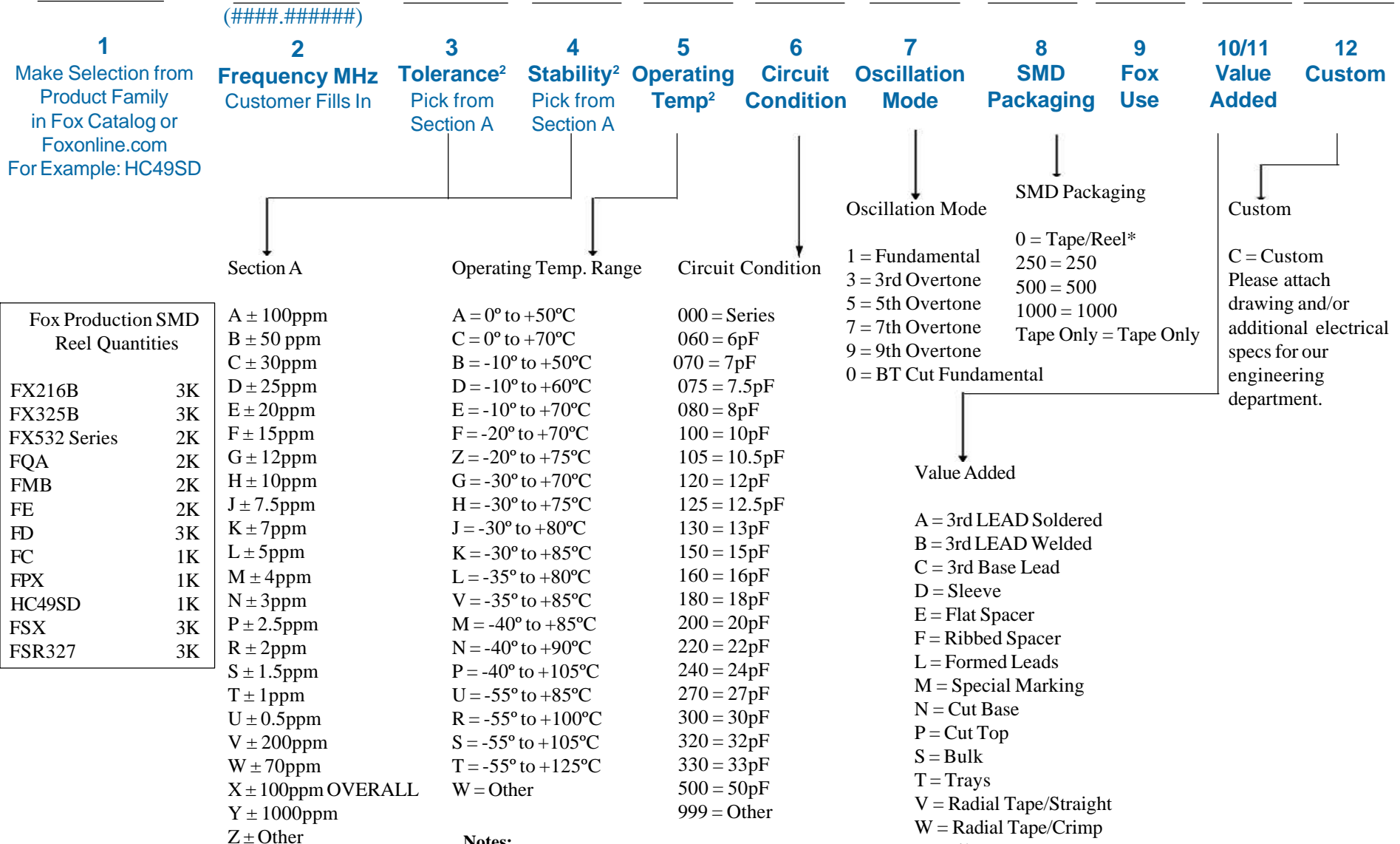


# Fox Electronics Part Description<sup>1</sup> Guide for Crystals









<sup>1</sup> Fox unique part numbers for non-standards are randomly generated based on the elements of the part description in a format: **### - Frequency - Random #** (099-22.1184-39789 is Fox unique part number).






<sup>2</sup> **All combinations are not possible.**

\* 0 = Tape/Reel assumes that no quantity per reel was specified: therefore, the Fox Production SMD Reel Quantities list applies. For any other quantities specified a broken reel charge will apply.

