

## FEATURES

- HIGH RELIABILITY FOR LOW COST
- ULTRA LOW PROFILE
- OPERATING TEMPERATURE RANGE OF -40/+85°C
- EXCELLENT CLOCK SIGNAL GENERATOR FOR CPU'S

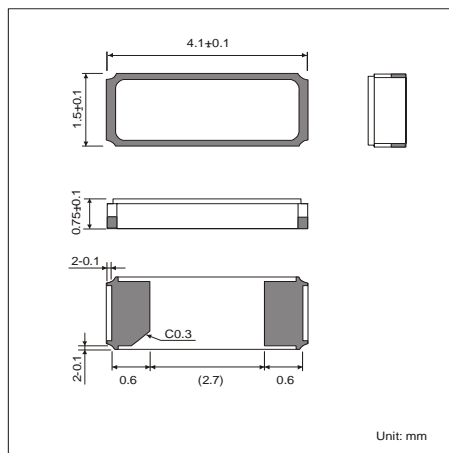


<b>MINIATURE SMD-WATCH CRYSTAL SERIES</b>	M4115
<b>PACKAGE DIMENSIONS</b>	see outline drawing
<b>FREQUENCY</b>	32.768 kHz
<b>FREQUENCY TOLERANCE AT 25°C</b>	+20 ppm standard / +10 ppm on request
<b>LOAD CAPACITANCE</b>	12.5 pF standard / 6 pF, 7 pF and 9 pF on demand available
<b>SERIES RESISTANCE</b>	70 kΩ max.
<b>OPERATING TEMPERATURE RANGE</b>	-40/+85°C
<b>STORAGE TEMPERATURE RANGE</b>	-55/+125°C
<b>PARABOLIC COEFFICIENT</b>	-0.04 ppm/°C <sup>2</sup> max.
<b>TURNOVER TEMPERATURE</b>	+25°C +5°C
<b>DRIVE LEVEL</b>	0.5 μW max.
<b>SHUNT CAPACITANCE C0</b>	1.0 pF typical
<b>MOTIONAL CAPACITANCE C1</b>	3.4 fF typical
<b>AGING</b>	+3 ppm max. per year
<b>DELIVERY FORM</b>	Tape & Reel (1.000 pcs per reel)
<b>OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION</b>	

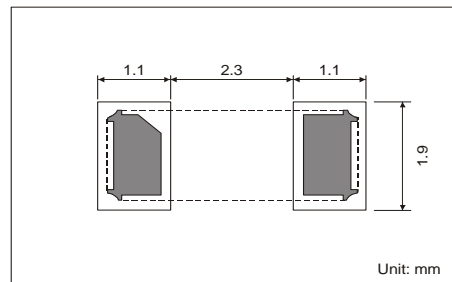
## PART NUMBERING SYSTEM

<b>EXAMPLE</b>	M4115 32.768 kHz +20 PPM -40/+85 12.5PF
<b>PACKAGE</b>	M4115
<b>FREQUENCY</b>	32.768 kHz
<b>FREQUENCY TOLERANCE AT 25°C</b>	REQUIRED VALUE
<b>TEMPERATURE RANGE</b>	-40/+85°C standard temperature range
<b>LOAD CAPACITANCE</b>	REQUIRED VALUE

## PACKAGE DIMENSIONS



## RECOMMENDED LAYOUT



## INTERNAL CONNECTION

