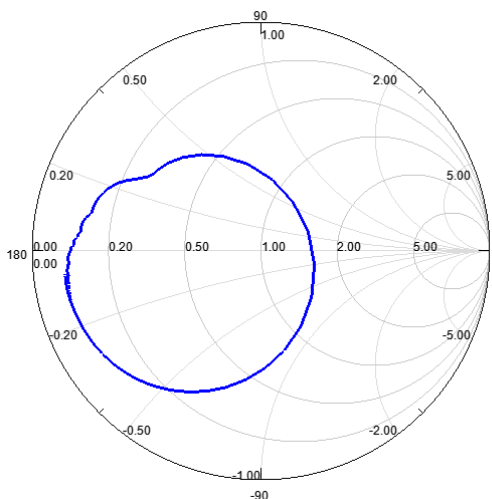


### SS2456BO2 Temperature Sensor (1-port Resonator)

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

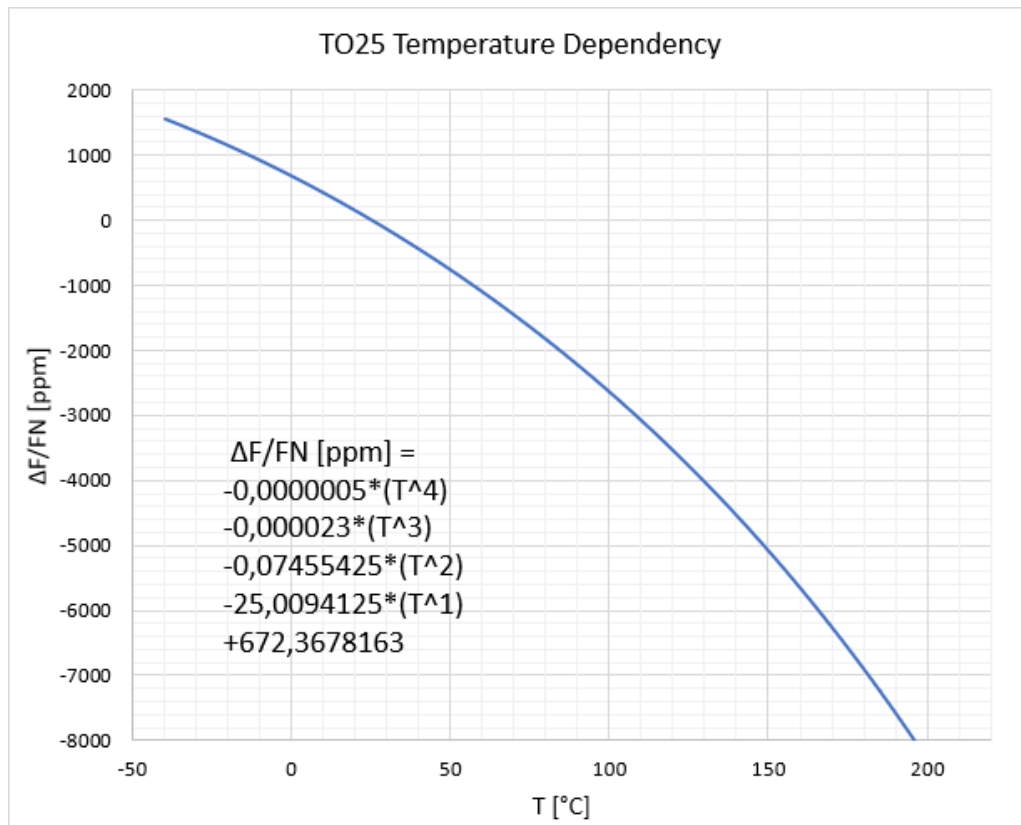
		minimum	typical	maximum	unit
Nominal frequency *1	f <sub>n</sub>	2455	2456	2457	MHz
Insertion Loss	I <sub>L</sub>		14,2	17,1	dB
Unloaded quality factor	Q <sub>U</sub>		4350		
Ageing @200°C		0,9	1,1	1,3	K/1000h
Equivalent Circuit elements					
Motional capacitance	C <sub>1</sub>		24,8		fF
Motional inductance	L <sub>1</sub>		170		nH
Motional resistance	R <sub>1</sub>		0,5		Ω
Parallel capacitance	C <sub>0</sub>		11		pF
Serial resistance	R <sub>0</sub>		3,8		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

