

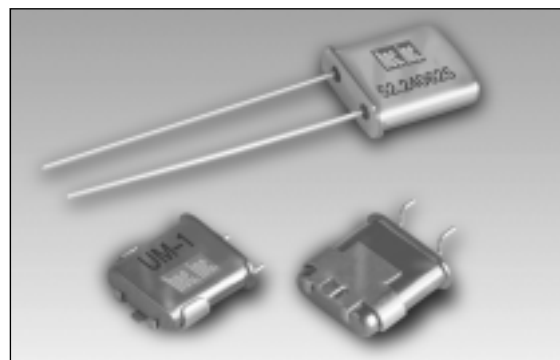
H1 SERIES UM-1 PAGER CRYSTAL



HEC, INC. specializes in the UM-1 pager crystal, which features the resistance welded housing for excellent hermetic seals and aging characteristics. This UM-1 crystal is available with a wide frequency range (3.6864 MHz to 225 MHz), wireless communication grade tight tolerances, and is also available in the metal jacket SMD configuration (see mechanical drawing below). Both packages have a small footprint ideal for space limited applications.

FEATURES:

- Available in SMD configuration
- Wide frequency coverage (3.6864-225 MHz)
- Small footprint
- Resistance Weld for a good aging factor
- Low profile



ELECTRICAL SPECIFICATIONS

PARAMETERS	CONDITIONS	MINIMUM	STANDARD	MAXIMUM	UNIT
FREQUENCY RANGE		3.6864		225.000	MHz
FREQUENCY TOLERANCE	3.6864 - 9.9 MHz 10.0 - 225 MHz	-50* -30*		+50* +30*	PPM
FREQUENCY STABILITY, ref @ 25°C	3.6864 - 9.9 MHz 10.0 - 225 MHz	-100* -50*		+100* +50*	PPM
OPERATING TEMPERATURE			-10°C to +60°C*		°C
STORAGE TEMPERATURE			-40°C to +85°C		°C
SHUNT CAPACITANCE (C ₀)				5.0	pF
LOAD CAPACITANCE (C _L)	Customer specified	6.0	18.0		pF
DRIVE LEVEL	3.6864 - 225 MHz		0.1	0.5	mW
AGING	at 25°C per year 3.6864 - 225 MHz	-3		+3	PPM

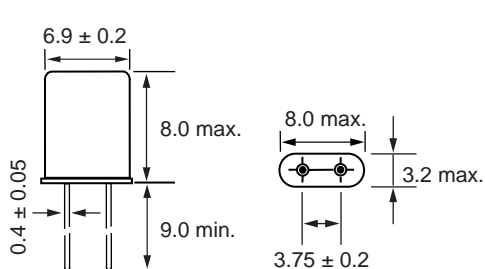
* Tight tolerances optional - please specify

EQUIVALENT SERIES RESISTANCE (ESR) SPECIFICATIONS

FREQUENCY RANGE (MHz)	MODE	ESR (Ω) MAX.	FREQUENCY RANGE (MHz)	MODE	ESR (Ω) MAX.
3.686 - 3.999	Fundamental	250	8.000 - 9.999	Fundamental	80
4.000 - 4.999	Fundamental	150	10.000 - 10.999	Fundamental	60
5.000 - 5.999	Fundamental	120	11.000 - 45.000	Fundamental	40
6.000 - 6.999	Fundamental	100	30.000 - 135.00	3rd Overtone	40
7.000 - 7.999	Fundamental	90	100.000 - 125.00	3rd Overtone	100

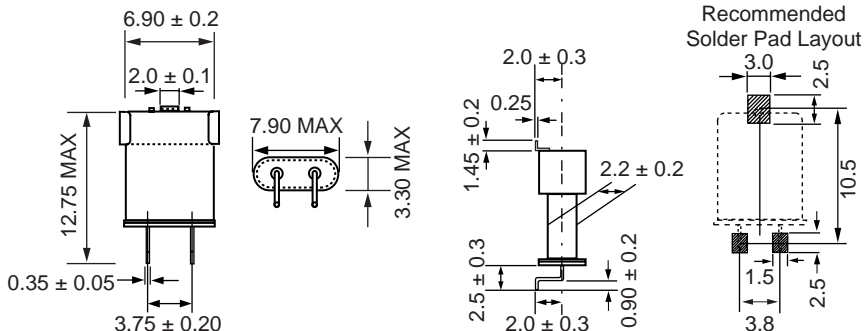
MECHANICAL DRAWING

UM-1 PACKAGE DRAWING



Unit: mm

UM-1 WITH METAL JACKET SMD CONFIGURATION



Recommended Solder Pad Layout