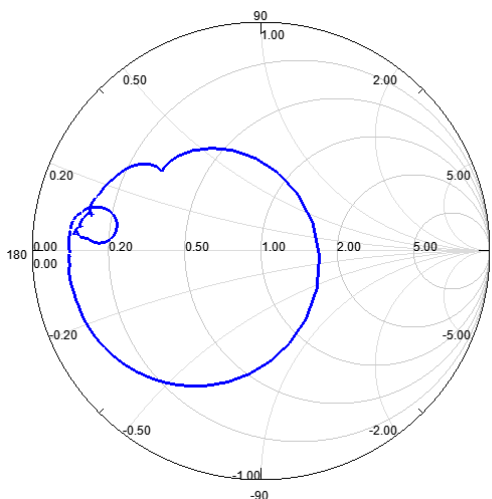


### SS2422BO2 Temperature Sensor (1-port Resonator)

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

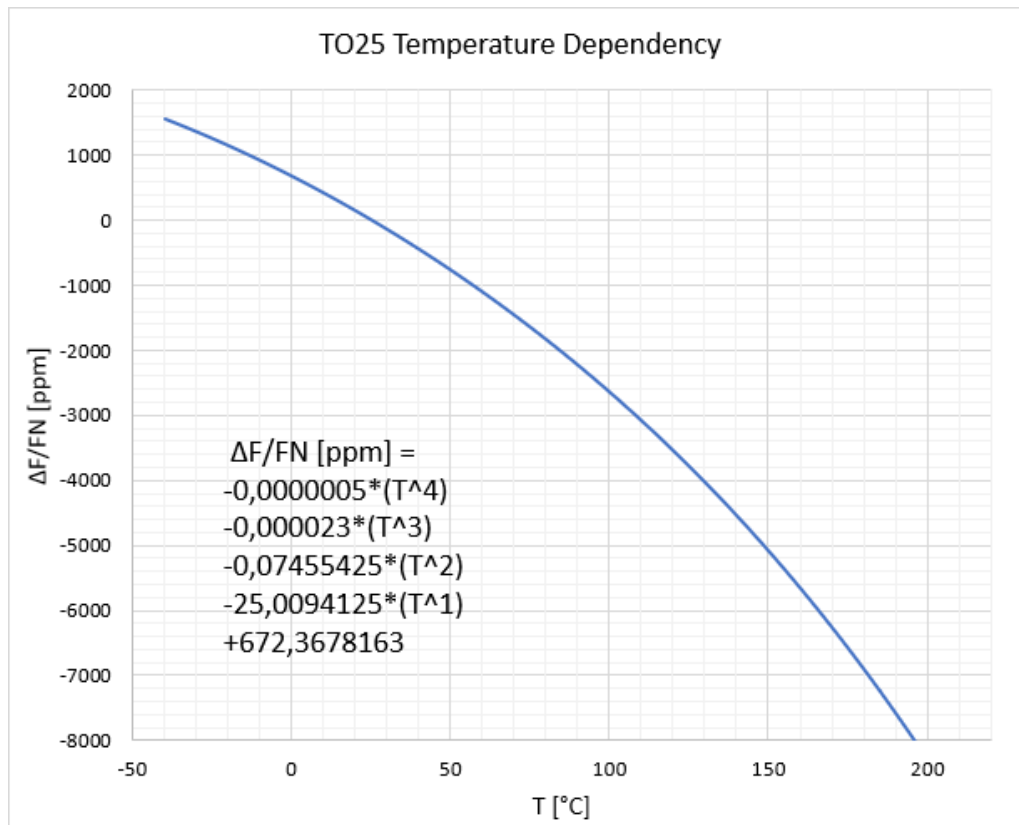
		minimum	typical	maximum	unit			
Nominal frequency *1	f <sub>n</sub>	2421	2422	2423	MHz			
Insertion Loss	I <sub>L</sub>		14,2	17,1	dB			
Unloaded quality factor	Q <sub>U</sub>		4350					
Ageing @200°C		0,9	1,1	1,3	K/1000h			
Equivalent Circuit elements								
Motional capacitance	C <sub>1</sub>		32,8		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	TC <sub>F</sub>	-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					

