DSC612NI3A-010G

Two-Output Low Power MEMS Clock Generator

General Description

The DSC612NI3A-010G is a two-output low power MEMS clock generator.

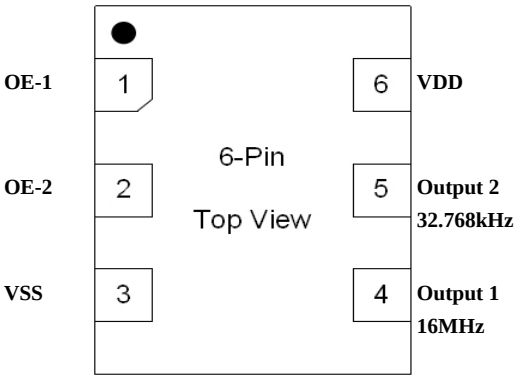
The MEMS based clock generator eliminates the need of external crystal or reference clock.

Refer to DSC612 master data sheet to read full descriptions.

Features

- Two LVCMOS clock outputs: 16MHz, 32.768kHz
- Ultra-small package size: 2.0mm x 1.6mm 6L LGA
- High stability: ±20ppm
- Temperature range: -40°C to +85°C
- Low power consumption: ~5mA (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



6-pin 2.0mm x 1.6mm 6L LGA

Pin Number	Pin Name	Pin Type	Pin Description
1	OE-1	I	Output Enable H = Output Active L = Output Disabled (High Impedance)
2	OE-2	I	Output Enable H = Output Active L = Output Disabled (High Impedance)
3	VSS	Power	Power Supply Ground
4	Output 1	O	16MHz LVCMOS Clock Output Controlled by Pin 1 (OE-1)
5	Output 2	O	32.768kHz LVCMOS Clock Output Controlled by Pin 2 (OE-2)
6	VDD	Power	Power Supply

Ordering Information

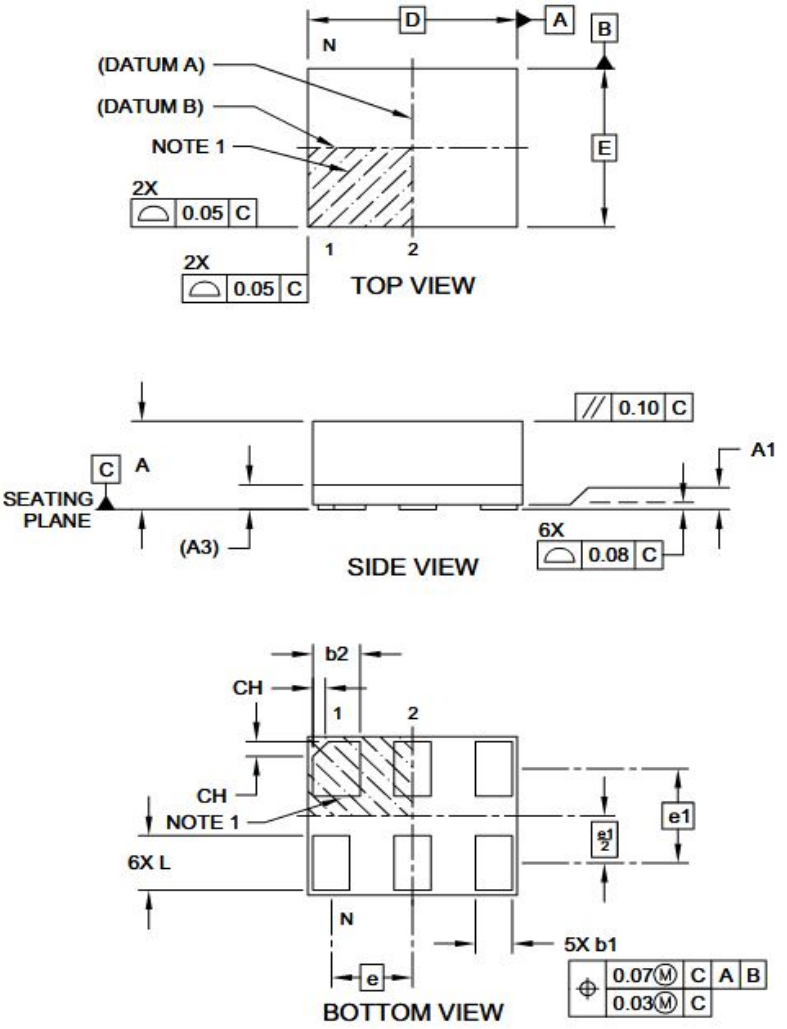
Ordering Part Number	Temperature Range	High Stability	Shipping	Package
DSC612NI3A-010G	-40°C to +85°C	±20ppm	Bag	2.0mm x 1.6mm 6L LGA
DSC612NI3A-010GT	-40°C to +85°C	±20ppm	Tape and Reel	2.0mm x 1.6mm 6L LGA