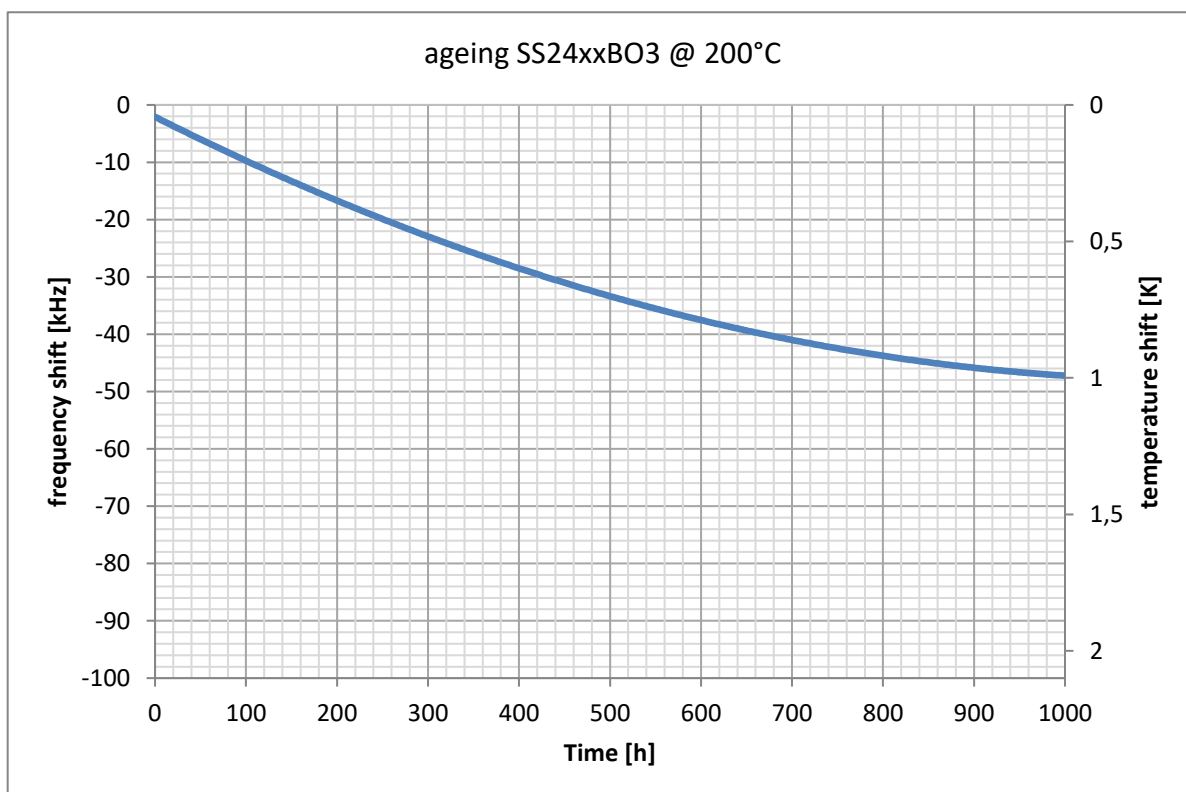
\*1 Nominal frequency is defined as maximum impedance of s11.

