



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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).....+4.6V
 Lead Temperature (soldering, 10s).....260°C
 Storage Temperature (T_s).....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.¹

Symbol	Parameter	Condition	Min.	Typ.	Max.	Units
IDD	Supply Current				95	mA
F0	Center Frequency			100		MHz
	Frequency Stability	Note 2			±50	ppm
Øj	Phase Noise	Integration Range (12kHz to 20MHz) Integration Range (1.875MHz to 20MHz)		166 97		fsRMS
Tstart	Start-Up Time				10	ms
TR/TF	Rise/Fall time	20%-80%	150	300	450	ps
	Duty Cycle		48	50	52	%
VOH	Output High Voltage	HCSL output levels	660	700	850	mV
VOL	Output Low Voltage	HCSL output levels	-150	0	27	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	350	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.

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 MX555AB1-1510

Revision 1.0
tcghelp@microchip.com

Features

- 100MHz HCSL
- PCIe Gen1/Gen2/Gen3/Gen4* compliant
- Typical phase noise:
 - 97fs (Integration range: 1.875MHz-20MHz)
- ±50ppm total frequency stability
- -40°C to +85°C temperature range
- Industry standard 6-Pin 5mm x 3.2mm LGA package

*Internal test

Operating Ratings

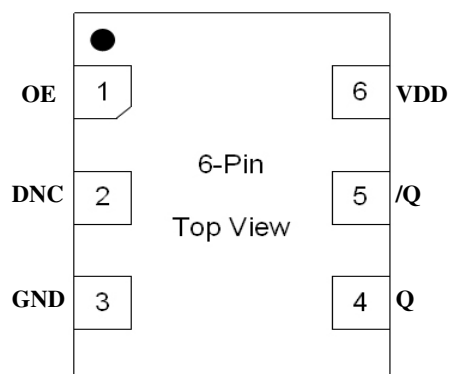
Supply Voltage (VIN).....+2.375V to +3.63V
 Ambient Temperature (TA).....-40°C to +85°C