Electrostatic Sensitive Device

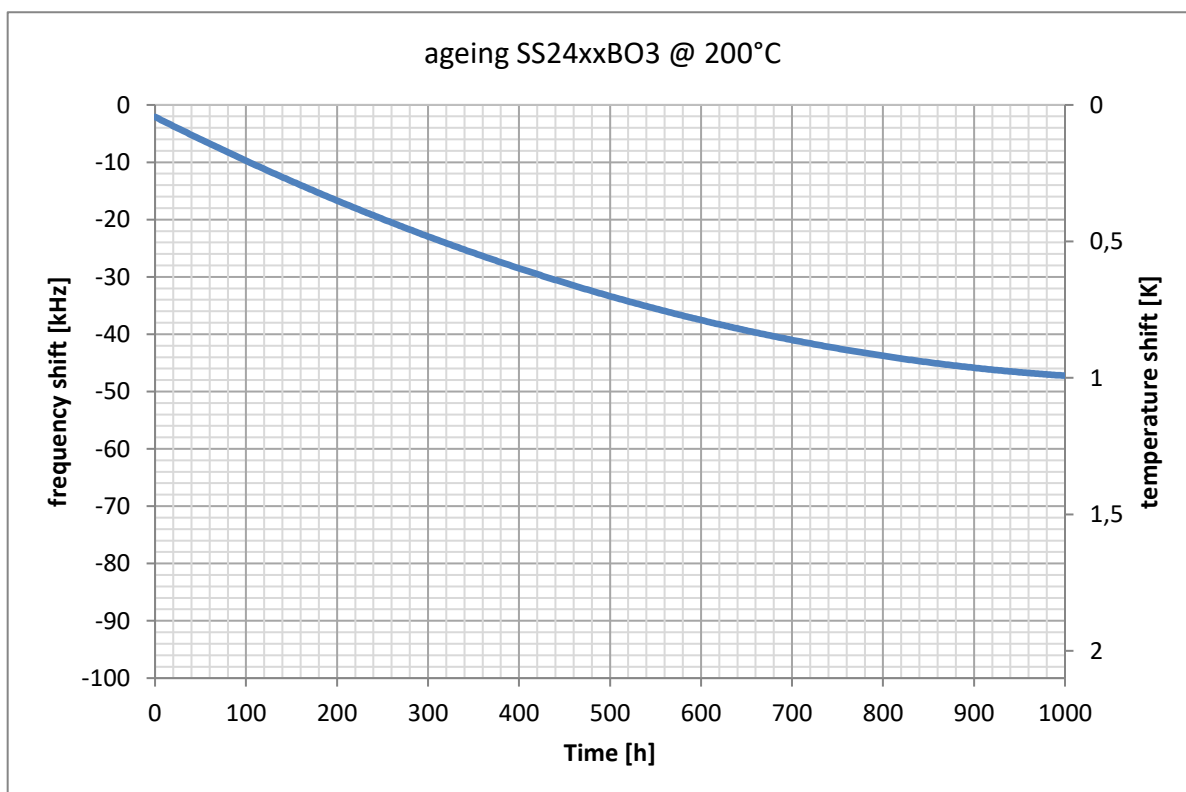
\*1 Nominal frequency is defined as maximum impedance of s11.