### Temperature coefficient of frequency

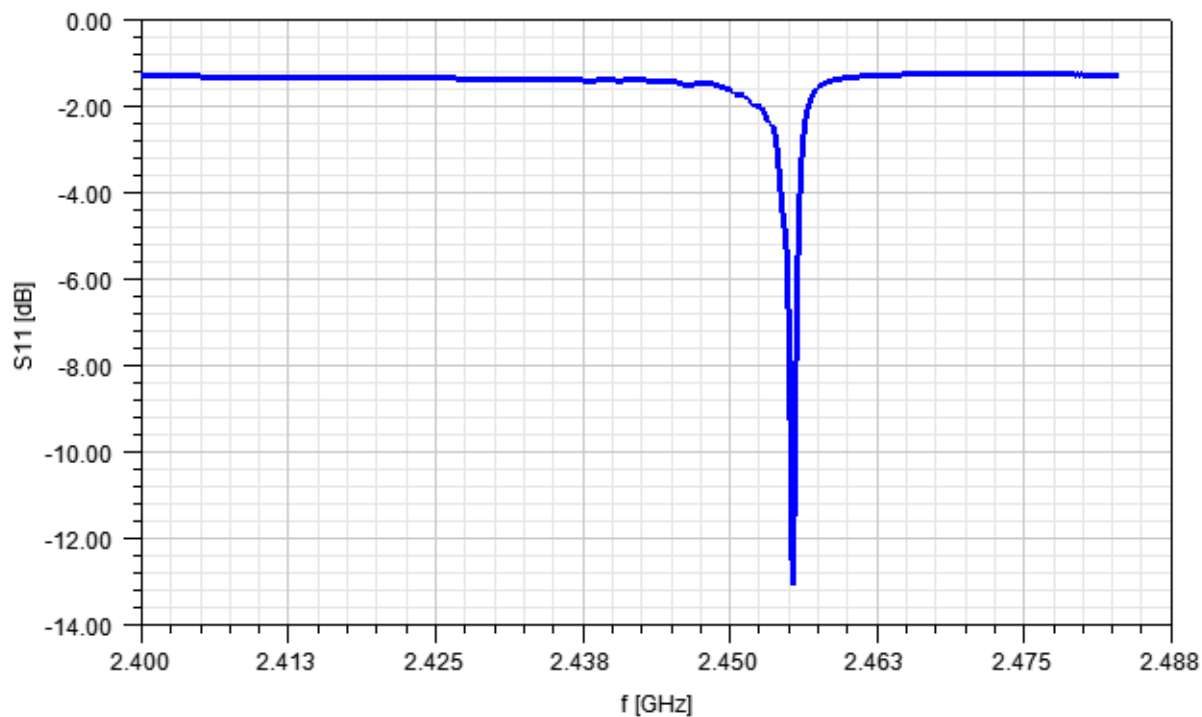
$$\Delta F/F_n = a \cdot T^4 + b \cdot T^3 + c \cdot T^2 + d \cdot T + e \quad \text{with } T \text{ in } ^\circ\text{C}$$



