



# BMV353 HCMOS/TTL VCXO SERIES

5.0X3.0X1.3MM CERAMIC/METAL LCC SMD PACKAGE

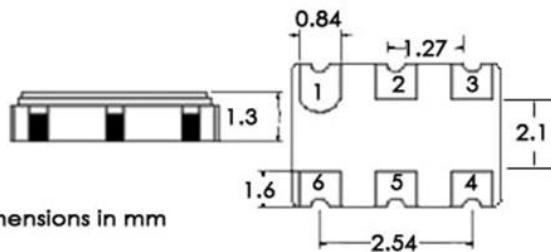
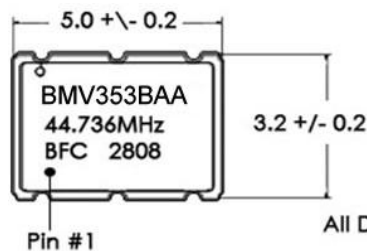


**Features:**

- Ceramic Base Construction, Metal Lid
- 1.0 to 108.0 MHz Frequency Range
- 0.3V to 3.3V Control Voltage
- Tight Frequency Stability( $\pm 25$ ppm) Available
- $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  Operating Temperature Option
- Ground Shielded 6-Pad SMD 5.0x3.2x1.3mm LCC Pkg.
- **RoHS Compliant**
- Very Low Phase Jitter with Fundamental Crystal Design
- Leadless Chip Carrier (LCC) Ultra Small SMD Package
- Enable/Disable Control on Pin#2 or Pin#5
- Many Frequency Pull Range Options Available
- HCMOS/TTL Output

ELECTRICAL SPECIFICATIONS			
Model	BMV353		
Frequency Range (MHz)	1 MHz to 108 MHz		
Input Voltage (Vcc)	$+3.3 \text{ VDC} \pm 5\%$		
Input Current	15 mA Maximum, depending on Frequency and output load		
Control Voltage (Vc)	$+1.65\text{V} \pm 1.5\text{V}$ for 3.3V part		
Storage Temperature	$-55^{\circ}\text{C}$ to $125^{\circ}\text{C}$		
Frequency Stability	$\pm 50$ ppm (Suffix "A")		$\pm 25$ ppm (Suffix "B")
Pull Range (APR)	$\pm 50$ ppm (Suffix "A")	$\pm 100$ ppm (Suffix "C")	$\pm 50$ ppm (Suffix "A") $\pm 75$ ppm (Suffix "B")
Temperature Range	$0^{\circ}\text{C}$ to $70^{\circ}\text{C}$ ; $-10^{\circ}\text{C}$ to $70^{\circ}\text{C}$ ; $-40$ to $+85$		
Standard Stability / Pullability	BA = $\pm 25$ ppm / $0^{\circ}\text{C}$ to $70^{\circ}\text{C}$ , Absolute pull range (APR): $\pm 50$ ppm Minimum		
Duty Cycle	1 = Tristate 60/40% symmetry; 3 = Tristate 55/45% symmetry		
Output Load	HCMOS: drive up to 15 pF load; TTL: drive up to 10 TTL gates		
Logic	Logic "1" Level	$0.9V_{cc}$ Minimum	
	Logic "0" Level	$0.1V_{cc}$ Maximum	
Rise / Fall Time (Tr/Tf)	5 ns Maximum at 20% to 80% Vp-p		
Start-up time	10 ms Maximum		
Phase Jitter (RMS, 1 Sigma)	1 ps Maximum for $f_j > 1$ kHz; 0.3 ps Typical for $f_j = 12\text{KHz}$ to $20\text{MHz}$		
Modulation Bandwidth	12 kHz Minimum at -3dB		
Linearity / Slope	$\pm 10\%$ Maximum of best straight line fit / Positive		
Input Impedance	10 k Ohms Minimum		
Setability at Fnom, 25°C	$+1.65\text{V} \pm 0.4\text{V}$ for 3.3V part		
Tristate Function	Input (Pin 2 or 5) High ( $>2.2\text{V}$ ) or open: Output (Pin 4) active		
	Input (Pin 2 or 5) Low ( $<0.5\text{V}$ ): Output disabled in high impedance		
Enable/Disable Time	100 ns Maximum		

Part Numbering Guide						
Model	Freq. Stability	APR	Temp. Range	Tri-State Symmetry	Pin Connections	Frequency
BMV353	A= $\pm 50$ ppm	A= $\pm 50$ ppm	Blank = $0^{\circ}\text{C}$ to $70^{\circ}\text{C}$	Blank = Tri-State 60/40%	A = E/D Pin#2, N/C Pin#5	In MHz
	B = $\pm 25$ ppm	B= $\pm 75$ ppm	G = $-10^{\circ}\text{C}$ to $70^{\circ}\text{C}$	S = Tri-State 55/45%	B = E/D Pin#5, N/C Pin#2	
		C= $\pm 100$ ppm	M = $-40$ to $+85$			
Example						
BMV353	A	C	M	S	A	44.736 MHz



**Pin Connections**

- #1 : Voltage Control
- #2 : E/D(A) or N/C(B)
- #3 : Ground
- #4 : Output
- #5 : N/C(A) or E/D(B)
- #6 : Vcc