

- 135.00 MHz IF SAW Filter / 21.50 MHz Bandwidth
- Revision 0: May 2013

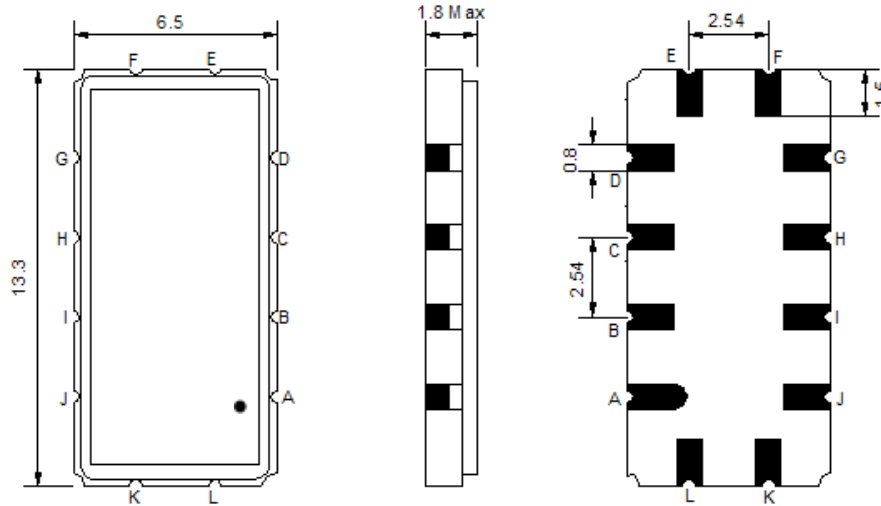
Electrical Characteristics

MAXIMUM RATING				
PARAMETERS DESCRIPTION	UNIT	MINIMUM	TYPICAL	MAXIMUM
Operation Temperature Range	°C	-	25	-
Storage Temperature Range	°C	-45	-	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	S90			
Length x Width	mm ²	-	13.3 x 6.5	-
Height	mm	-	-	1.8

ELECTRICAL SPECIFICATION				
PARAMETERS DESCRIPTION	UNIT	MINIMUM	TYPICAL	MAXIMUM
Center Frequency (Fo)	MHz	-	135.00	-
Insertion Loss at Fo	dB	-	13.00	15.00
Group Delay Variation at Fo ± 9.5 MHz	nsec	-	30	100
Absolute Delay at Fo	usec	-	0.99	1.20
Passband Ripple Variation at Fo ± 9.5 MHz	dB _{p-p}	-	0.45	1.0
Bandwidth at -1dB	MHz	21.20	21.50	-
Bandwidth at -3dB	MHz	-	22.30	-
Bandwidth at -40dB	MHz	-	25.30	25.70
Ultimate Rejection	dB	40	45	-
Relative Attenuation				
Fo - 13.0 MHz	dB	40	48	-
Fo + 13.0 MHz	dB	40	50	-
Temperature Coefficient	ppm/°C	-	-86	-

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.

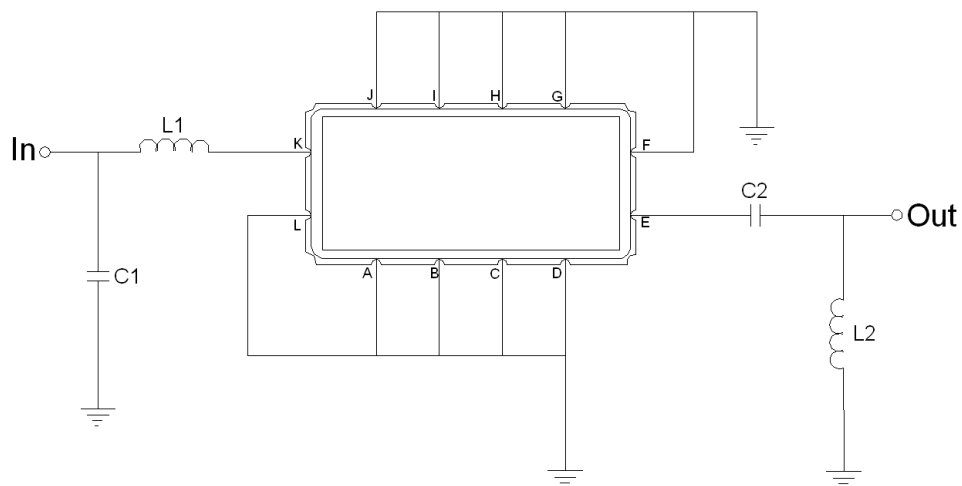
Package Dimensions



- ① **TRANSKO:** Brand
- ② **TF-013503:** Model Name
- ③ **X :** Date Code (Year)
- ④ **Y :** Date Code (Month)
- ⑤ **Z :** Date Code (Date)
- : Index Dot

