



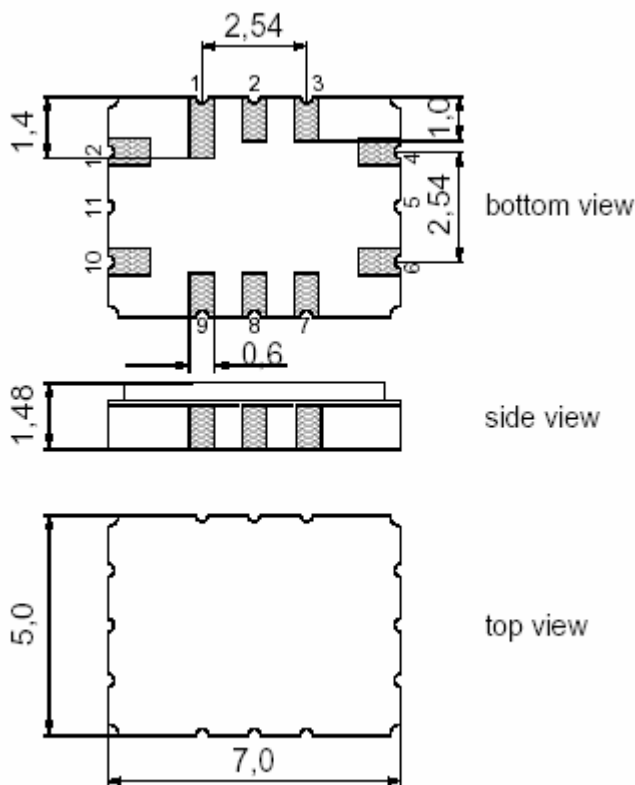
## SP38003 MHz SAW Filter Electrical Characteristic

### Features

- For 3G base station applications
- Usable bandwidth of 9.8 MHz
- High attenuation
- Ceramic Surface Mount Package (SMP)
- Small size

### Package

### Pin Configuration



Surface Mount 7.01 x 5.0 x 1.48 mm :

12	Input
6	Output
10	Balanced input or input ground
4	Balanced output or output ground
3,9	Case ground
1,2,7,8	Not connected

Dimensions shown are nominal in millimeters

All tolerances are +/-0.15mm except overall length and width +/-0.13mm

Body:  $Al_2O_3$  ceramic

Lid: Kovar, Ni plated

Terminations: Au plating 0.5 -1.0um, over a 2 - 6um Ni plating



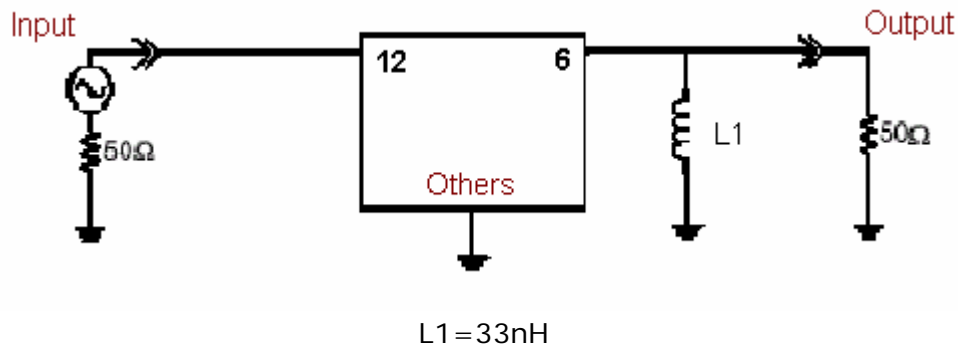
## Electrical Specifications

Parameter	Unit	Minimum	Typical	Maximum
Center Frequency, $F_c$	MHz	-	380	-
Insertion Loss at 380 MHz	dB	-	23	25
Bandwidth at $-1.0$ dB (reference is loss at $F_c$ )	MHz	9.2	10.25	-
Bandwidth at $-3.0$ dB (reference is loss at $F_c$ )	MHz	9.8	11.49	-
<b>Template on the amplitude</b> , reference is loss at $F_c$				
Attenuation at 370 MHz	dB	35	42	-
Attenuation at 372.5 MHz	dB	15	40	-
Attenuation at 387.5 MHz	dB	15	40	-
Attenuation at 390 MHz	dB	35	45	-
<b>Stopband rejection</b>				
from 10 MHz to 300 MHz	dB	25	40	-
from 300 MHz to 340 MHz	dB	40	50	-
from 340 MHz to 360 MHz	dB	45	50	-
from 395 MHz to 410 MHz	dB	40	48	-
from 410 MHz to 440 MHz	dB	35	50	-
from 440 MHz to 600 MHz	dB	25	40	-
Amplitude ripple within $F_c \pm 4.6$ MHz	dB <sub>p-p</sub>	-	0.7	1.0
Group delay variation within $F_c \pm 4.6$ MHz	nsec	-	20	150
Operating Temperature Range	°C	-30 to +85 °C		

### Notes:

1. All specifications are based on the test circuit shown below
2. Electrical margin has been built into the design to account for the variations due to manufacturing tolerances
3. Relative to Insertion loss at 380 MHz
4. This specification is valid for room temperature only

## Matching Schematic



Notes: Actual matching values may vary due to PCB layout and parasitics



**Typical Performance (at +25oC)**