## Temperature coefficient of frequency

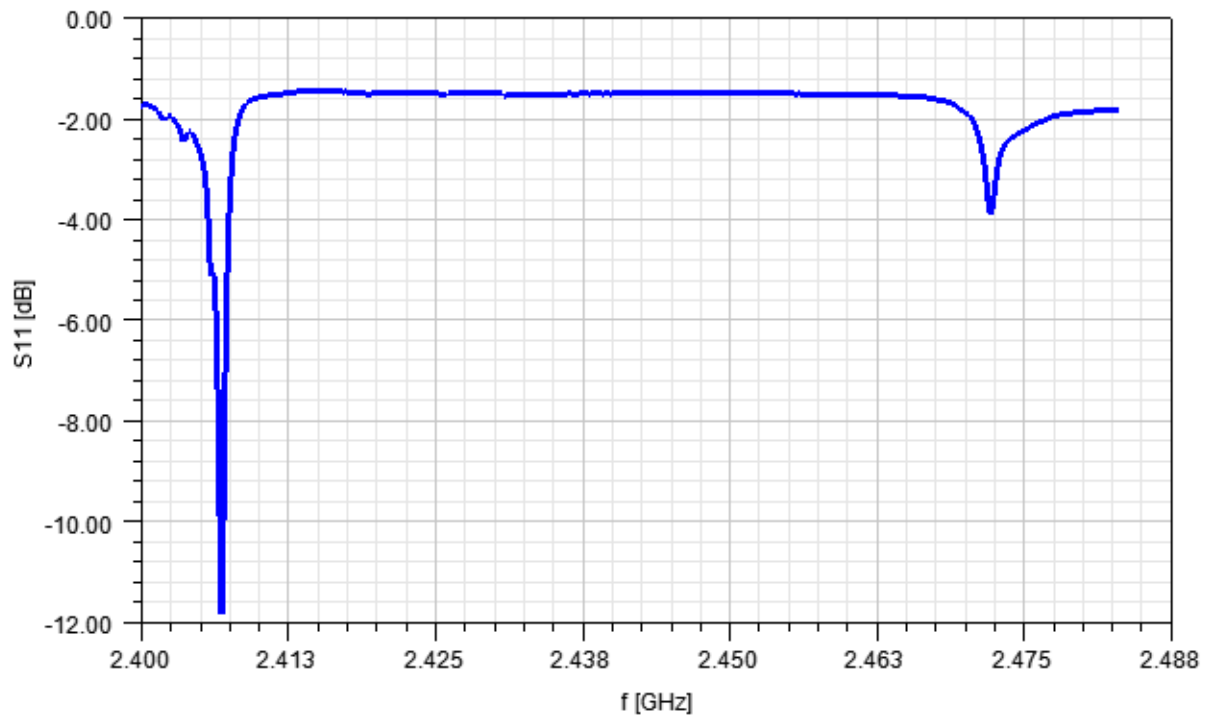
$$\Delta F/F_n = a \cdot T^4 + b \cdot T^3 + c \cdot T^2 + d \cdot T + e \quad \text{with } T \text{ in } ^\circ\text{C}$$



