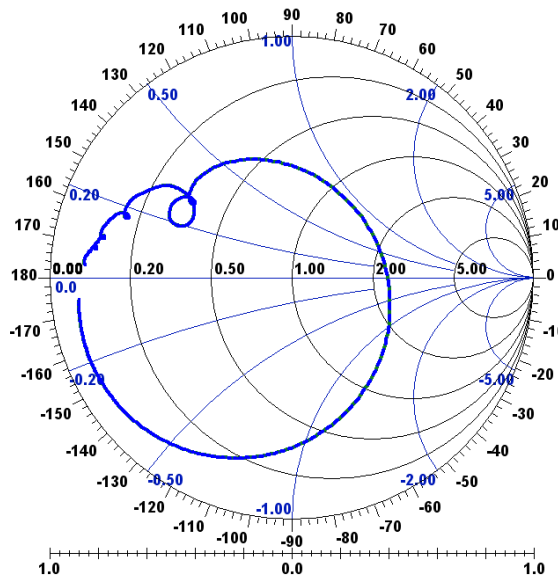


## SS2447BB2 Temperature sensor (1-port Resonator)

This product is lead-free in compliance with RoHs 2011/65/EU.

Typical performance: S11 @ 23°C



### Test Conditions:

RF power	-10 dBm
Temperature	23.0 °C
DC Voltage	0 V
Terminating source impedance ( $Z_S$ ):	50 $\Omega$
Terminating load impedance ( $Z_L$ ):	50 $\Omega$

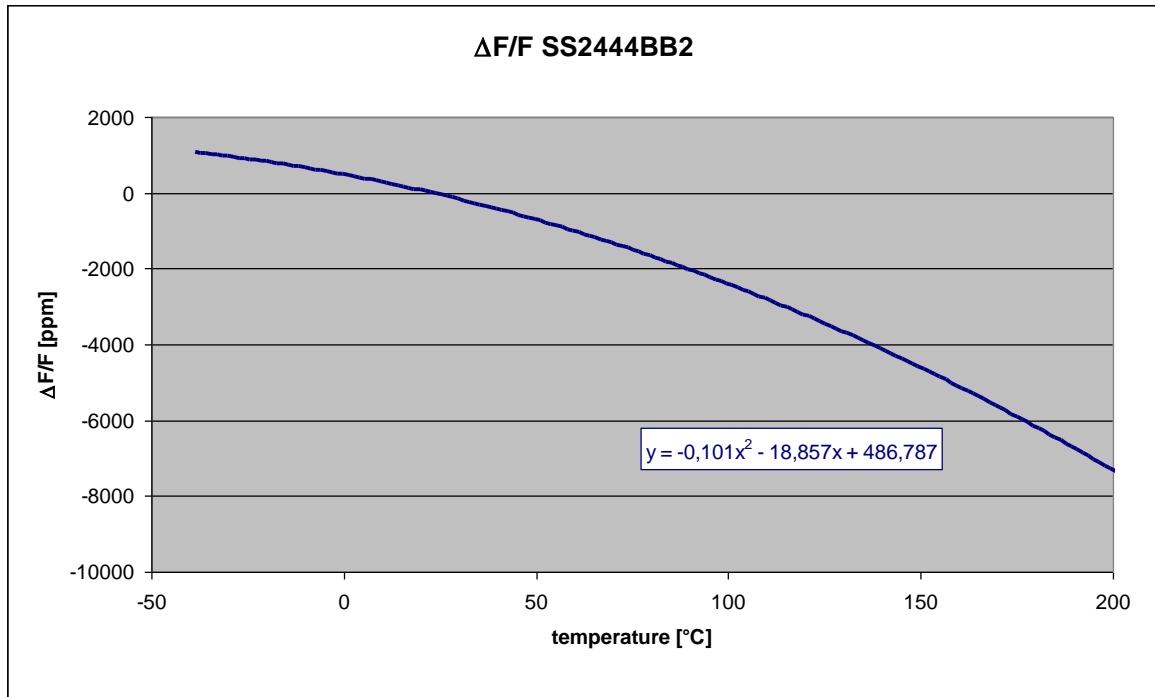
		min	typical	max	unit
Nominal frequency <sup>*1</sup>	$F_n$	2446.16	2446.86	2447.56	MHz
Unloaded quality factor	$Q_U$	7000	8750		
Ageing @200°C				-0.5	K/1000h
<b>Equivalent Circuit elements</b>					
Motional capacitance	$C_1$		7.212		fF
Motional inductance	$L_1$		583.89		nH
Motional resistance	$R_1$		1.03		$\Omega$
serial resistance	$R_0$		2.8		$\Omega$
Parallel capacitance	$C_0$		0.685		pF
Operating temperature range		-40		200	°C
Temperature coefficient of frequency	$TC_F$				
	$\alpha$		-0.101		ppm/K <sup>2</sup>
	$\beta$		-18.86		ppm/K
	$\delta$		486.8		ppm