# QUARTZ CRYSTAL SELECTION GUIDE

• SURFACE MOUNT CRYSTALS					
PRODUCT	FX216B	FX325B	FX532 Series	FQA	FMB
					
<b>Frequency Range</b>	26.000 ~ 60.000 MHz	16.000 ~ 50.000 MHz	10.000 ~ 67.000 MHz	10.000 ~ 67.000 MHz	10.000 ~ 67.000 MHz
<b>Frequency Tolerance</b>	±50 PPM ~ ±10 PPM	±50 PPM ~ ±20 PPM	±50 PPM ~ ±10 PPM	±50 PPM ~ ±20 PPM	±50 PPM ~ ±5 PPM
<b>Frequency Stability</b>	±50 PPM ~ ±10 PPM	±50 PPM ~ ±20 PPM	±50 PPM ~ ±10 PPM	±100 PPM ~ ±20 PPM	±100 PPM ~ ±3 PPM
<b>Temperature Range</b>	-10°C ~ +60°C to -30°C ~ +80°C	-10°C ~ +60°C to -40°C ~ +85°C	-10°C ~ +60°C to -40°C ~ +85°C	-10°C ~ +60°C to -40°C ~ +85°C	-10°C ~ +60°C to -40°C ~ +85°C
<b>Key Features</b>	<ul style="list-style-type: none"> <li>• 2.0 x 1.6mm</li> <li>• 0.55mm Height Max</li> <li>• Fundamental</li> <li>• Ultra Low Profile</li> </ul>	<ul style="list-style-type: none"> <li>• 3.2 x 2.5mm</li> <li>• 1.0mm Height Max</li> <li>• Fundamental to 50 MHz</li> <li>• Resin Sealed or Seam Sealed</li> </ul>	<ul style="list-style-type: none"> <li>• 5 x 3.2mm</li> <li>• 1.0mm Height Max</li> <li>• Fundamental to 67 MHz</li> <li>• Resin Sealed or Seam Sealed</li> </ul>	<ul style="list-style-type: none"> <li>• 6 x 3.5mm</li> <li>• 1.4mm Height Max</li> <li>• Low Cost - Resin Sealed</li> <li>• Fundamental to 40 MHz</li> </ul>	<ul style="list-style-type: none"> <li>• 6 x 3.5mm</li> <li>• 1.1mm Height Max</li> <li>• Fundamental to 67 MHz</li> <li>• Seam Sealed</li> </ul>
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PRODUCT	FE	FD	FC	FPX	HC49SD
	 Stocking Std.			 Stocking Std.	 Stocking Std.
<b>Frequency Range</b>	6.000 ~ 160.000 MHz	9.8304 ~ 160.000 MHz	3.200 ~ 7.200 MHz	3.579545 ~ 90.000 MHz	3.200 ~ 70.000 MHz
<b>Frequency Tolerance</b>	±50 PPM ~ ±20 PPM	±50 PPM ~ ±5 PPM	±50 PPM ~ ±20 PPM	±50 PPM ~ ±20 PPM	±30 PPM ~ ±10 PPM
<b>Frequency Stability</b>	±50 PPM ~ ±15 PPM	±50 PPM ~ ±3 PPM	±50 PPM ~ ±15 PPM	±100 PPM ~ ±20 PPM	±50 PPM ~ ±5 PPM
<b>Temperature Range</b>	-10°C ~ +60°C to -40°C ~ +85°C	-10°C ~ +60°C to -40°C ~ +85°C	-10°C ~ +60°C to -40°C ~ +85°C	-10°C ~ +60°C to -40°C ~ +85°C	-10°C ~ +60°C to -40°C ~ +85°C
<b>Key Features</b>	<ul style="list-style-type: none"> <li>• 7.5 x 5mm</li> <li>• 1.7mm Height Max</li> <li>• Low Cost - Resin Sealed</li> <li>• Fundamental to 50 MHz</li> <li>• 2 Additional Footprints (FH, FL)</li> </ul>	<ul style="list-style-type: none"> <li>• 7.5 x 5mm</li> <li>• 1.1mm Height Max</li> <li>• Fundamental to 50 MHz</li> <li>• Seam Sealed</li> </ul>	<ul style="list-style-type: none"> <li>• 11.8 x 5.5mm</li> <li>• 2.1mm Height Max</li> <li>• Low Cost - Resin Sealed</li> </ul>	<ul style="list-style-type: none"> <li>• Low Cost</li> <li>• Plastic Encapsulated</li> </ul>	<ul style="list-style-type: none"> <li>• Low Cost</li> <li>• Fundamental to 50 MHz</li> </ul> 
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• THRU-HOLE CRYSTALS / WATCH CRYSTALS				
PRODUCT	HC49S	HC80U	HC49U	WATCH CRYSTALS
	 Stocking Std.		 Stocking Std.	
<b>Frequency Range</b>	3.200 ~ 70.000 MHz	3.579545 ~ 200.000 MHz	1.8432 ~ 180.000 MHz	32.768 kHz
<b>Frequency Tolerance</b>	±30 PPM ~ ±10 PPM	±30 PPM ~ ±5 PPM	±30 PPM ~ ±5 PPM	±20PPM
<b>Frequency Stability</b>	±50PPM ~ ±5 PPM	±50 PPM ~ ±3 PPM	±50 PPM ~ ±3 PPM	-0.04PPM / (Δ°C) <sup>2</sup>
<b>Temperature Range</b>	-10°C ~ +70°C to -40°C ~ +85°C	-20°C ~ +70°C to -40°C ~ +70°C	-20°C ~ +70°C to -40°C ~ +85°C	-20°C ~ +60°C / -40°C ~ +85°C
<b>Key Features</b>	<ul style="list-style-type: none"> <li>• 3.6mm Profile</li> <li>• Low Cost</li> <li>• Resistance Weld</li> <li>• Fundamental to 50 MHz</li> </ul>	<ul style="list-style-type: none"> <li>• High Frequency Range</li> <li>• Fundamental to 50 MHz</li> </ul>	<ul style="list-style-type: none"> <li>• Low Cost</li> <li>• Fundamental to 40 MHz</li> </ul> 	<ul style="list-style-type: none"> <li>• Miniature Pkgs.</li> <li>• Long Term Stability</li> </ul>
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FASTFOX is a quick delivery service. Check with Fox Customer Service for available frequencies.

## IMPORTANT

When ordering any non-standard crystals, please specify series or parallel resonance. If parallel, the load capacitance (CL) needs to be specified in picofarads \_\_\_\_pF.