



RFM Integrated Device, Inc.

## PRODUCT SPECIFICATION

Part Number: XTS4203

TSX, 26 MHz, +/-10 ppm, -40°C to +85°C

# SMD TSX 2.0x1.6 26MHz

## Features:

- Surface Mount Hermetic Package
- Excellent Reliability Performance
- Good Frequency Perturbation and Stability over temperature
- Ultra Miniature Package
- Moisture Sensitivity Level (MSL) : Level-1



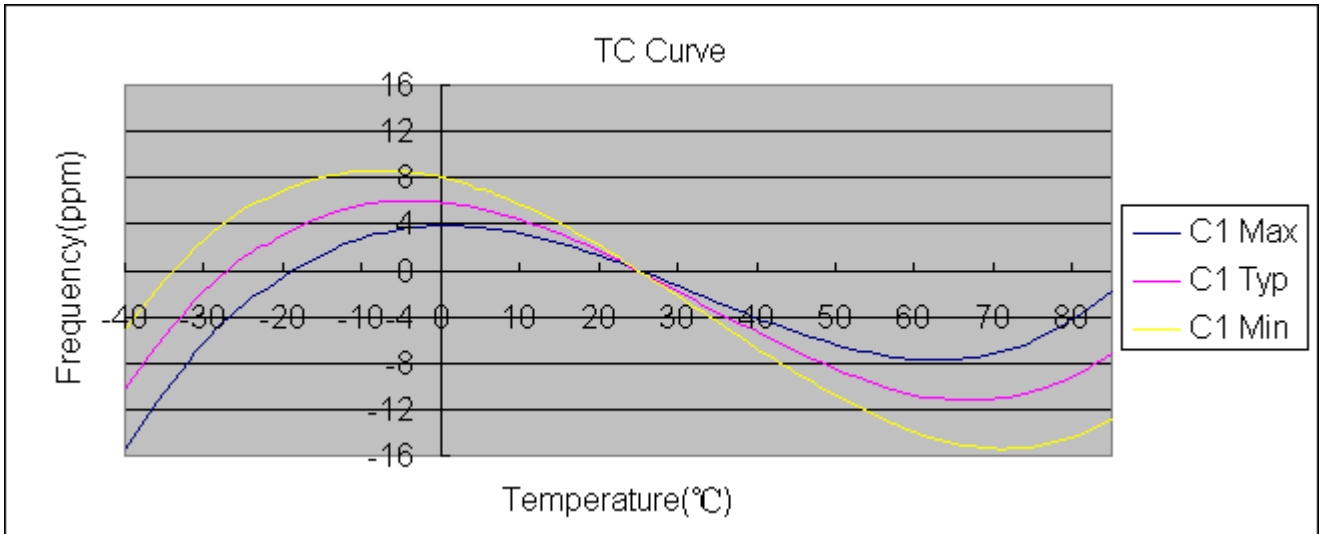
## Description and Applications:

Surface mount 2.0mmx1.6mm crystal unit for use in wireless communications devices, especially for a need of ultra miniature package for mobility.

## Electrical Specifications:

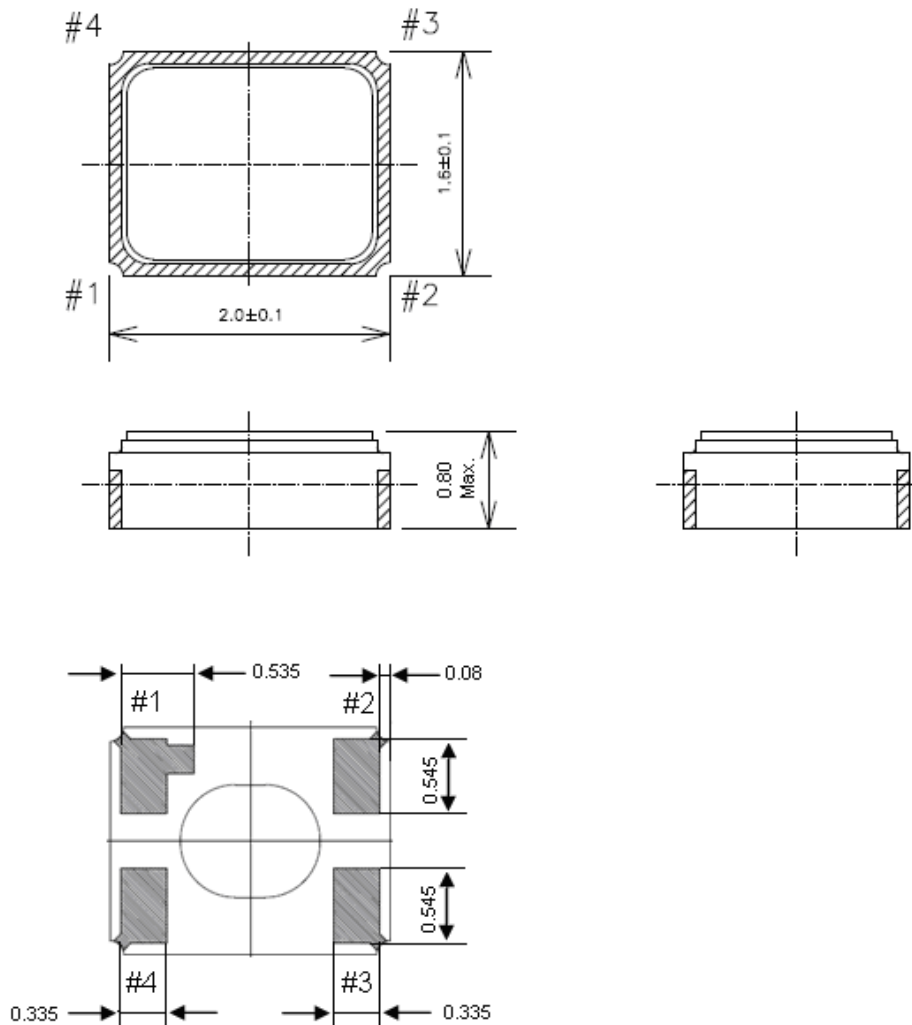
<b>XTS4203</b>	<b>Specification(Crystal)</b>
Nominal Frequency	26.000000 MHz
Mode of Oscillation	Fundamental
Storage Temperature Range	-40°C to +105°C
Operating Temperature Range	-40°C to +85°C
Frequency Stability over Operating Temperature Range	+/-16 ppm (referred to the value at 25°C)
Frequency Make Tolerance (FL)	+/-10 ppm @ 25°C +/- 3°C
Equivalent Series Resistance (ESR)	40 Ω max
Nominal Drive Level	10uW typical and 100 uW max
Shunt Capacitance (Co)	3.0 pF max
Load Capacitance (CL)	7 pF
Hysteresis	+/-0.5 ppm @ -40~85°C
Aging	+/-1ppm/year
Insulation Resistance	500 MW min./DC 100V
Trim Sensitivity	14.5 ppm/pF min
Unit Weight	5.7mg+/-0.5mg
Inflection Point (Ti)	30.5 /- 1.5°C

Room Temp (T0)	30.5°C			
S curve 3 order curve fitting coefficient	Min	Typ	Max	Unit
C1	-0.46	-0.36	-0.26	ppm/°C
Marking	Laser Marking			
Resistance (25°C)	100K +/- 1% Ω			
B-constant	4250 +/- 1% k (Evaluated from 25°C to 50°C, 1% tolerance)			

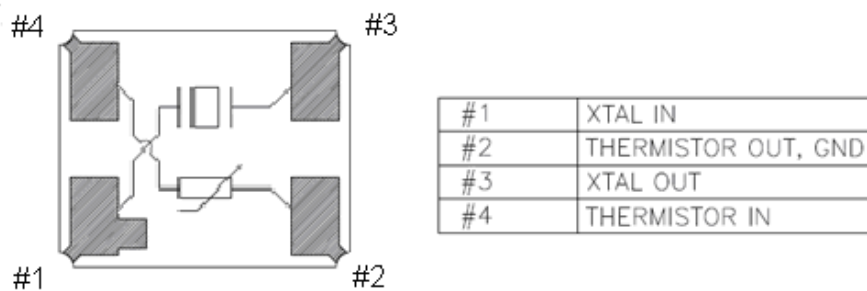


Coefficient reference to 30.5C				Unit
	Min Curve	Typ Curve	Max Curve	
C1	-0.45	-0.36	-0.27	ppm/°C
C2	-4.16	-2.28	-2.03	e <sup>4</sup> -ppm/°C <sup>2</sup>
C3	9.19	9.22	9.20	e <sup>5</sup> -ppm/°C <sup>3</sup>

## Mechanical Dimensions (unit: mm):



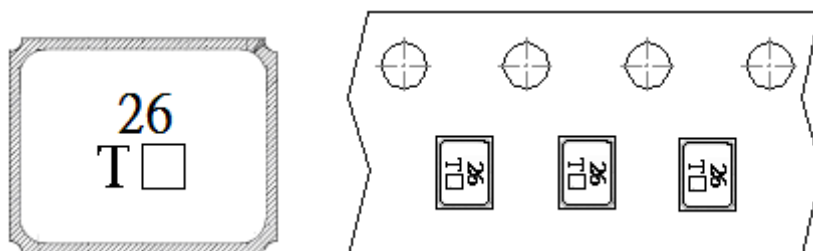
Terminal land connection (TOP VIEW)



## Marking:

Line 1: XX; Frequency (26)

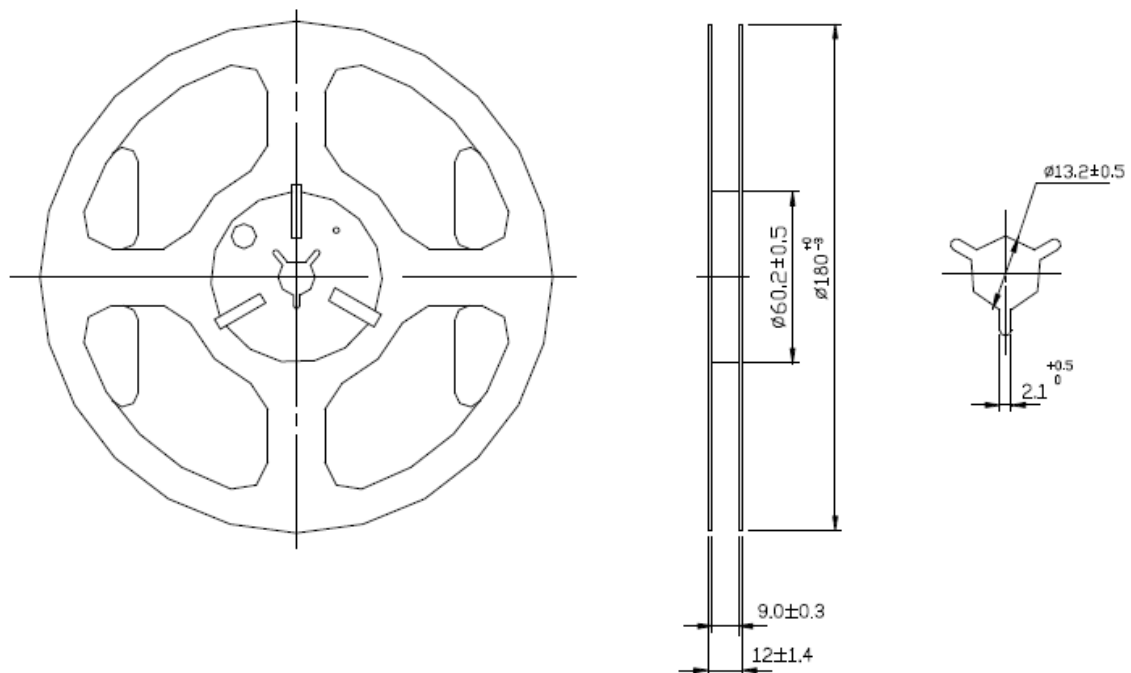
Line 2: T; Traceable Code + ; date Code of Year/Month



