

NDK CONFIDENTIAL



## Specification review result of 1237MHz SAW filter

CUSTOMER: ELTECH COMPONENT LTD

DESCRIPTION: Specification review result of 1237MHz SAW filter

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REVIEW DATE: 31-Aug-2022

PREPARED BY: T.Hirocho

CHECKED BY: -----

APPROVED BY: T.Tsuda

**ENGINEERING DEPT.**  
**NDK SAW devices Co., Ltd.**

Gentleman:

This is a specification review result of 1237MHz SAW filter.  
Please confirm their contents.

## Specifications

### Maximum ratings

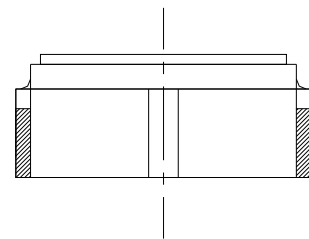
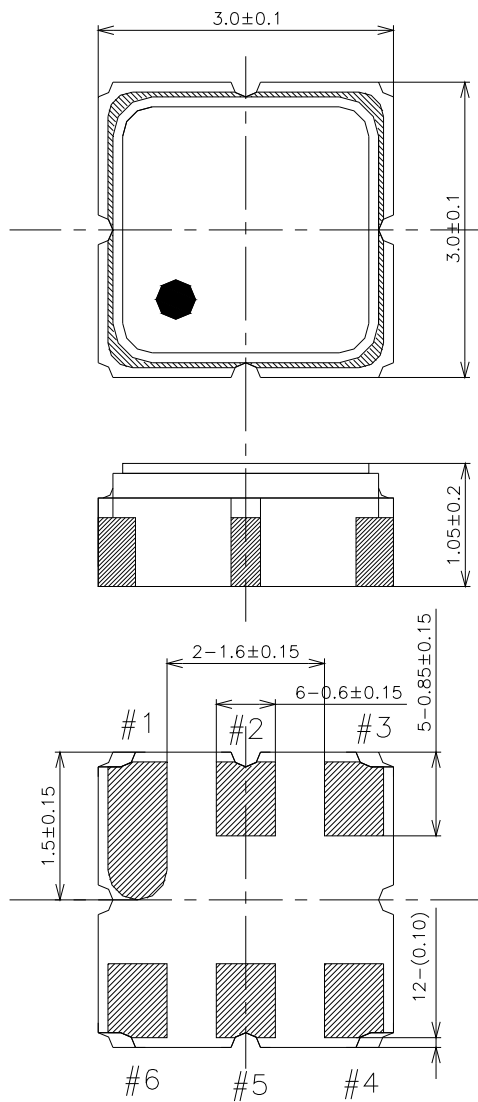
Parameter	Unit	Your request			Our proposal		
		Min.	Typ.	Max.	Min.	Typ.	Max.
Operating temperature	degC	-40	-	+85	-40	-	+85
Storage temperature	degC	-55	-	+125	-40	-	+85
Input power level (CW +55degC 50,000h)	dBm	-	-	+17	-	-	+17
TCf	ppm/K	-	-70	-	-	-50	-
Package SIZE	mm	3.0 x 3.0			3.0 x 3.0 x 1.05		
Terminating impedance	ohm	50			50		

### Electrical Characteristics

Parameter	Unit	Your request			Our proposal (*1)			
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Model Name	-	-			-			
Center Frequency (Fn)	MHz	1237			1237			
Maximum Insertion Loss (within 1217 MHz to 1257MHz)	dB	-	2.0	4.0		2.8	4.0	
Amplitude Ripple (within 1217 MHz to 1257MHz)	dB	-	0.5	1.75	-	1.0	2.2	
Group Delay Variation (within 1217 MHz to 1257MHz)	ns	-	6	10	-	14.3	40	
Attenuation (Relative 0dB)								
1	1 MHz to 100 MHz	dB	30	37	-	45	70	-
2	100 MHz to 1000 MHz	dB	25	28	-	35	46	-
3	1000 MHz to 1177 MHz	dB	30	34	-	30	45	-
4	1297 MHz to 1338 MHz	dB	25	47	-	40	55	-
5	1338 MHz to 2000 MHz	dB	30	33	-	30	44	-

Note : (\*1) Our proposal is based on simulation values. These values may be changed after trial production.

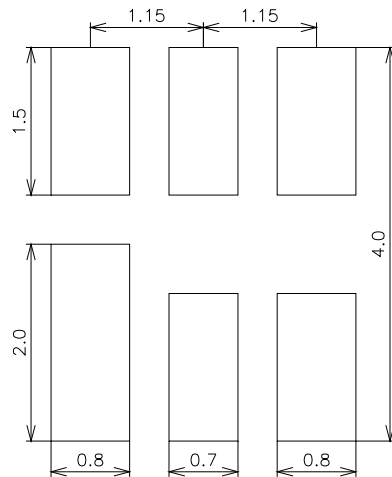
**Package dimensions and pin connections**



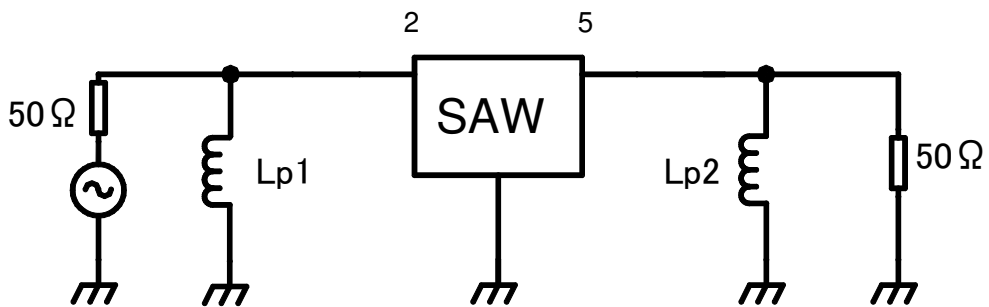
Terminal land connection	
2	INPUT
5	OUTPUT
1,3,4,6	GND

