

- 138.24 MHz IF SAW Filter / 22.46 MHz Bandwidth
- Revision 0: 02 Dec. 2008

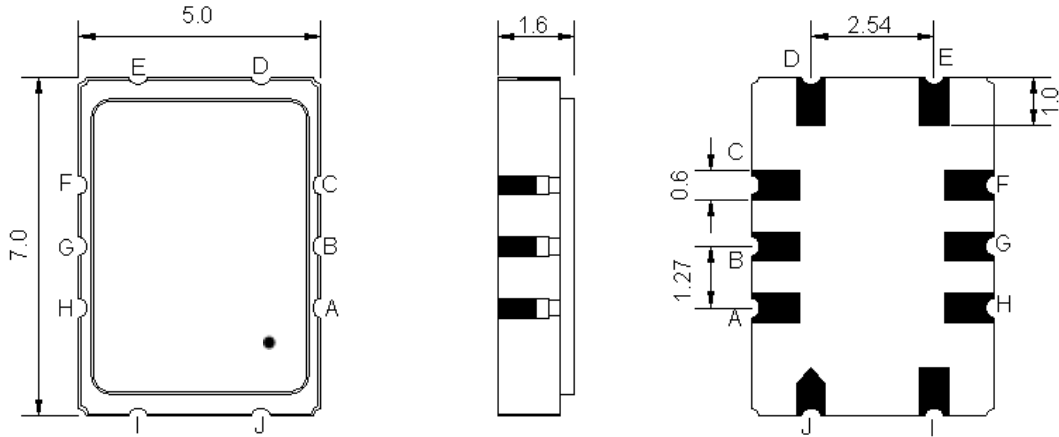
Electrical Characteristics

MAXIMUM RATING				
PARAMETERS DESCRIPTION	UNIT	MINIMUM	TYPICAL	MAXIMUM
Operating Temperature Range	°C	-40	-	85
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V	-	-	10
Maximum Input Power	dBm	-	-	10
Source Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Load Impedance (single ended) ⁽¹⁾	Ω	-	50	-
Package type & size	S			
Length x Width	mm ²	-	7.0 x 5.0	-
Height	mm	-	-	1.7

ELECTRICAL SPECIFICATION				
PARAMETERS DESCRIPTION	UNIT	MINIMUM	TYPICAL	MAXIMUM
Center Frequency (Fo)	MHz	-	138.24	-
Insertion Loss at Fo	dB	-	9.6	11.5
Temperature Coefficient	ppm/°C	-	-86	-
Passband Ripple Variation (128.24MHz~148.24MHz)	dB _{p-p}	-	0.3	1.0
Group Delay Variation (128.24MHz~48.24MHz)	nsec	-	25	50
Absolute Delay at Fo	µsec	-	0.72	-
Bandwidth at -1.0 dB	MHz	-	22.4	-
Bandwidth at -3.0 dB	MHz	-	23.7	-
Bandwidth at -40.0 dB	MHz	-	30.0	-
Relative Attenuation				
10 MHz ~ 108.24 MHz	dB	54	58	-
108.24MHz ~ 117.52MHz	dB	50	53	-
122.88MHz	dB	45	53	-
220.4MHz ~ 271.12MHz	dB	58	75	-
271.12MHz ~ 1000MHz	dB	40	70	-

Notes : (1) With Matching Network (Ref. Testing Environment Circuit as shown below).
Those impedances could be modified with different impedance values and/or structures, if necessary.

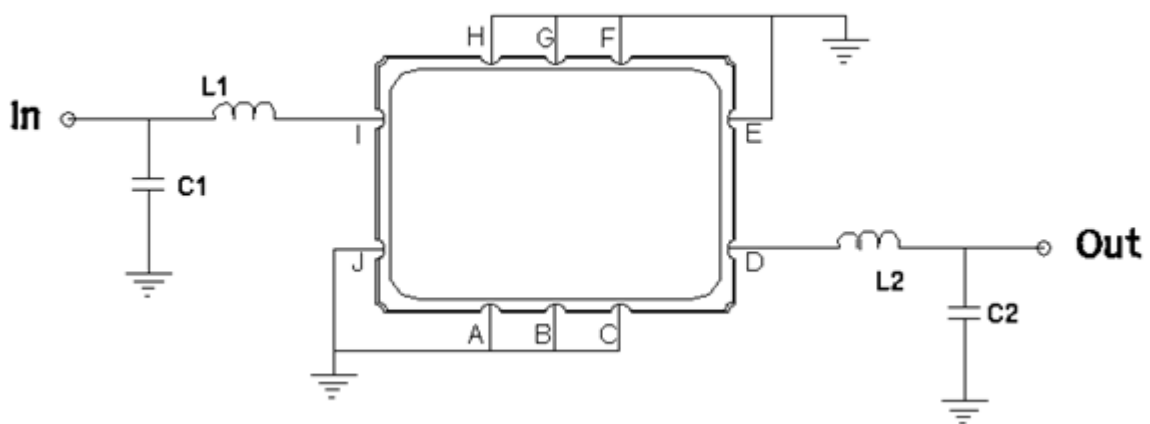
Package Dimensions



- ① **TRANSKO:** Brand
- ② **TL13820B:** Model Name
- ③ **X :** Date Code (Year)
- ④ **Y :** Date Code (Month)
- ⑤ **Z :** Date Code (Date)
- : Index Dot

