

## **Excellent Integrated System Limited**

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Microchip Technology](#)  
[MX555ABD100M000](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



## MX555ABD100M000

### Ultra-low Jitter 100MHz HCSL XO

#### ClockWorks™ FUSION

### General Description

The MX555ABD100M000 is an ultra-low phase jitter XO with HCSL output optimized for high line rate applications.

### Applications

- PCI-Express
- Storage

### Absolute Maximum Ratings

Supply Voltage (VIN).....	+3.6V
Lead Temperature (soldering, 10s).....	260°C
Storage Temperature (T <sub>s</sub> ).....	125°C
ESD Rating (HBM).....	2kV

### Electrical Characteristics

VDD = 2.5V ±5% or 3.3V ±10%, -40°C to +85°C, outputs terminated with 50 Ohms to VSS.<sup>1</sup>

Symbol	Parameter	Condition	Min.	Typ.	Max.	Units
IDD	Supply Current				95	mA
F0	Center Frequency			100		MHz
	Frequency Stability	Note 2			±50	ppm
∅j	Phase Noise	Integration Range (12kHz to 20MHz) Integration Range (1.875MHz to 20MHz)		220 100		fsRMS
Tstart	Start-Up Time				20	ms
TR/TF	Rise/Fall time		300			ps
	Duty Cycle		45		55	%
VOH	Output High Voltage	HCSL output levels	640	700	850	mV
VOL	Output Low Voltage	HCSL output levels	-150	0		mV
VOVS	Max Output Including Overshoot				VOH + 0.3	V
VUDS	Min Output Including Undershoot		VOL - 0.3			V
VRB	Ringback Voltage		0.2			V
VOX	Absolute Crossing Point		250	450	550	mV
Vswing	Peak to Peak Output Voltage Swing		640	700	950	mV

#### Notes:

1. Guaranteed after thermal equilibrium.
2. Inclusive of initial accuracy, temperature drift, aging, shock, vibration from -40°C to +85°C.

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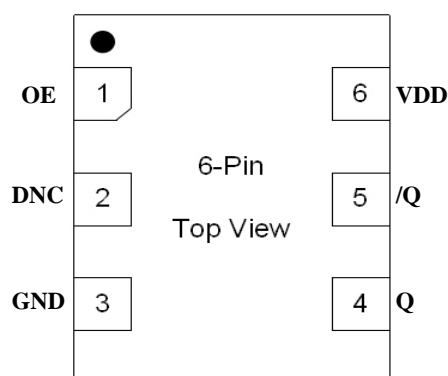
Micrel Inc. • 2180 Fortune Drive • San Jose, CA 95131 • USA • tel +1 (408) 944-0800 • fax + 1 (408) 474-1000 • <http://www.micrel.com>

## Ordering Information

Ordering Part Number	Marking Line 1	Marking Line 3	Shipping	Package
MX555ABD100M000	MX555A	BD1000	Tube	6-Pin 5mm x 3.2mm LGA
MX555ABD100M000 TR	MX555A	BD1000	Tape and Reel	6-Pin 5mm x 3.2mm LGA

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

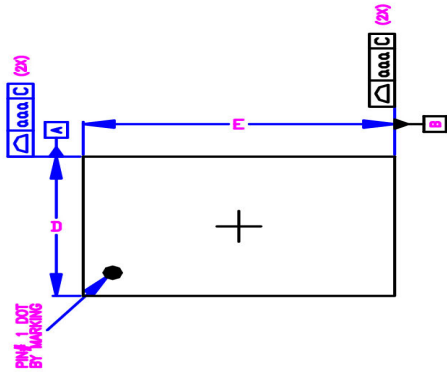
## Pin Configuration



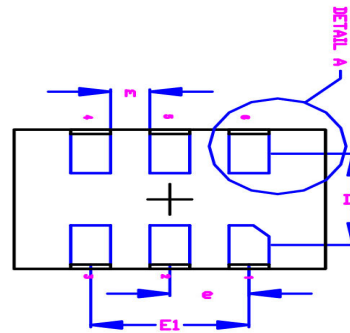
## Pin Description

Pin Number	Pin Name	Pin Type	Pin Level	Pin Function
1	OE	I, SE	LVC MOS	Output Enable, disables output to tri-state, 0 = Disabled, 1 = Enabled, 50k Ohms Pull-Up
2	DNC			Make no connection, leave floating.
3	GND	PWR		Power Supply Ground
4, 5	Q, /Q	O, Diff	HCSL	Clock Output Frequency = 100MHz
6	VDD	PWR		Power Supply

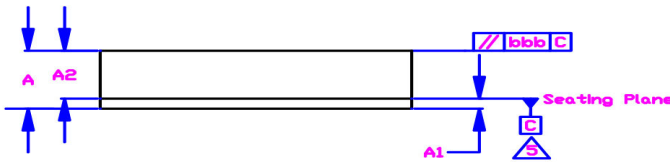
### Package Information and Recommended Land Pattern for 6-Pin LGA<sup>3</sup>



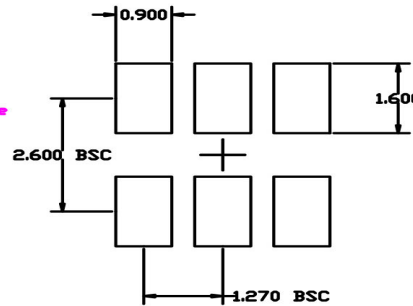
TOP VIEW



BOTTOM VIEW

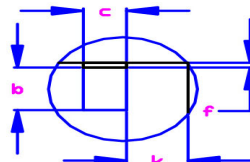


SIDE VIEW



RECOMMENDED LAND PATTERN

Dimensional Tol.			
aaa			0.10
bbb			0.17
Dimensional Ref.			
REF.	Min.	Nom.	Max.
A	1.26	1.33	1.41
A1	1.19	1.23	1.27
A2	1.17	1.11	1.13
D	3.11	3.21	3.31
D1		2.11 BSC	
E	4.91	5.11	5.11
E1		2.54 BSC	
b	0.85	0.91	0.95
c	0.85	0.91	0.95
e		1.27 BSC	
f	0.85	1.11	1.15
k	0.86	0.91	0.96
m	1.58	1.63	1.68
n		6	



DETAIL A  
SCALE 5:1

- Notes
1. Dimensioning and Tolerancing per ASME Y14.5M-1994.
  2. Dimensions are in millimeters.
  3. 'e' represents the basic LGA pitch
  4. 'n' is the maximum no. of Land for a specified Package.
  5. Package warp shall be 0.050 max.
  6. Substrate base is BT Resin
  7. The Pin#1 corner must be identified on top side only.
  8. Reference Jedec Spec M0-220

6-Pin LGA (5x3.2mm)

Note:

3. Package information is correct as of the publication date. For updates and most current information, go to [www.micrel.com](http://www.micrel.com).

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