

## FEATURES

- TIGHT TOLERANCE / TIGHT STABILITY AVAILABLE
- HIGH RELIABILITY FOR LOW COST
- LOW PROFILE - 0.45 MM PACKAGE HEIGHT
- ULTRA MINIATURA SIZE AND LIGHTWEIGHT
- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU'S

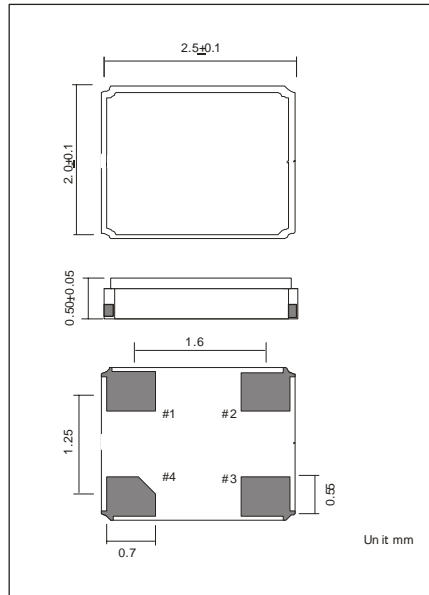


<b>ULTRA-MINI-SMD-CRYSTAL SERIES</b>	SMD02502/4	
<b>FREQUENCY RANGE</b>	13.560 ~ 60.0 MHz	
<b>MODE OF VIBRATION</b>	AT-FUNDAMENTAL	
<b>RESONANCE RESISTANCE</b>	13.560 ~ 16.0 MHz = 100 Ω max.	
	16.0 ~ 20.0 MHz = 80 Ω max.	
	20.0 ~ 60.0 MHz = 60 Ω max.	
<b>FREQUENCY TOLERANCE AT 25°C</b>	+10 ppm ~ +50 ppm	
<b>WORKING TEMPERATURE RANGE</b>	-10/+60°C ~ -30/+85°C	
<b>TEMPERATURE STABILITY</b>	<b>+8 ppm</b>	-10/+60°C / 0+70°C
	<b>+12 ppm</b>	-10/+60°C / 0+70°C / -20+70°C
	<b>+15 ppm</b>	-10/+60°C / 0+70°C / -20+70°C / -30+85°C
	<b>+20 ppm</b>	-10/+60°C / 0+70°C / -20+70°C / -30+85°C
	<b>+30 ppm</b>	-10/+60°C / 0+70°C / -20+70°C / -30+85°C
	<b>+50 ppm</b>	-10/+60°C / 0+70°C / -20+70°C / -30+85°C
<b>LOAD CAPACITANCE</b>	Series, 8pF, 10pF, 12pF	
<b>DRIVE LEVEL</b>	10 μW (100 μW max.)	
<b>AGING</b>	+2 ppm per year	
<b>INSULATION RESISTANCE</b>	>500 MΩ DC/100V +10%	
<b>STORAGE TEMPERATURE</b>	-40/+85°C	
<b>PACKAGE</b>	Tape and Reel (3.000 pcs per reel)	
<b>OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION</b>		

## PART NUMBERING SYSTEM

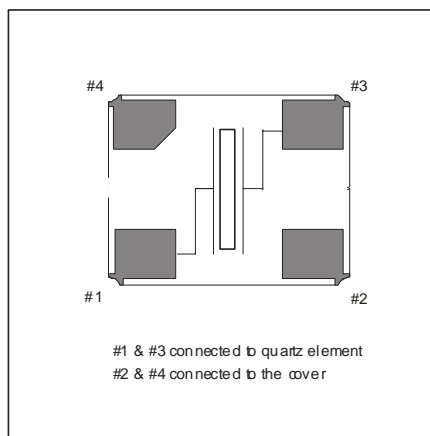
<b>EXAMPLE</b>	SMD02502/4 60.000 MHz 10/15/-30+85/10pF
<b>TYPE</b>	SMD02502/4
<b>FREQUENCY</b>	IN MHZ
<b>FREQUENCY TOLERANCE AT 25°C</b>	REQUIRED VALUE
<b>TEMPERATURE STABILITY</b>	REQUIRED VALUE
<b>TEMPERATURE RANGE</b>	REQUIRED VALUE
<b>LOAD CAPACITANCE</b>	REQUIRED VALUE

**OUTLINE DRAWING**



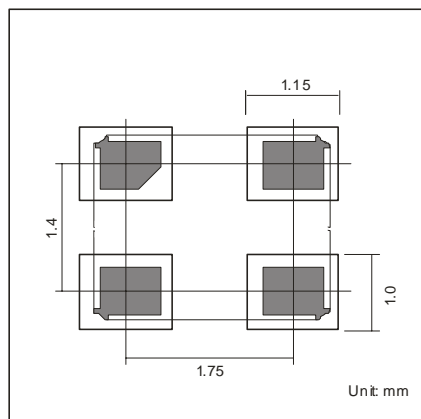
Unit: mm

**INTERNAL CONNECTIONS**



#1 & #3 connected to quartz element  
#2 & #4 connected to the cover

**RECOMMENDED LAND PATTERN**



Unit: mm