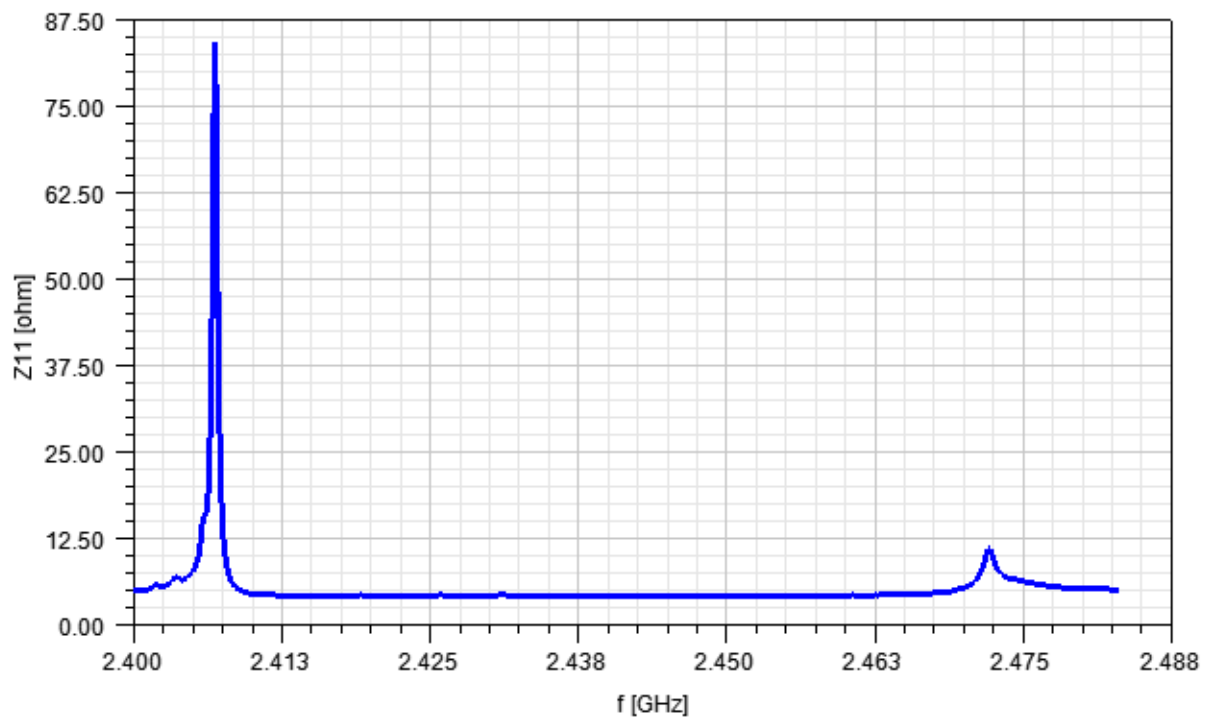
## Ageing



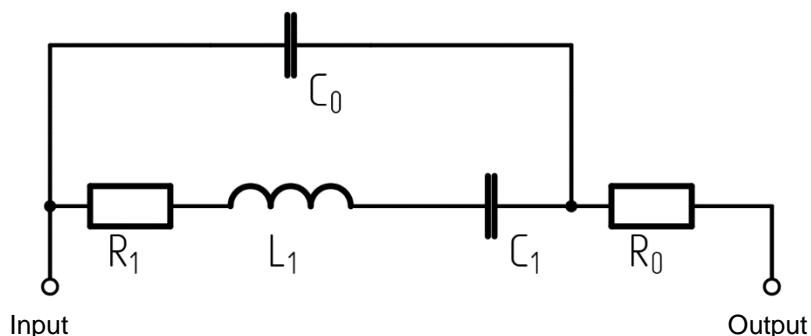
### Magnitude



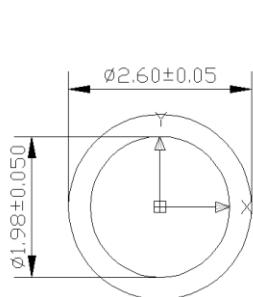
### Impedance



## Equivalent Circuit

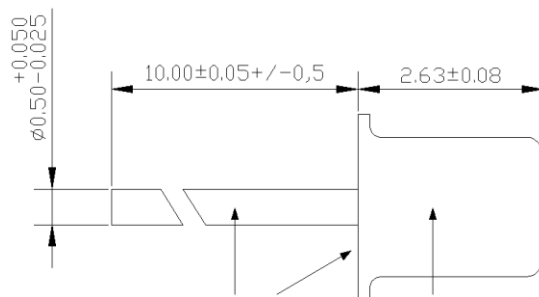


## Package: TO25



dimensions in mm

Pin 1: Input  
 CAP: Output

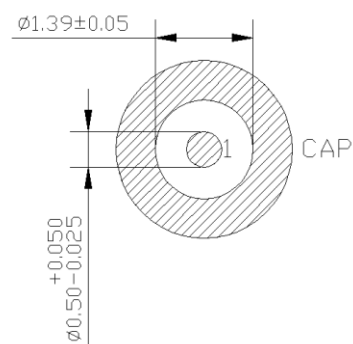


Pin and Socket:  
 NiCo2918

Surface:  
 0.76 μm Au  
 over 2 μm Ni

Cap:  
 NiCo2918

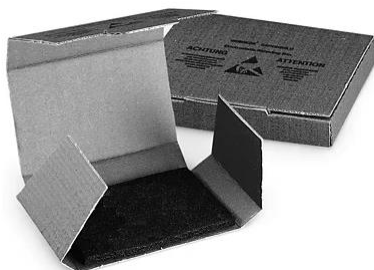
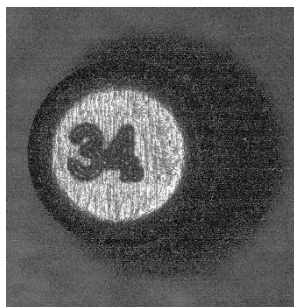
Surface:  
 5~8 μm Ni



## 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.



SAW COMPONENTS Dresden GmbH

Produkt / Product:  
 Bestellnr. / PO-no.:  
 Los / Lot:

Menge / Quantity:  
 Datum / Date:

Sign.: