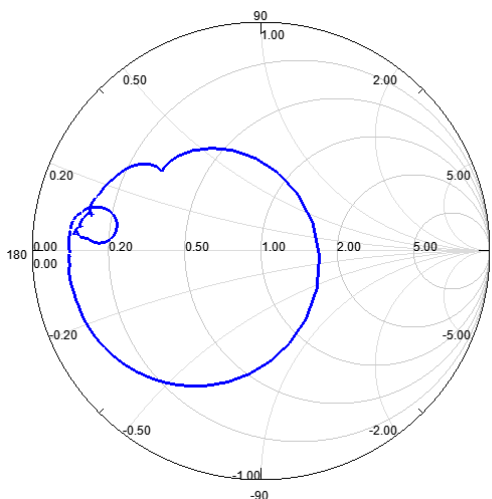


### SS2422BO2 Temperature Sensor (1-port Resonator)

This product is in compliance with RoHS 2011/65/EU.

**Typical performance: S11 @ 23°C**



**Test Conditions:**

RF power	-10 dBm
Temperature	25 °C
DC Voltage	0 V
Terminating source impedance (Z <sub>S</sub> ):	50 Ω
Terminating load impedance (Z <sub>L</sub> ):	50 Ω

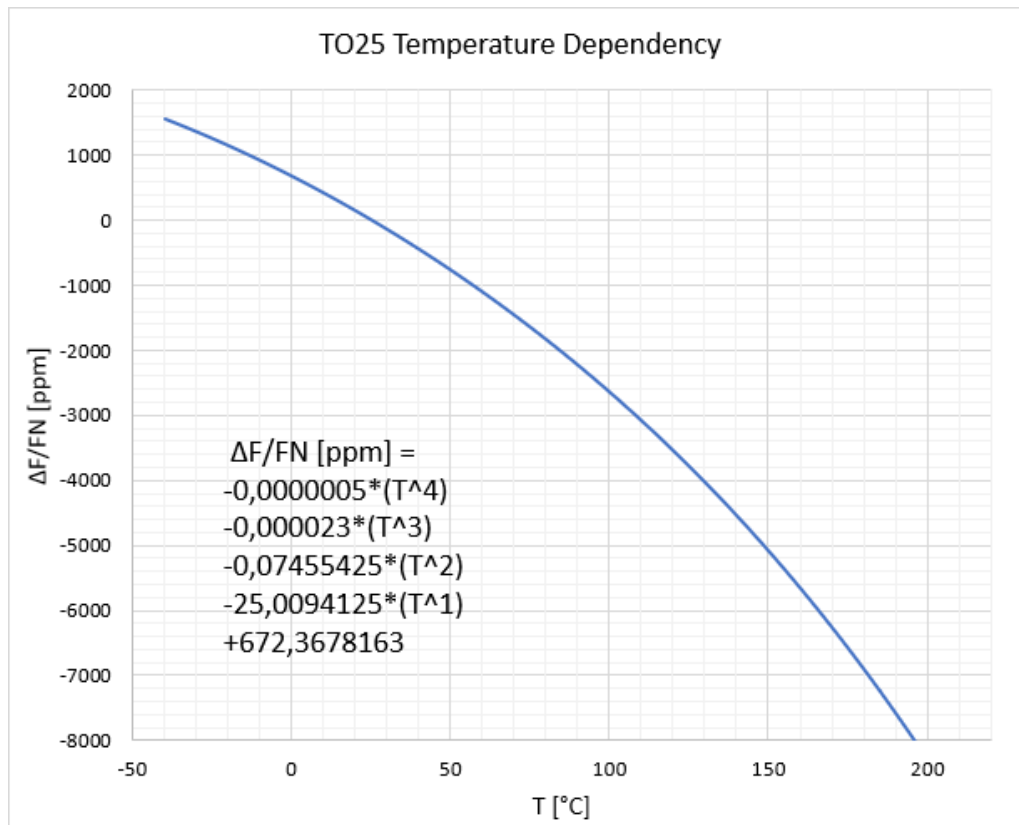
		minimum	typical	maximum	unit
Nominal frequency *1	f <sub>n</sub>	2241	2422	2423	MHz
Insertion Loss	I <sub>L</sub>		14,2	17,1	dB
Unloaded quality factor	Q <sub>U</sub>		4350		
Ageing @200°C		0,9	1,1	1,3	K/1000h
Equivalent Circuit elements					
Motional capacitance	C <sub>1</sub>		32,8		fF
Motional inductance	L <sub>1</sub>		133,8		nH
Motional resistance	R <sub>1</sub>		0,3		Ω
Parallel capacitance	C <sub>0</sub>		13,5		pF
Serial resistance	R <sub>0</sub>		4,3		Ω
Operating temperature range		0		200	°C
Temperature coefficient of frequency	a		-5E-7		ppm/K <sup>4</sup>
	b		-23E-6		ppm/K <sup>3</sup>
	c		-74,55E-3		ppm/K <sup>2</sup>
	d		-25,0		ppm/K
	e		672,37		ppm

Electrostatic Sensitive Device

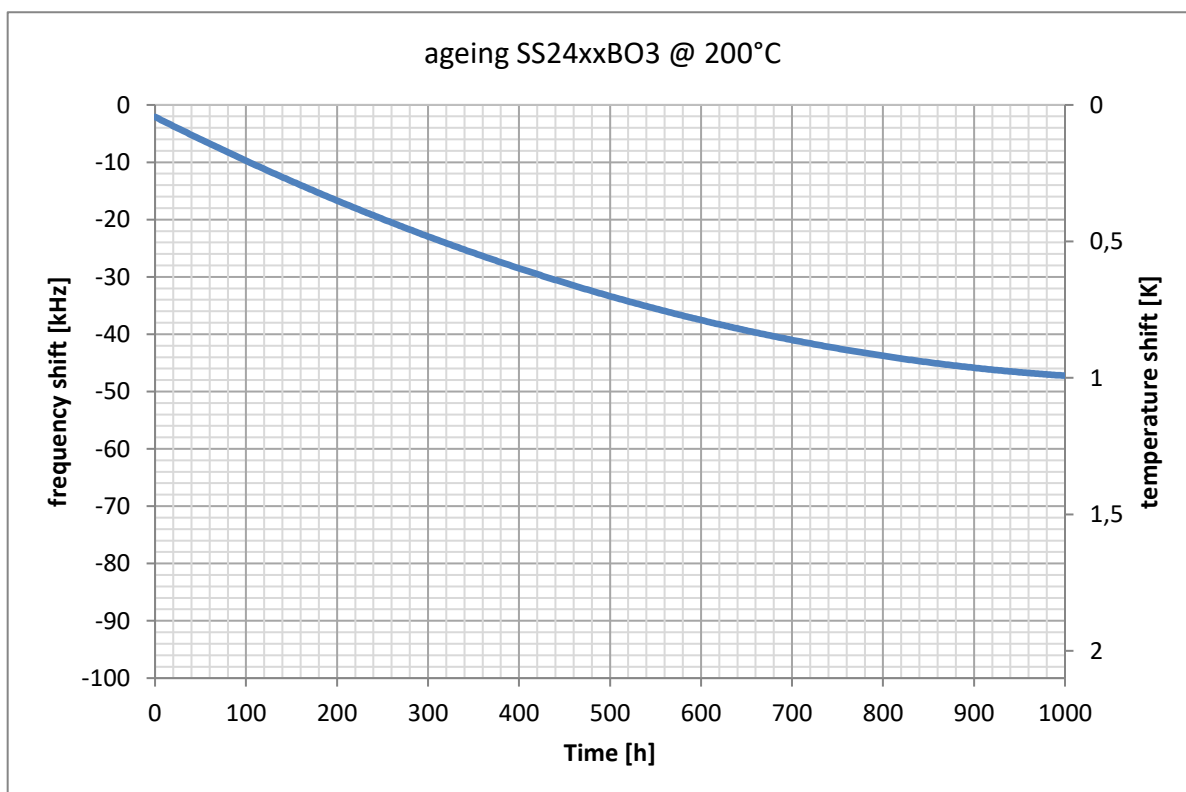
\*1 Nominal frequency is defined as maximum impedance of s11.

## Temperature coefficient of frequency

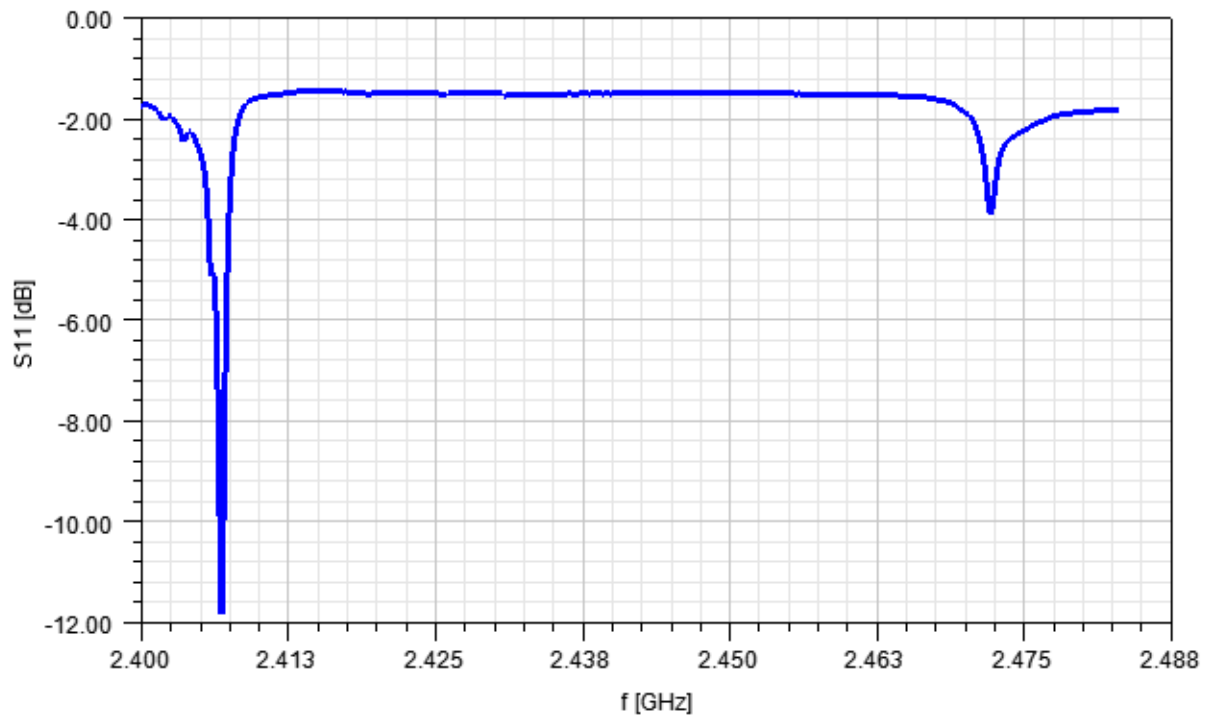
$$\Delta F/F_n = a \cdot T^4 + b \cdot T^3 + c \cdot T^2 + d \cdot T + e \quad \text{with } T \text{ in } ^\circ\text{C}$$



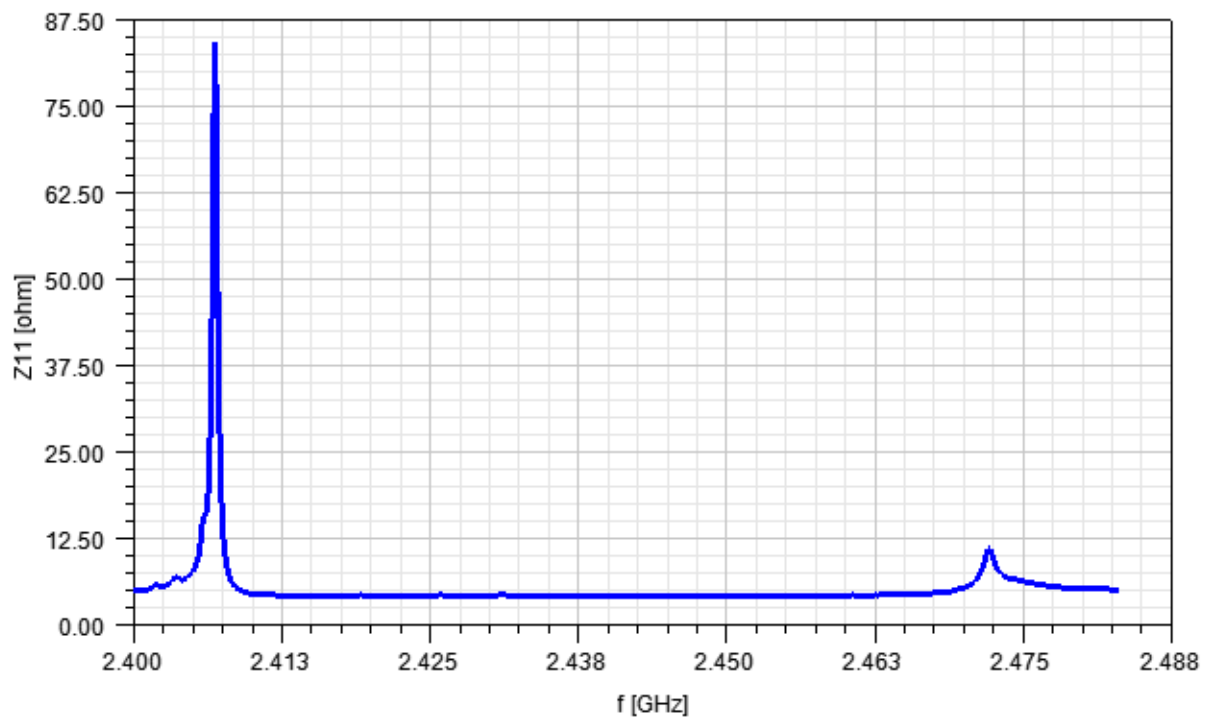
## Ageing



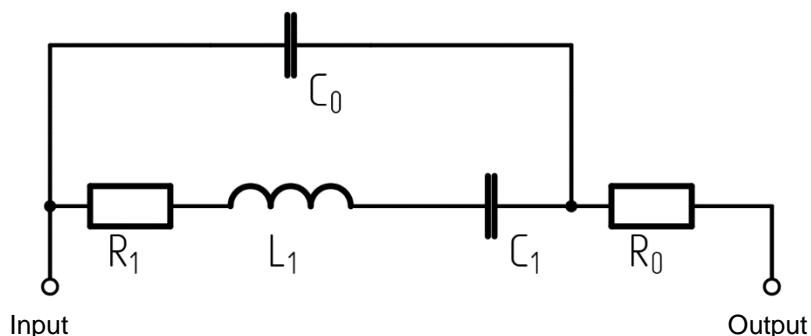
### Magnitude



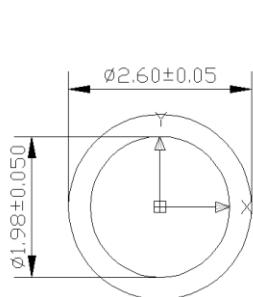
### Impedance



## Equivalent Circuit

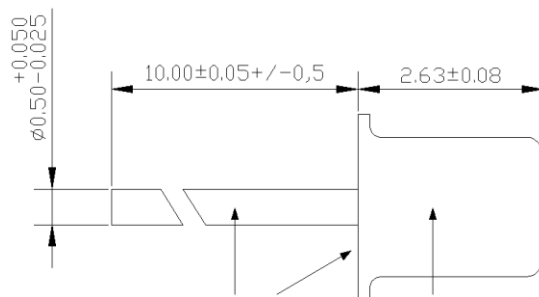


## Package: TO25



dimensions in mm

Pin 1: Input  
 CAP: Output

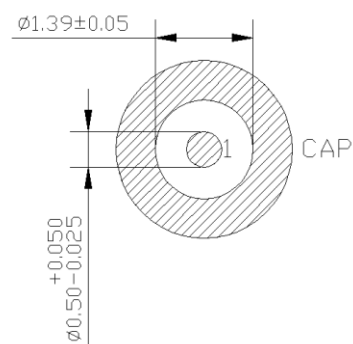


Pin and Socket:  
 NiCo2918

Surface:  
 0.76 μm Au  
 over 2 μm Ni

Cap:  
 NiCo2918

Surface:  
 5~8 μm Ni



## Marking

The marking is located on the cap of the package: figures indicate last digits of the nominal resonance frequency in MHz, e.g. "44" in case of 2444 MHz.

Product ID, Lot Number, delivery date and other information is submitted on a label on transfer package.