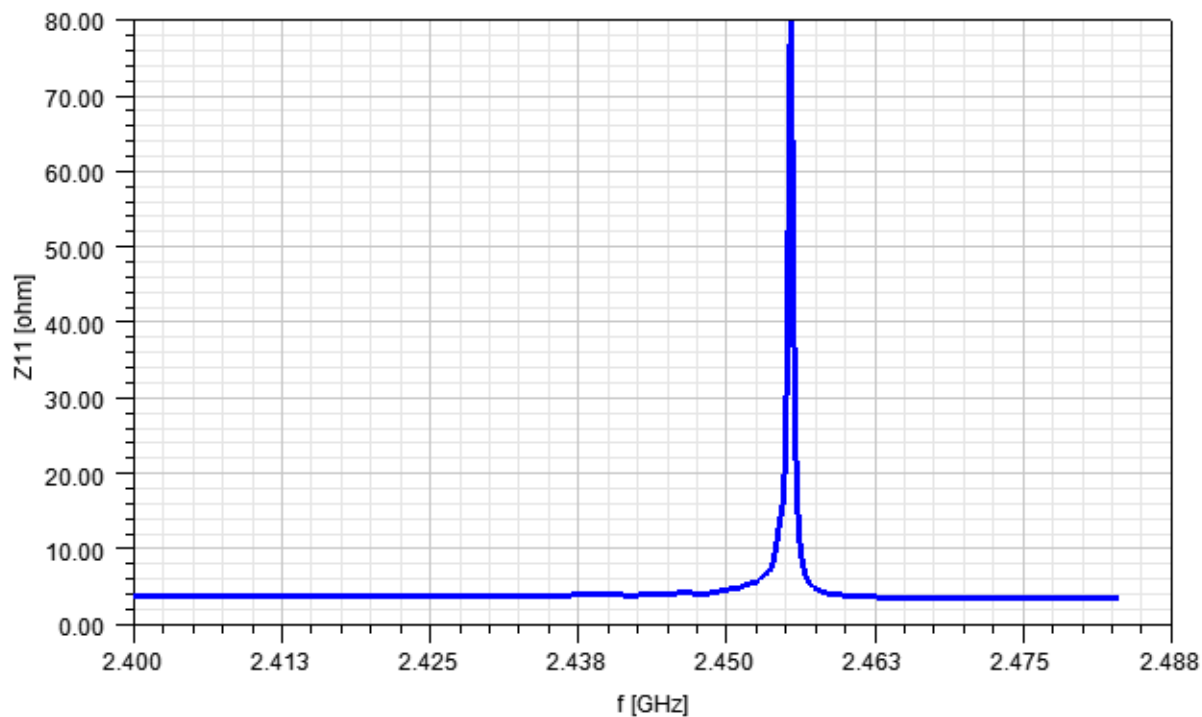
### Ageing



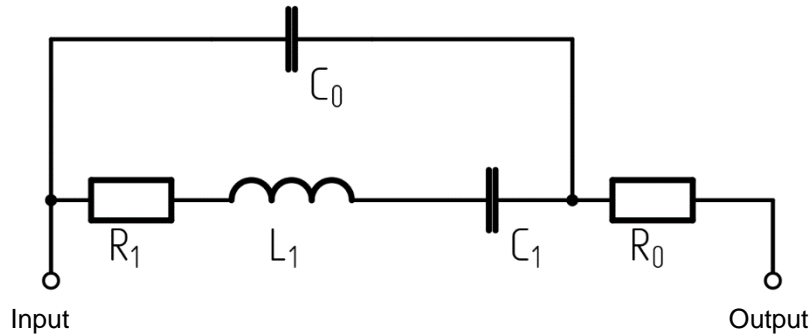
## Magnitude



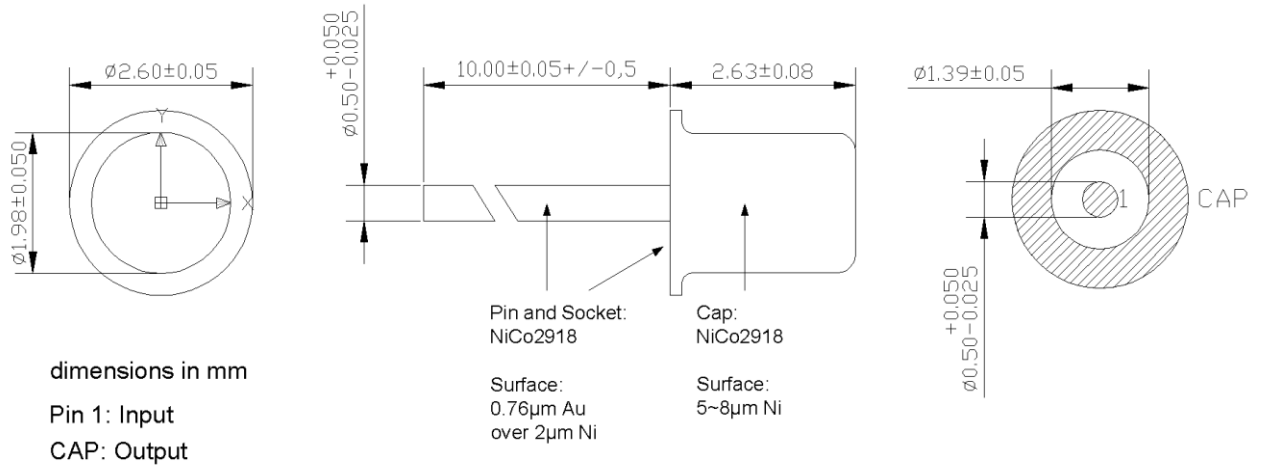
## Impedance



## Equivalent Circuit



## Package: TO25



## 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.