Pin Description	
A, B, C, E, F, G, H, J	Ground
I	Input
D	Output

Testing Environment

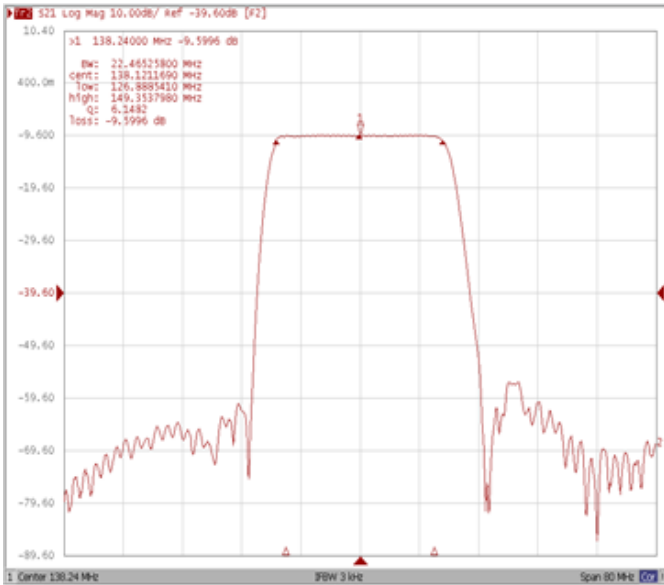


Test Fixture & Values	
Input	L1 = 47 nH, C1 = 20pF
Output	L3 = 68 nH, C1 = 36 pF
Source/Load Impedance	50 Ω

