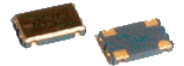




BSM99X SERIES

HCMOS/TTL CLOCK OSCILLATOR

5 X 7 X 1.6MM SMD CERAMIC PACKAGE

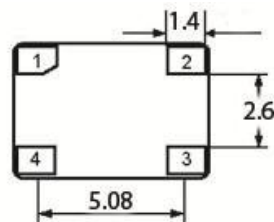
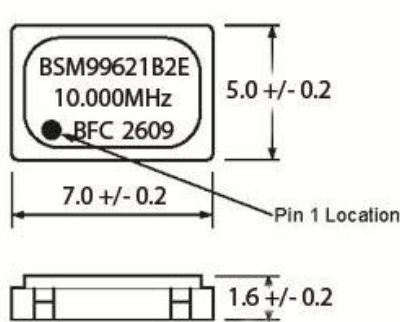


- Miniature Ceramic SMD (5.0 x 7.0 x 1.6mm) Package
- 24 to 72 Hour Manufacturing Option Available
- TTL / HCMOS Compatible Output
- Low Phase Jitter
- Tri-State Function for Auto Test Systems Available
- Fundamental/ 3rd Overtone Open Crystal Design
- Wide Frequency Range (1.000 – 200.0 MHz)
- Leadless Chip Carrier (LCC)
- Industry Standard Pad Out Spacing
- RoHS Compliant (Pb Free)

ELECTRICAL SPECIFICATIONS				
Model	BSM996	BSM997	BSM998	BSM999
Voltage	+5VDC ± 10%	+ 3.3VDC ± 10%	+2.5VDC ± 10%	+1.8VDC ± 10%
Frequency Range	1.0 to 106.25MHz	1.000 to 200.0MHz	1.000 to 200.0MHz	1.0 to 156.25MHz
Operating Temperature Range	0°C to +70°C; -10°C to 70°C; -20°C to +70°C; -40°C to +85°C			
Storage Temperature	-55°C to +125°C			
Input Current	60 mA Maximum, depending on frequency and output load			
Overall Frequency Stability	±100ppm; ±50ppm; ±30ppm; ±25ppm; ±10ppm			
Duty Cycle (Symmetry)	60/40%; 55/45%; 52.5/47.5%			
Output Load	HCMOS; 50pF , TTL; Drive up to 10 TTL Gates			
Logic "1" / Logic "0" Level	0.9Vcc Minimum / 0.1Vcc Maximum			
Rise / Fall Time (Tr / Tf)	10 ns Maximum, Depending on Frequency and Output Load			
Start up Time	10 ms Max.			
Phase Jitter (RMS, 1 Sigma)	1 ps Max. for fj > 1 kHz; 0.3 ps Typical for fj = 12kHz to 20 MHz			
Tristate Function	Input (Pin 1) High (0.7Vcc, or 2.2V if Vcc=5V) or open: Output (Pin 3) active			
	Input (Pin 1) Low (<0.3 Vcc, or 0.8V if Vcc = 5V): Output disabled in High Impedance			
Output Disable Time	100 ns Max.			
Output Enable Time	100 ns Max.			

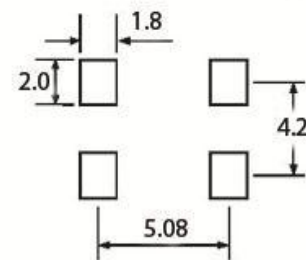
Part Number Table						
Model	Input Voltage	Symmetry	Frequency Stability	Operating Temp. (°C)	Tri State on Pin1	Freq.
BSM996	5V	21 = 55/45	B = ±100ppm	2 = 0°C to +70°C	Blank= N/C	
BSM997	3.3V	22 = 60/40	C = ±50ppm	3 = -20°C to +70°C	E = Tri-State	
BSM998	2.5V	23 = 52.5/47.5	D = ±30ppm	5 = -40°C to +85°C		
BSM999	1.8V		E = ±25ppm	7 = -10°C to 70°C		
			X = ±10ppm			

Part Number Example						
BSM997		21	C	2	E	25.0MHz



Pin Connections
 #1: E/D or NC
 #2: Ground
 #3: Output
 #4: Vcc

Recommended Solder Pad Layout



Dimensions in Millimeters

All dimensions are typical unless otherwise specified