Electrostatic Sensitive Device

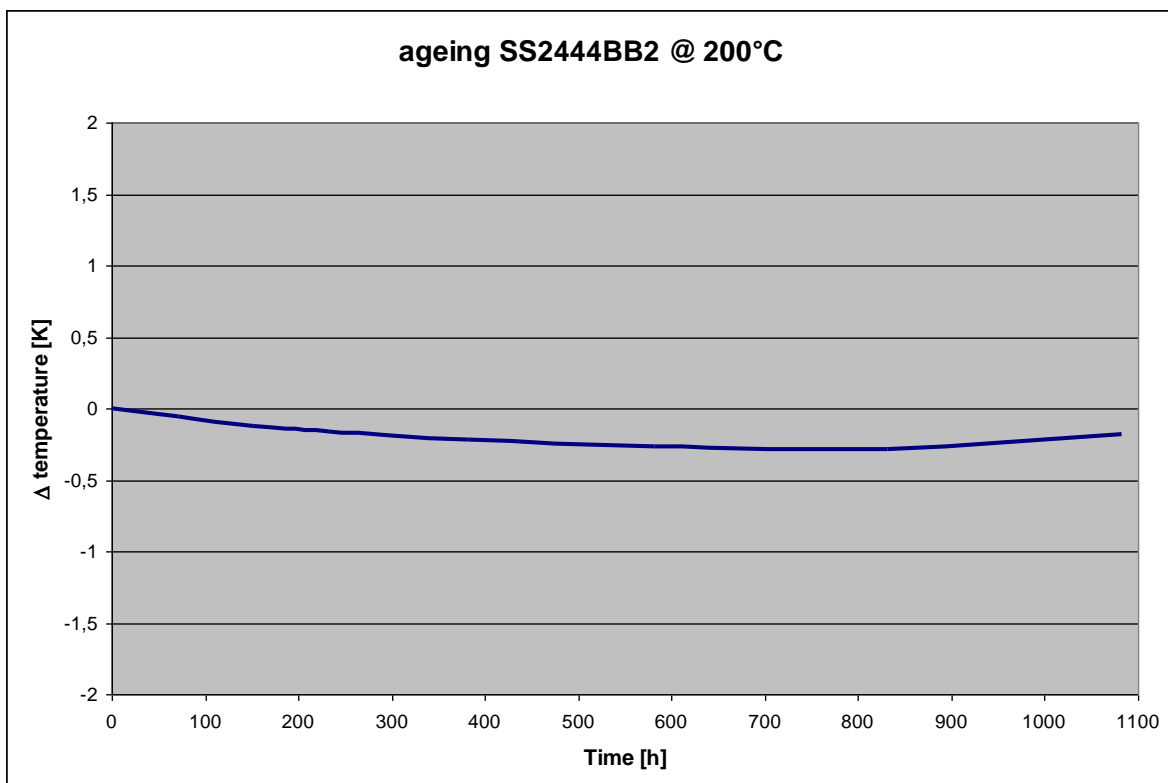
<sup>\*1</sup> Nominal frequency is defined as maximum impedance.

## Temperature coefficient of frequency

$$\Delta F/F_n = \alpha * T^2 + \beta * T + \delta \text{ with } T \text{ in } ^\circ\text{C}$$

