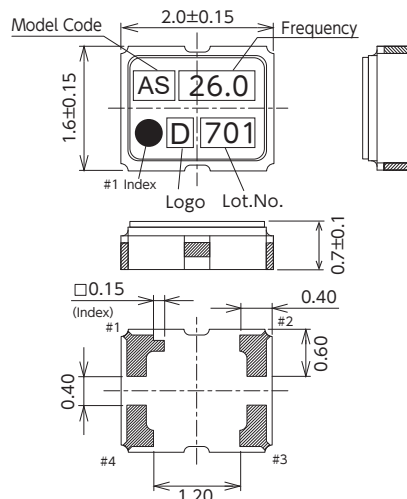
(1) Moisture prevention packing is unnecessary.

Moisture Sensitivity Level: Level1 (IPC/JEDEC J-STD-033)

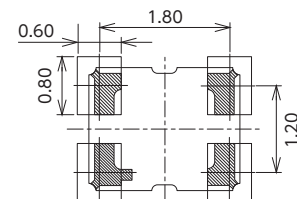
Consult our sales representative for other specifications

[mm]

#### Dimensions



#### Recommended Land Pattern (Top View)



Model Code  
DA2016AS : AS (VC-TCXO)  
DB2016AS : BS (TCXO)

#### Pin Connections

| Pin No. | Connection                     |
|---------|--------------------------------|
| #1      | Vcont (VC-TCXO)/<br>GND (TCXO) |
| #2      | GND                            |
| #3      | Output                         |
| #4      | Vcc                            |