

## General Description

The DSC612PI3A-010T is a two-output low power MEMS clock generator.

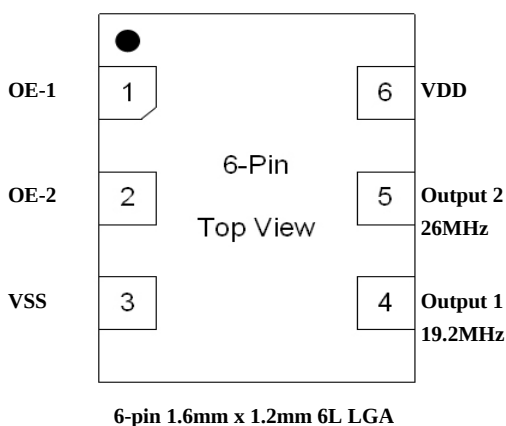
The MEMS based clock generator eliminates the need of external crystal or reference clock.

Refer to [DSC612 master data sheet](#) to read full descriptions.

## Features

- Two LVCMOS clock outputs: 19.2MHz, 26MHz
- Ultra-small package size: 1.6mm x 1.2mm 6L LGA
- High stability:  $\pm 20$ ppm
- Temperature range:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Low power consumption:  $\sim 5\text{mA}$  (both outputs active)
- Wide supply voltage range: 1.71V -3.63V VDD
- Excellent shock and vibration immunity
- High reliability
- Lead free and RoHS compliant
- AEC-Q100 automotive grade available

## Pin Configuration and Description



| Pin Number | Pin Name | Pin Type | Pin Description                                                            |
|------------|----------|----------|----------------------------------------------------------------------------|
| 1          | OE-1     | I        | Output Enable<br>H = Output Active<br>L = Output Disabled (High Impedance) |
| 2          | OE-2     | I        | Output Enable<br>H = Output Active<br>L = Output Disabled (High Impedance) |
| 3          | VSS      | Power    | Power Supply Ground                                                        |
| 4          | Output 1 | O        | 19.2MHz LVCMOS Clock Output<br>Controlled by Pin 1 (OE-1)                  |
| 5          | Output 2 | O        | 26MHz LVCMOS Clock Output<br>Controlled by Pin 2 (OE-2)                    |
| 6          | VDD      | Power    | Power Supply                                                               |

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November 15, 2018  
7105

Revision 1.0  
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## Ordering Information

| Ordering Part Number | Temperature Range | High Stability | Shipping      | Package              |
|----------------------|-------------------|----------------|---------------|----------------------|
| DSC612PI3A-010T      | -40°C to +85°C    | ±20ppm         | Bag           | 1.6mm x 1.2mm 6L LGA |
| DSC612PI3A-010TT     | -40°C to +85°C    | ±20ppm         | Tape and Reel | 1.6mm x 1.2mm 6L LGA |

Devices are Green and RoHS compliant. Sample material may have only a partial top mark.

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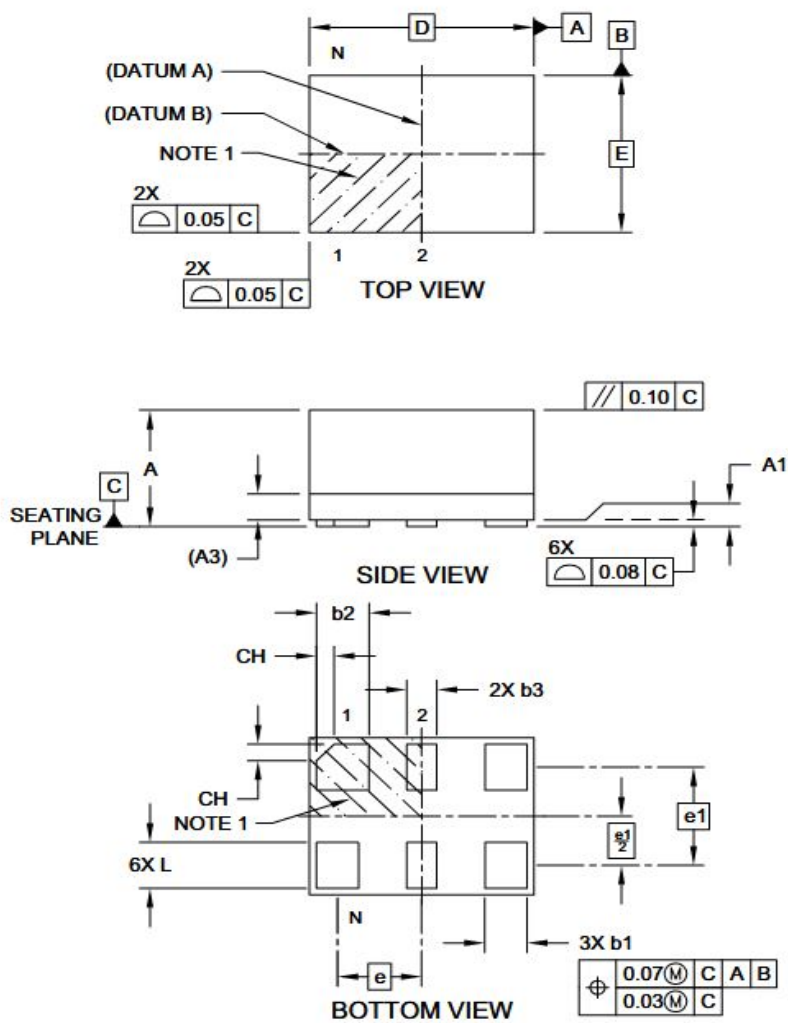
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### 6-Lead 1.6 mm x 1.2 mm VFLGA Package Outline and Recommended Land Pattern