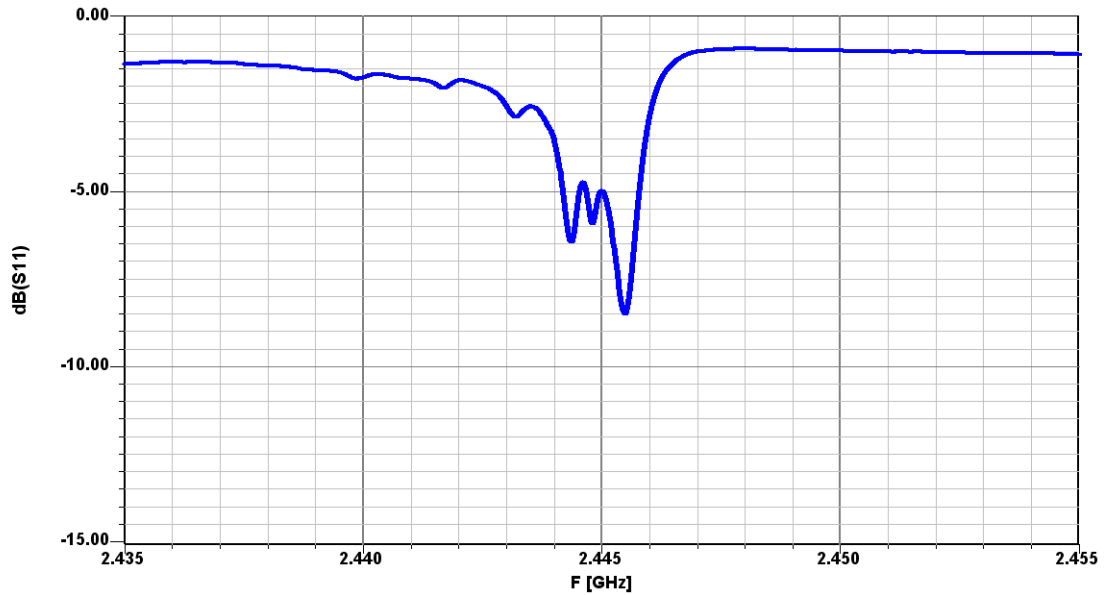


## ageing

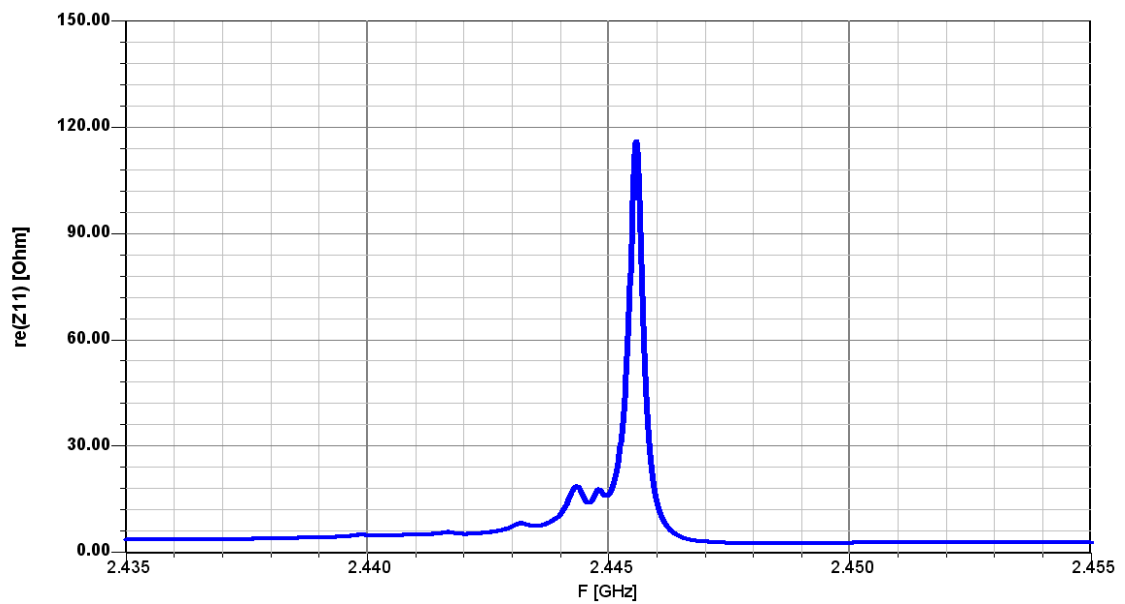


### Typical performance:

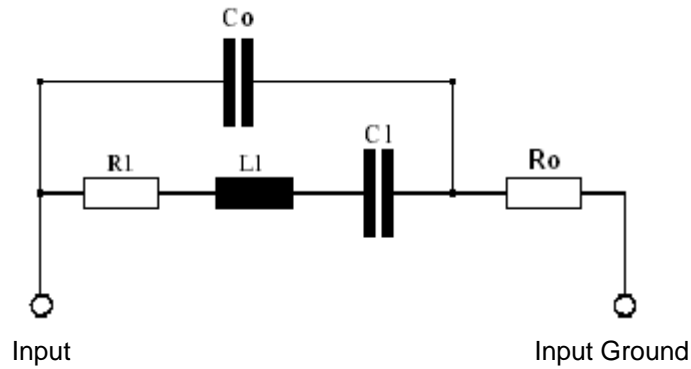
#### Magnitude:



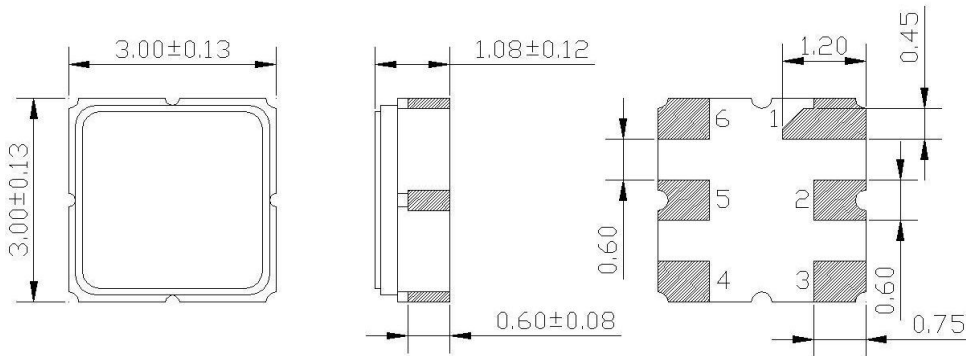
#### Impedance :



### Equivalent Circuit



### Package: S25 / 3.0\*3.0mm<sup>2</sup>



All dimensions in mm

Pin 1	Case ground	Pin 6	not connected
Pin 2	Antenna (Input/Ground)	Pin 5	Antenna (Ground/Input)
Pin 3	not connected	Pin 4	Case ground

### Marking

S...	Type
XXZZLL	Date code
XX	Year
ZZ	Calendar week
LL	Lot Number