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

6-Lead 2.0 mm x 1.6 mm VFLGA Package Outline and Recommended Land Pattern

6-Lead Very Thin Fine Pitch Land Grid Array (ATA) - 2.0x1.6 mm Body [VFLGA]

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



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6-Lead Very Thin Fine Pitch Land Grid Array (ATA) - 2.0x1.6 mm Body [VFLGA]

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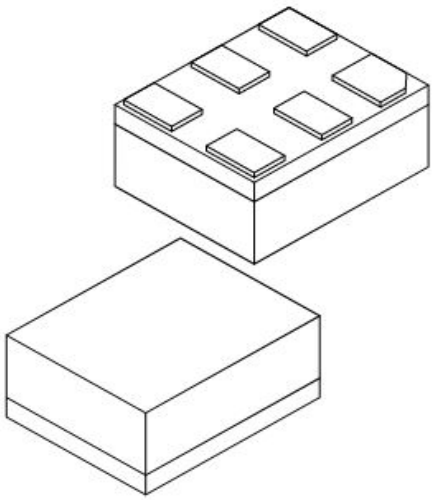

Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Number of Terminals	N		6	
Terminal Pitch	e		0.775 BSC	
Terminal Pitch	e1		0.95 BSC	
Overall Height	A	0.79	0.84	0.89
Standoff	A1	0.00	0.02	0.05
Substrate Thickness (with Terminals)	A3		0.20 REF	
Overall Length	D		2.00 BSC	
Overall Width	E		1.60 BSC	
Terminal Width	b1	0.30	0.35	0.40
Terminal Width	b2	0.40	0.45	0.50
Terminal Length	L	0.50	0.55	0.60
Terminal 1 Index Chamfer	CH	-	0.15	-

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.

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6-Lead Very Thin Fine Pitch Land Grid Array (ATA) - 2.0x1.6 mm Body [VFLGA]

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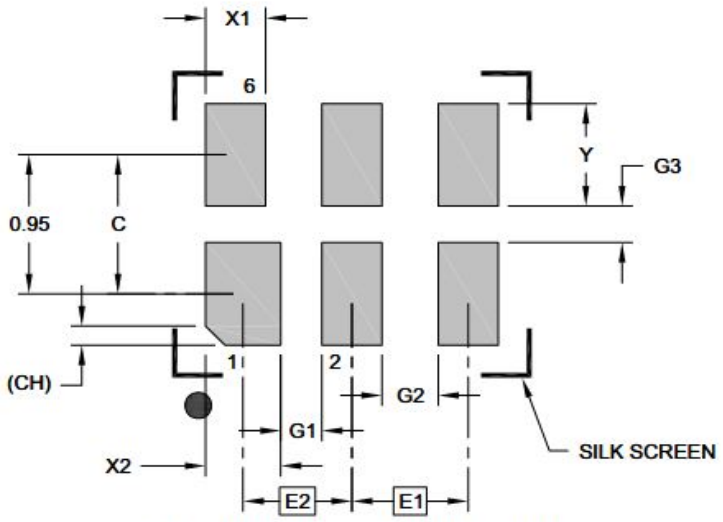

RECOMMENDED LAND PATTERN

Units		MILLIMETERS		
Dimension Limits		MIN	NOM	MAX
Contact Pitch	E1		0.78 BSC	
Contact Pitch	E2		0.73 BSC	
Contact Spacing	C		0.95	
Contact Width (X4)	X1			0.40
Contact Width (X2)	X2			0.45
Contact Pad Length (X6)	Y			0.70
Space Between Contacts (X4)	G1	0.28		
Space Between Contacts (X3)	G2	0.38		
Space Between Contacts (X3)	G3	0.25		
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 C04-3201A