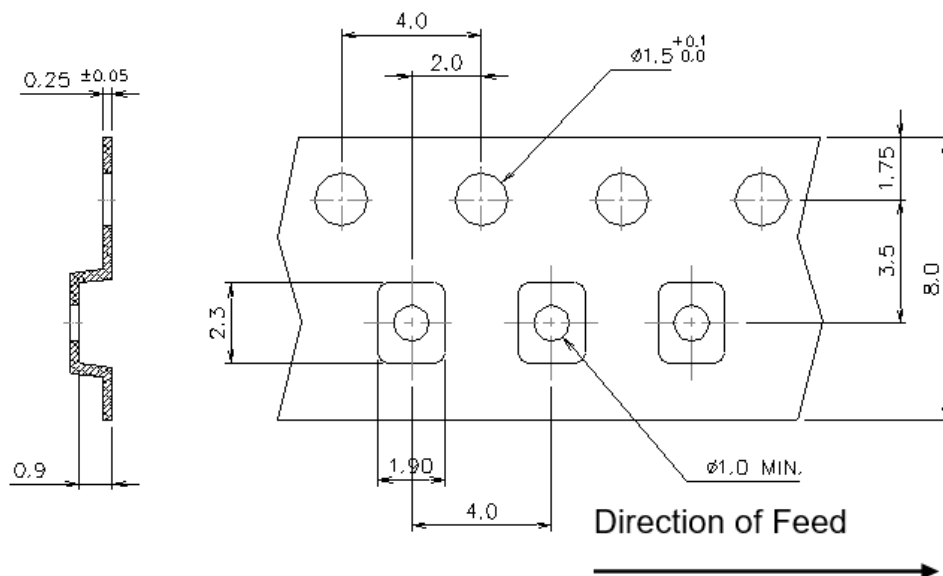
**Date Code Table: Year/Month**

Year/Month	1	2	3	4	5	6	7	8	9	10	11	12
2018	A	B	C	D	E	F	G	H	J	K	L	M
2019	N	P	Q	R	S	T	U	V	W	X	Y	Z
2020	a	b	c	d	e	f	g	h	i	j	k	m
2021	n	p	q	r	s	t	u	v	w	x	y	z
2022	A	B	C	D	E	F	G	H	J	K	L	M
2023	N	P	Q	R	S	T	U	V	W	X	Y	Z
2024	a	b	c	d	e	f	g	h	i	j	k	m
2025	n	p	q	r	s	t	u	v	w	x	y	z

**Reel Dimensions (mm):**



**Tape Dimensions (mm):**

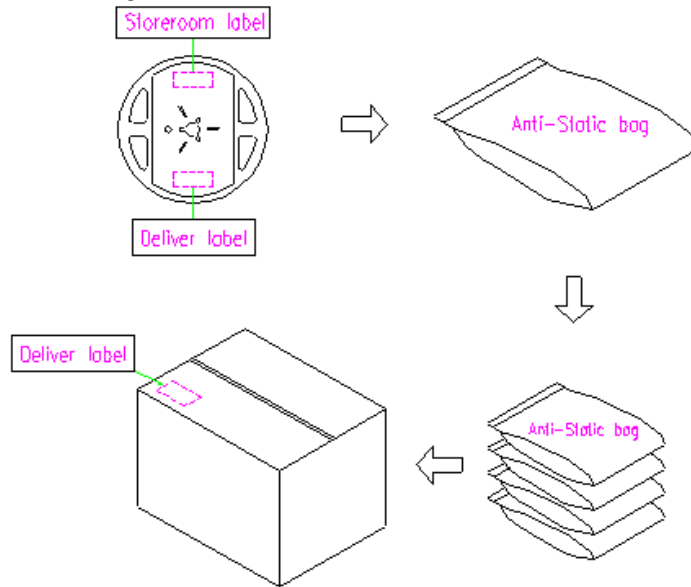


[NOTE]:

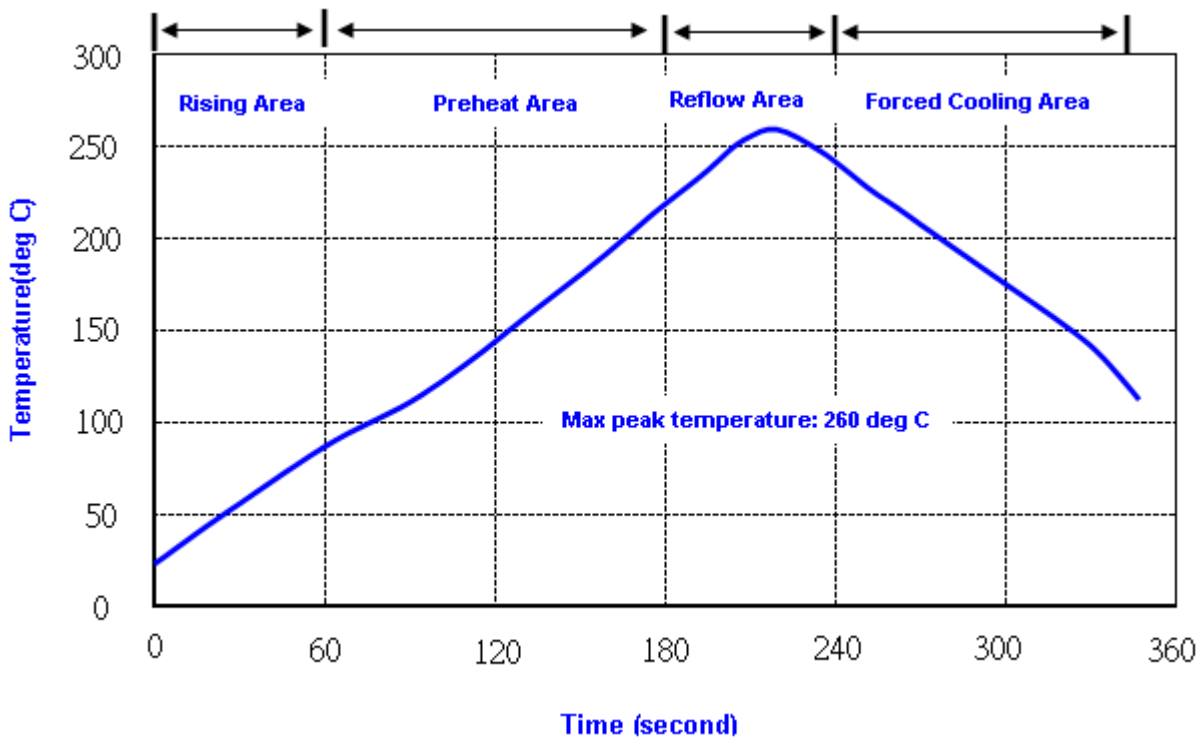
1. Unless otherwise specified tolerance on dimension +/-0.1 mm.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance +/-0.2 mm.

## Packing Quantity/Packing:

3K pcs maximum per reel



## Reflow Profile:



- Note:**
1. Max peak temperature: 260+/-5 deg C; Time: 10+/-2 sec
  2. Temperature: 217+/-5 deg C; Time: 90~100 sec

## Reliability Specifications

Test name	Test process / method	Reference standard
<b>Mechanical characteristics</b>		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 265°C /10sec ×2 times Total time : 4min.(IR-reflow)	EIAJED-4701 -300(301)M(II)
Vibration	Total peak amplitude : 1.5mm Vibration frequency : 10 to 2000 Hz Sweep period : 20 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc.	MIL-STD 202G method 204
Mechanical Shock	directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine	MIL-STD 202G method 213
Solderability	Solder Temperature:265±5°C Duration time: 5±0.5 seconds.	J-STD-002
<b>Environmental characteristics</b>		
Thermal Shock	Heat cycle conditions -40 °C (30min) ↔ 85 °C (30min) * cycle time : 10 times	MIL-STD 883G method 1010.8
Humidity test	Temperature : 85 ± 2 °C Relative humidity : 85% Duration : 96 hours	MIL-STD 202G method 103
Dry heat ( Aging test )	Temperature : 125 ± 2 °C Duration : 168 hours	MIL-STD 202G method 108A
Cold resistance (Low Temp Storage)	Temperature : -40 ± 2 °C Duration : 96 hours	IEC 60068-2-1