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

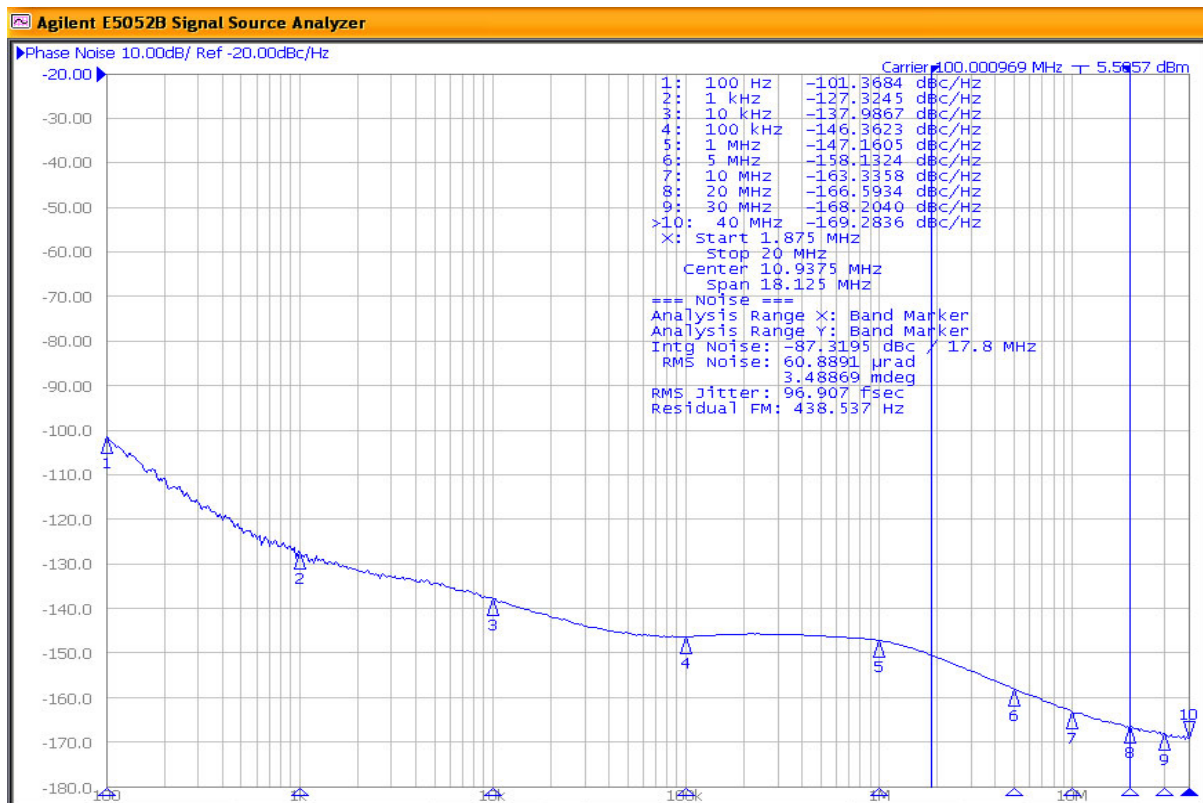


Figure 1. HCSL Output 100MHz 1.875MHz-20MHz 97fs

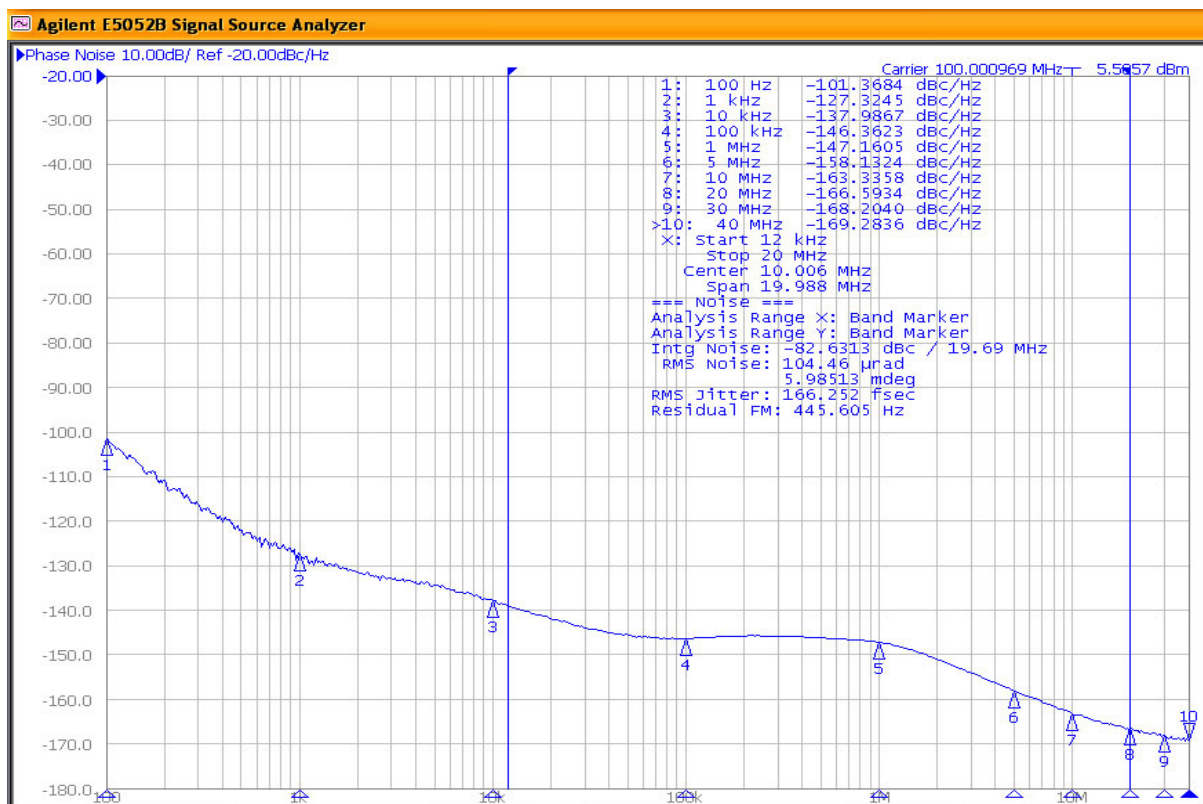
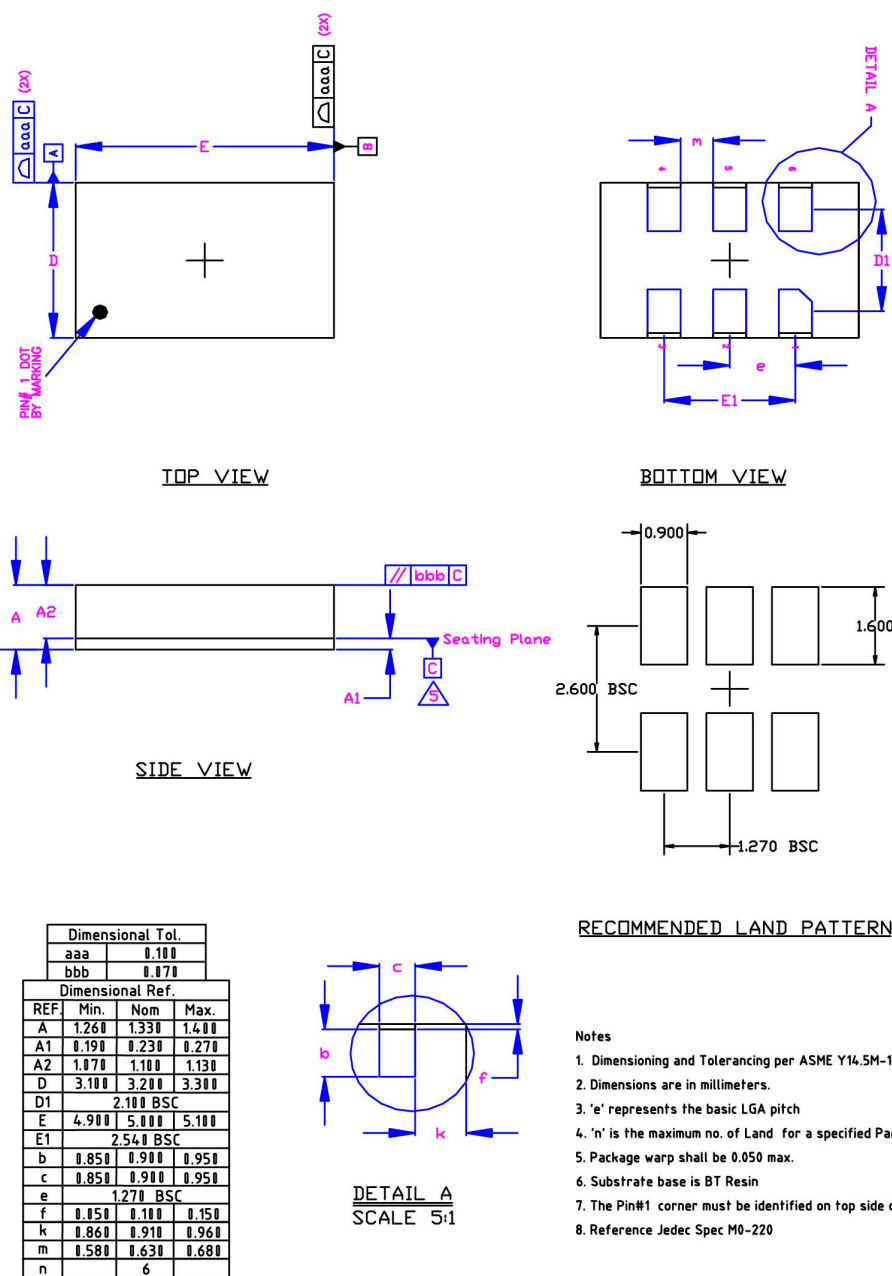


Figure 2. HCSL Output 100MHz 12kHz-20MHz 166fs

Package Information and Recommended Land Pattern for 6-Pin LGA³



Note:

3. Package information is correct as of the publication date. For updates and most current information, go to www.microchip.com.

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