

GEYER KX-TSX Features and Applications:

- Low profile Automotive-grade crystal with build-in thermistor
- Package size: 1.6 x 1.2 x 0.65 mm, 4 pad footprint
- Frequency: 76.80 MHz
- Moisture Sensitivity Level, MSL Level 1
- Recommended for Car Navigation Systems, ADAS (Advanced Driver Assistance Systems), In-Vehicle UWB (Ultra-Wideband), Telematics & V2X, etc
- For further specifications, please contact us



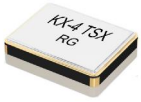
Quartz Crystal with build-in thermistor

SMD-version

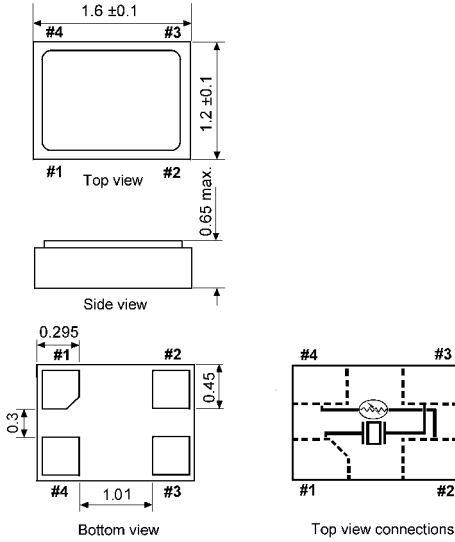
part no.	12.84950
model	KX-4F-TSX
frequency	76.80 MHz
mode	fundamental
load capacitance CL	7 pF
frequency tolerance at 25°C	-10 ~ +22 ppm
frequency drift after two times reflow	±2 ppm
frequency temperature stability:	-16 ~ +16 ppm (-30°C ~ +85°C) -35 ~ +35 ppm (-40°C ~ +105°C) -35 ~ +55 ppm (-40°C ~ +115°C)
operating temperature	-40° ~ +125°C
storage temperature	-40° ~ +125°C
series resistance R1 (ESR) max	30 Ohm
tuning sensitivity	10 ~ 15 ppm / pF
aging (refer 25°C)	±0.7 ppm / year
drive level max.	250 µW
quality factor(Q):	> 50000
spurious mode series resistance min.	1100 Ω within ±1 MHz offset
inflection point:	24.5°C ±2°C
first-order curve fitting parameter //C1 (refer 24.5°C)	-0.5 ~ -0.1 ppm / °C
second-order curve fitting parameter //C2 (refer 24.5°C)	-0.0006 ~+ 0.0006 ppm / °C ²
third-order curve fitting parameter //C3 (refer 24.5°C)	0.000085 ~ 0.000115 ppm / °C ³
Full Cycle Temperature Hysteresis (-40~+115°C)	±0.5 ppm
Full Operation Temperature Perturbation (-40~+115°C)	±0.5 ppm
Operation Temperature Perturbation Slope (-40~+115°C)	±0.15 ppm / °C
5°C Cycle Temperature Hysteresis (-40~+115°C):	±0.15 ppm
AEC-Q200	available
Contents of reel	3000 pcs.

Thermistor

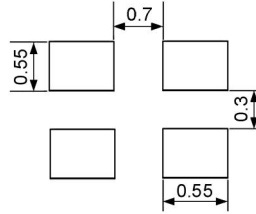
Resistance	100 kOhm ±1 % at 25°C
B-constant	4250 K ±1 % +25°C / +50°C



Dimensions (mm):

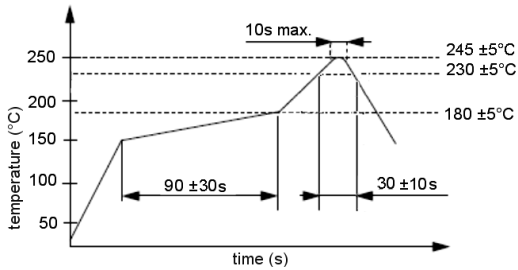


Suggested soldering pad:

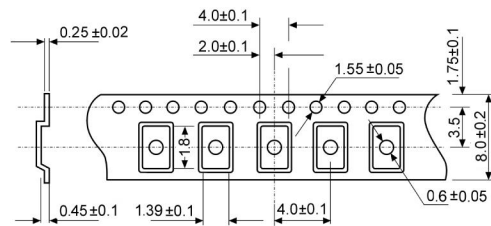


PIN		Connection	
1		XTAL IN	
2	GND	Thermistor OUT	
3		XTAL OUT	
4		Thermistor IN	

Reflow soldering condition:



Tape specification:



reel diameter 178 mm