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Integrated Device Technology (IDT)
IDT4MA100000Z3AACUGI8

For any questions, you can email us directly: sales@integrated-circuit.com





100.00 MHz LVPECL Oscillator

4MA100000Z3

High Performance Differential MEMS Oscillator

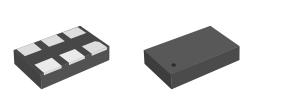
DATASHEET

Features

Frequency: 100.00 MHz
 Output Type: LVPECL
 Frequency Stability: ± 50ppm
 Supply Voltage: 2.5V & 3.3V

Standard Packages: 5.0 x 3.2 mm; 7.0 x 5.0 mm
 RMS phase jitter: 0.6ps typical (12k to 20MHz)

Operating Temperature: - 40 to 85 °C

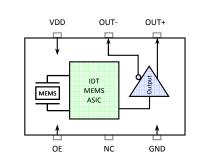


 7.0×5.0 mm package shown (also available in 5.0×3.2 mm pkg)

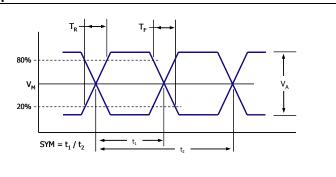
Specification

Parameter	2.5 V Specifications			3.3 V Specifications			Units	Conditions
	Min	Тур	Max	Min	Тур	Max		
Supply Voltage (V _{DD})	2.375	2.50	2.625	2.97	3.30	3.63	V	
Output Frequency		100.00			100.00		MHz	
Frequency Stability	- 50		+ 50	- 50		+ 50	ppm	Includes supply voltage and temperature variation (-40 to 85°C), reflow drift, and aging.
Supply Current		95			100		mA	No load
Enable/Disable Time			1			1	us	Guaranteed by design
Input LOW level			$0.3V_{DD}$			$0.3V_{DD}$	V	At OE pin
Input HIGH level	0. 7V _{DD}			0. 7V _{DD}			٧	At OE pin
Output LOW level		0.8	V _{DD} -1.8		1.5	VDD -1.8	٧	
Output HIGH level	VDD -1.0	1.6		VDD -1.1	2.3		V	
Amplitude (V _A)		0.75			0.75		٧	Single Ended output swing (Pk-Pk)
Mid Level (V _M)		V _{DD} -1.3			V _{DD} -1.3		٧	
Rise Time (T _R)		220	260		200	240	ps	Maximum; 20/80% of V_A ; Output load (CL) = 2pF; Guaranteed by Char.
Fall Time (T _F)		220	260		200	240	ps	Maximum; 20/80% of V _A ; Output load (CL) = 2pF; Guaranteed by Char.
Symmetry (SYM)	48	50	52	48	50	52	%	Worst case; measured at 50% of waveform
Phase Jitter		0.9			0.6		ps	12k to 20MHz, RMS; Measured Differentially
Period Jitter		2.6			2.4		ps	RMS
Cycle-to-Cycle Jitter		20			18		ps	1,000 cycles, Peak
Start-up Time		10			10		ms	Output valid time after power up, 25°C
Aging		± 5			± 5		ppm	25°C, 10 years

Block Diagram

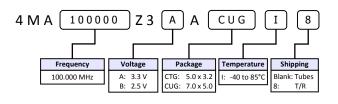


Output Waveform



Part Ordering Information

<u> </u>						
Package Size	Voltage	Ordering Code				
7.0 x 5.0 mm	3.3 V	4MA100000Z3AACUGI				
	2.5 V	4MA100000Z3BACUGI				
5.0 x 3.2 mm	3.3 V	4MA100000Z3AACTGI				
	2.5 V	4MA100000Z3BACTGI				
Factory minimum order quantity: 500pcs (T/R)						



Distributor of Integrated Device Technology (IDT): Excellent Integrated System Limited

Datasheet of IDT4MA100000Z3AACUGI8 - OSC MEMS 100.000MHZ LVPECL SMD Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

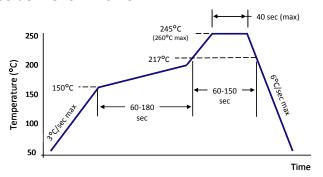
4MA100000Z3 Datasheet

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Pin Description

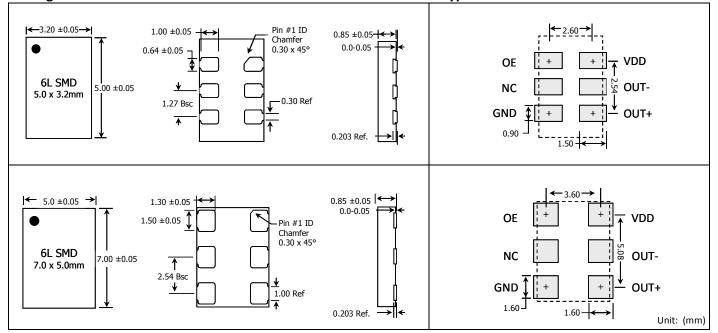
Pin #	Name	Description			
1	OE	Output Enable*			
2	NC	No Connect			
3	GND	Ground			
4	OUT+	Output			
5	OUT-	Complementary Output			
6	VDD	Power Supply Voltage			
* Pulled high internally					

Solder Reflow Profile



Package Outline and Dimensions

Typical PCB Land Pattern





Sales

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