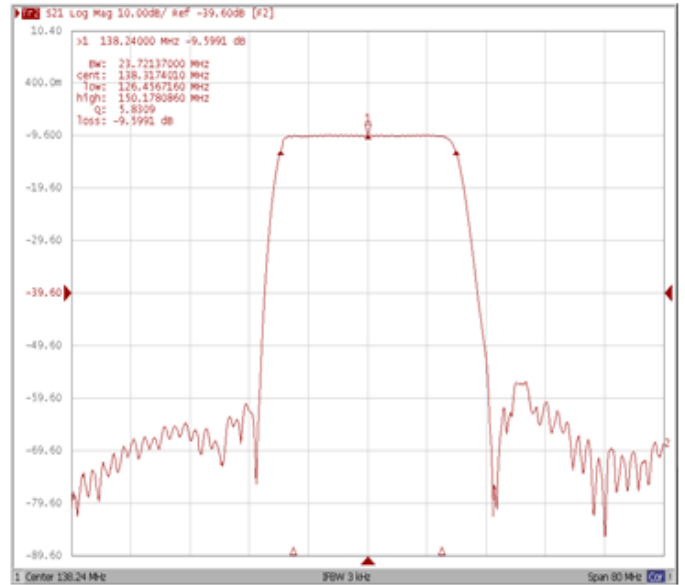
Frequency Characteristics

Frequency Response

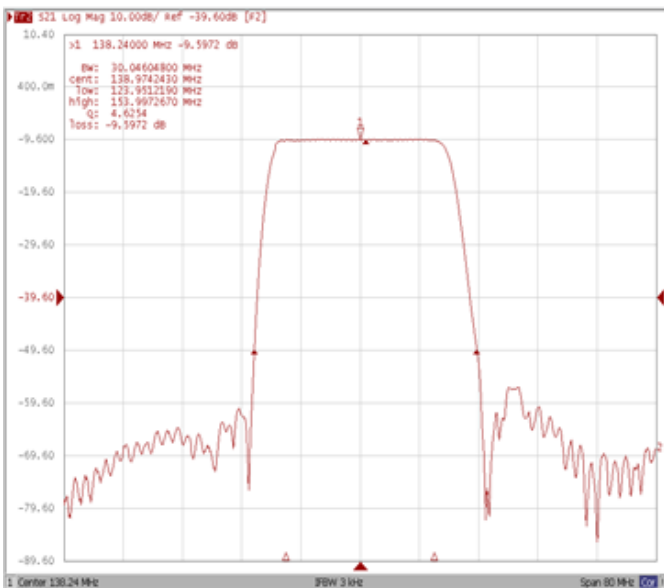
Bandwidth at -1.0 dB



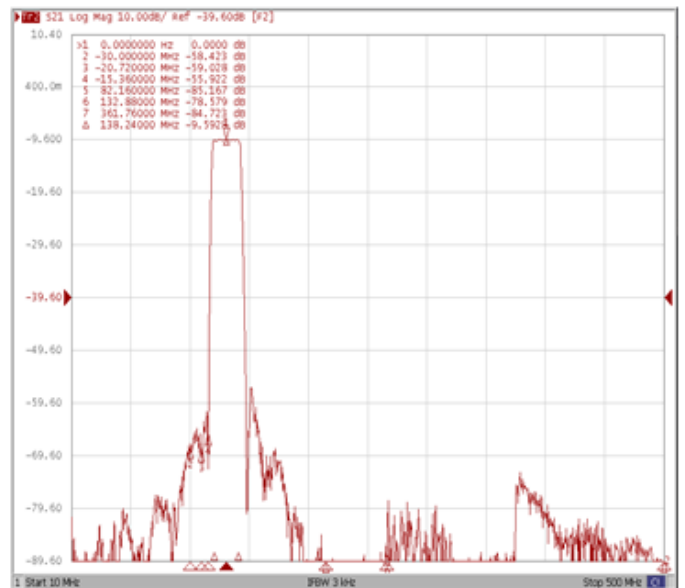
Bandwidth at -3.0 dB



Bandwidth at -40.0 dB

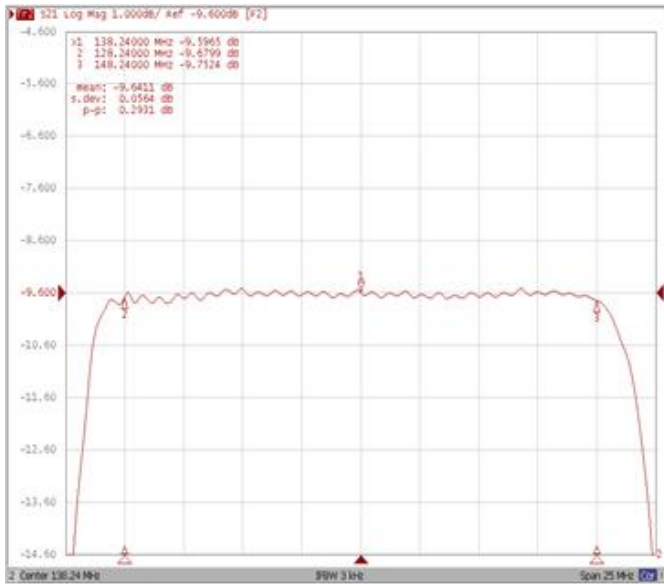


WIDE

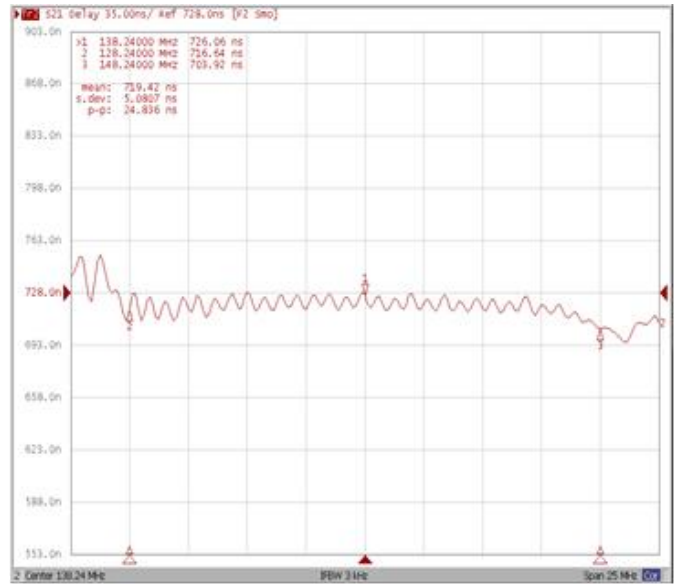


Frequency Response

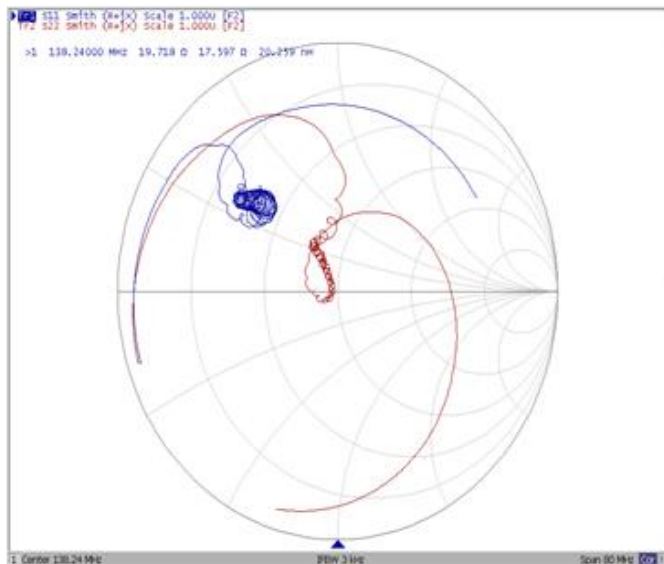
Ripple Variation (128.24MHz ~ 148.24MHz)



Group Delay Variation F(128.24MHz ~ 148.24MHz)



Smith Chart



VSWR