#### 6-Lead Very Thin Fine Pitch Land Grid Array (AVA) - 1.6x1.2 mm Body [VFLGA]

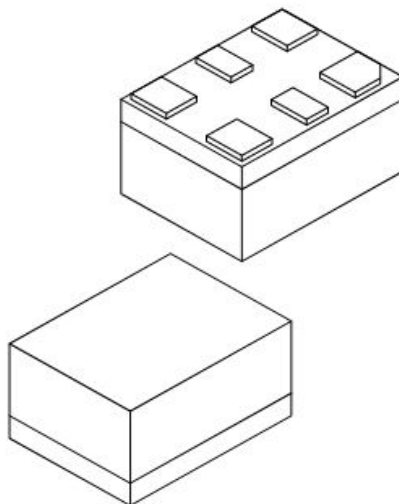
**Note:** For the most current package drawings, please see the Microchip Packaging Specification located at <http://www.microchip.com/packaging>



Microchip Technology Drawing C04-1203A Sheet 1 of 2

**6-Lead Very Thin Fine Pitch Land Grid Array (AVA) - 1.6x1.2 mm Body [VFLGA]**

**Note:** For the most current package drawings, please see the Microchip Packaging Specification located at <http://www.microchip.com/packaging>



| Dimension Limits                     | Units | MILLIMETERS |       |       |
|--------------------------------------|-------|-------------|-------|-------|
|                                      |       | MIN         | NOM   | MAX   |
| Number of Terminals                  | N     | 6           |       |       |
| Terminal Pitch                       | e     | 0.60 BSC    |       |       |
| Terminal Pitch                       | e1    | 0.75 BSC    |       |       |
| Overall Height                       | A     | 0.79        | 0.84  | 0.89  |
| Standoff                             | A1    | 0.00        | 0.02  | 0.05  |
| Substrate Thickness (with Terminals) | A3    | 0.20 REF    |       |       |
| Overall Length                       | D     | 1.60 BSC    |       |       |
| Overall Width                        | E     | 1.20 BSC    |       |       |
| Terminal Width                       | b1    | 0.25        | 0.30  | 0.35  |
| Terminal Width                       | b2    | 0.325       | 0.375 | 0.425 |
| Terminal Width                       | b3    | 0.20        | 0.25  | 0.30  |
| Terminal Length                      | L     | 0.30        | 0.35  | 0.40  |
| Terminal 1 Index Chamfer             | CH    | -           | 0.125 | -     |

**Notes:**

1. Pin 1 visual index feature may vary, but must be located within the hatched area.
2. Package is saw singulated
3. Dimensioning and tolerancing per ASME Y14.5M

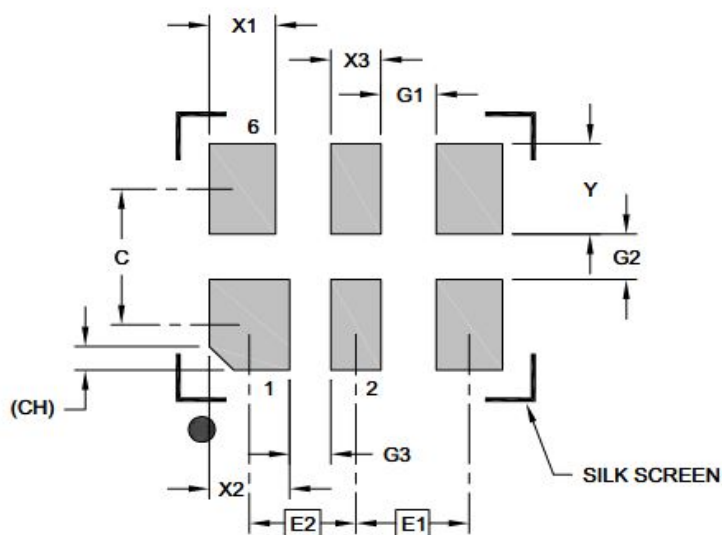
BSC: Basic Dimension. Theoretically exact value shown without tolerances.

REF: Reference Dimension, usually without tolerance, for information purposes only.

Microchip Technology Drawing C04-1203A Sheet 2 of 2

**6-Lead Very Thin Fine Pitch Land Grid Array (AVA) - 1.6x1.2 mm Body [VFLGA]**

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**RECOMMENDED LAND PATTERN**

| Dimension Limits            | Units | MILLIMETERS    |          |      |
|-----------------------------|-------|----------------|----------|------|
|                             |       | MIN            | NOM      | MAX  |
| Contact Pitch (X3)          | E1    |                | 0.60 BSC |      |
| Contact Pitch               | E2    |                | 0.56 BSC |      |
| Contact Spacing             | C     |                | 0.75     |      |
| Contact Width (X3)          | X1    |                |          | 0.35 |
| Contact Width               | X2    |                |          | 0.43 |
| Contact Width (X2)          | X3    |                |          | 0.27 |
| Contact Pad Length (X6)     | Y     |                |          | 0.50 |
| Space Between Contacts (X4) | G1    | 0.29           |          |      |
| Space Between Contacts (X3) | G2    | 0.25           |          |      |
| Space Between Contacts      | G3    | 0.22           |          |      |
| Contact 1 Index Chamfer     | CH    | 0.13 X 45° REF |          |      |

**Notes:**

1. Dimensioning and tolerancing per ASME Y14.5M

BSC: Basic Dimension. Theoretically exact value shown without tolerances.

Microchip Technology Drawing C04-3203A