

### Features

- Frequency range : 12MHz to 54MHz
- SMD seam sealing ceramic package
- Crystal with thermally coupled temperature sensor (Thermistor)
- External dimensions (mm)  
L : 2.5 x W : 2.0 x H : 1.0
- RoHS compliant & Pb free

### Applications

- Mobile communications
- WiFi, Bluetooth
- GPS
- Mobile phone, Tablet, Wearables

### Electrical Characteristics

Item		QT252T	Conditions
Frequency Range	$F_0$	12MHz ~ 54MHz	
Frequency Tolerance	$F_{tol}$	±10 ppm	at 25°C
Frequency Stability over Operating Temperature Range	$F_{stab}$	±10 ppm	refer to 25°C
Operating Temperature Range	$T_{OTR}$	-30°C ~ +85°C	
Shunt Capacitance	$C_0$	3 pF Max.	
Drive Level	$D_L$	1μW ~ 200μW (50μW Typ.)	
Load Capacitance	$C_L$	6pF, 7pF, 8pF	
Aging	$F_{aging}$	±1 ppm Max.	at 25°C, first year
Storage Temperature Range	$T_{STR}$	-40°C ~ +105°C	

### NTC Thermistor

Resistance	-	100 KΩ ± 1%	at 25°C; Note [1]
B-constant	-	4250 K ± 1%	25°C~+50°C; Note [1]

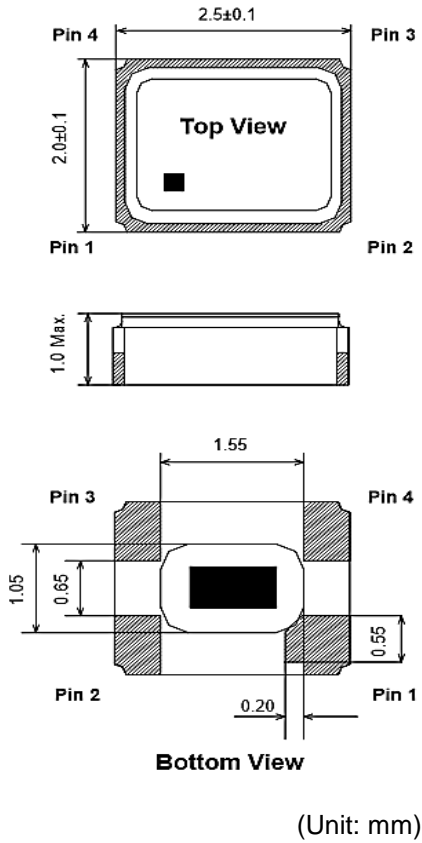
#### Notes:

[1] Please contact us for other specifications.

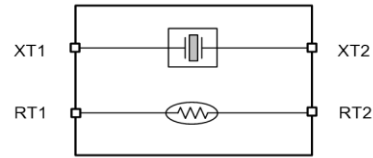
### Motional Resistance (ESR)

Fundamental	
12 ~ 13 MHz	150Ω Max.
14 ~ 30 MHz	100Ω Max.
30 ~ 54 MHz	60Ω Max.

### Dimensions



### Block diagram and Pin function

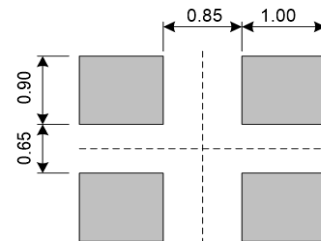


	Symbol	Function
Pin 1	XT1	XTAL Terminal 1
Pin 2	RT2	Thermistor Terminal 2
Pin 3	XT2	XTAL Terminal 2
Pin 4	RT1	Thermistor Terminal 1

Note:

- (a) Pin 2 is connected to the metal lid and thermistor
- (b) Pin 4 is connected to the thermistor only
- (c) RT2 is recommended to GND

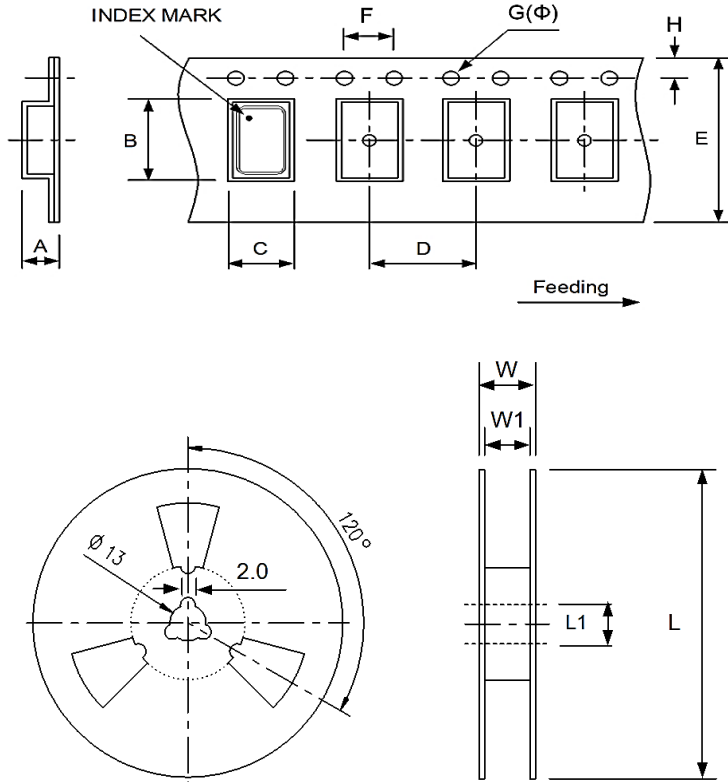
### Recommended pad layout



### Ordering Information



### Packing



DIMENSIONS	A	B	C	D	E	F	G	H	L	L1	W	W1
	1.15	2.70	2.25	4.00	8.00	4.00	1.55	1.75	178	13.0	11.6	8.4

(Unit: mm)

### Reflow Profile

Solder melting point : 220°C ± 10°C, 60 sec. Min.

Peak temperature : 260°C ± 10°C, 10 sec. Min.