Unit [mm]  
Tolerance  $\pm 0.2$ mm

**Land pattern (recommended)**

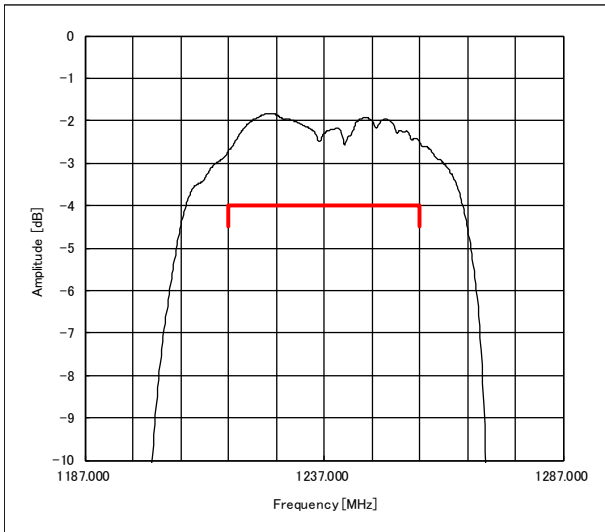


**Matching networks**

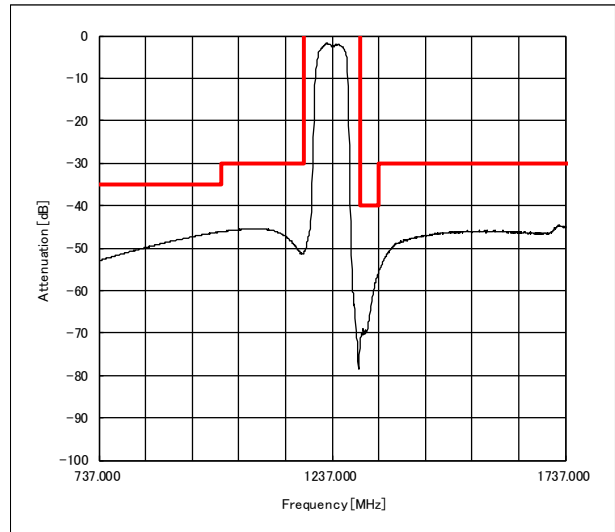


Item	Value	Note
Lp1	6.2 nH	Software fixture (Inductor Q : 36)
Lp2	6.2 nH	Software fixture (Inductor Q : 36)

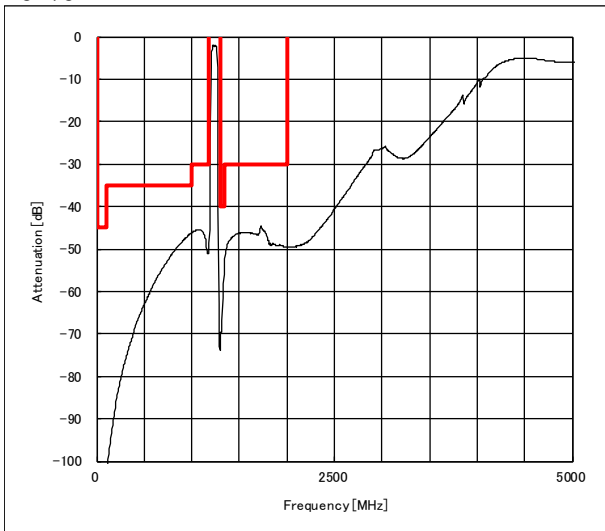
**Filter characteristics ( Simulation result )**



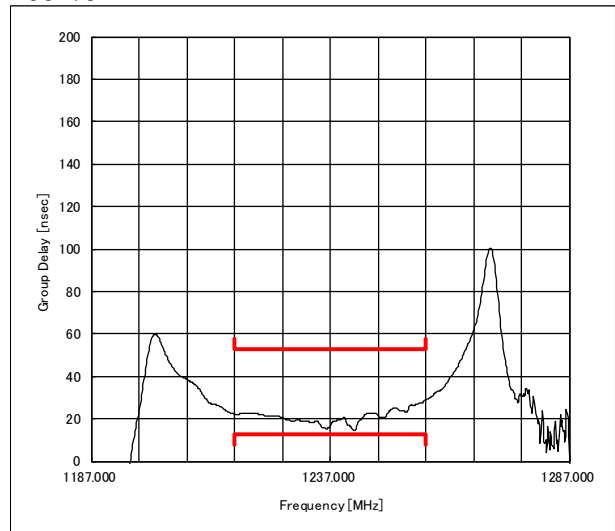
Pass band characteristics (Amplitude)  
Center : 1237 MHz Span : 100 MHz  
1dB/div



Out-of-band characteristics (Amplitude)  
Center : 1237 MHz Span : 1000MHz  
10dB/div



Out-of-band characteristics (Amplitude)  
Center : 2500 MHz Span : 5000MHz  
10dB/div



Pass band characteristics (Group delay)  
Center : 1237 MHz Span : 100 MHz  
20ns/div

\* Red Line : Our Proposal