



# BSM32xHP SERIES

## HIGH PRECISION HCMOS CLOCK OSCILLATORS



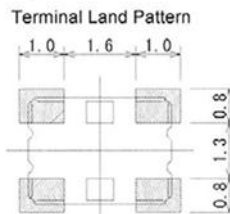
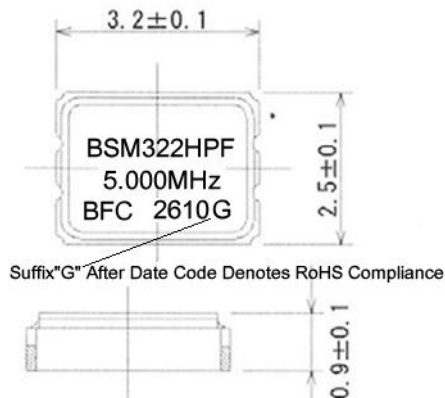
### Features:

- RoHS Compliant (Pb-Free)
- Tri-state Enable / Disable Available
- 3.3V, 3.0V and 2.5V options
- Tight Frequency Stability ( $\pm 10\text{ppm}$ ,  $\pm 15\text{ppm}$ )
- Very low Phase Jitter (1 ps Max, 0.3 ps Typical)
- Leadless Chip Carrier (LCC) Ultra Small Package (3.2x2.5x0.9mm)
- 5.000 to 54.000 MHz Frequency Range
- Extended Temperature Range  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$

ELECTRICAL SPECIFICATIONS				
Model	BSM322HP	BSM323HP	BSM3233HP	
Supply Voltage	2.5VDC $\pm 5\%$	3.0VDC $\pm 5\%$	3.3VDC $\pm 5\%$	
Input Current	8mA Maximum			
Nominal Frequency Range	4.000 to 54.000 MHz			
Storage Temperature Range	$-55^{\circ}\text{C}$ to $125^{\circ}\text{C}$			
Frequency Stability	$\pm 10\text{ppm}$ , $\pm 15\text{ppm}$			
Operating Temperature Range	$-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$			
Frequency Stability Vs. Aging	$\pm 3\text{ppm}/\text{year}$			
Rise & Fall Time	10 ns Maximum, depending on frequency and output load			
"0" Level (logic "0")	0.1 Vcc Maximum			
"1" Level (logic "1")	0.9 Vcc Minimum			
Symmetry	45/55% Max (1/2 Vcc)			
Output Wave Form: Load	HCMOS: 15 pF load			
Start-up time	5ms Maximum			
Phase Jitter (RMS, 1 Sigma)	1 ps Max for $f_j > 1\text{kHz}$ ; 0.3 ps Typical for $f_j = 12\text{kHz}$ to $20\text{MHz}$			
Pin 1 Options	Option	No Connection	Output Enable	Output Disable(Hi-Z)
	Part # Suffix	Blank	H	L
Output Disabled Time	100 ns Maximum			
Output Enable Time	100 ns Maximum			

Part Number Table					
Model	Voltage	HP	Frequency Stability	Pin 1 Options	Frequency
BSM32	3 = 3V	HP	F = $\pm 15\text{ppm}$	Blank = No Connection	In MHz
	33 = 3.3V		G = $\pm 10\text{ppm}$	H = Output Enable	
	2 = 2.5V			L = Output Disable(Hi-Z)	

Part Number Example					
BSM32	3	HP	F	H	20.000MHz



Pad Connections

Terminal	Connection
#1	N/C or CE
#2	N.C.
#3	GND
#4	OUTPUT
#5	N.C.
#6	Vdd