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

Testing Environment



Test Fixture & Values	
Input	L1 = 27nH, C1= 56pF
Output	L2 = 27nH, C1= 82pF
Source/Load Impedance	50 Ω

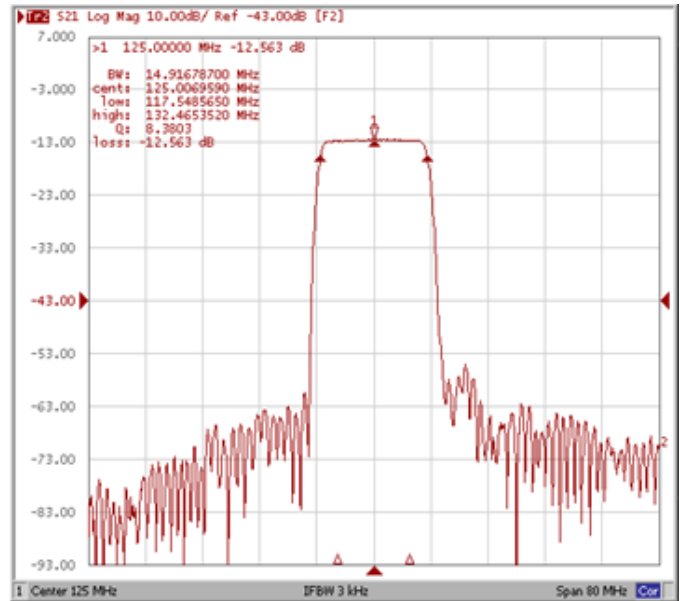
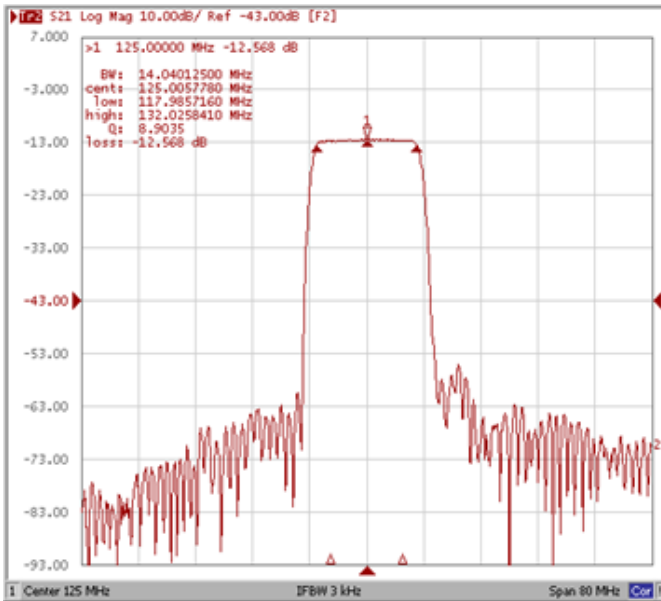
Frequency Characteristics

Frequency Response

Operating Temperature: +25°C

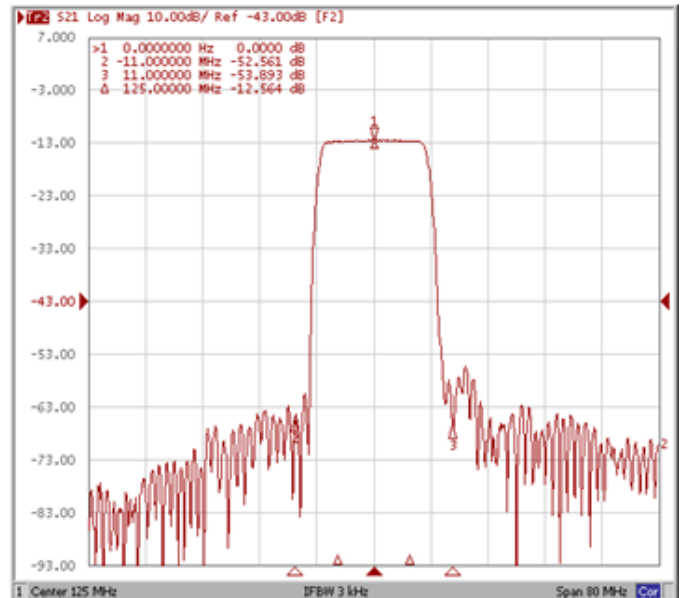
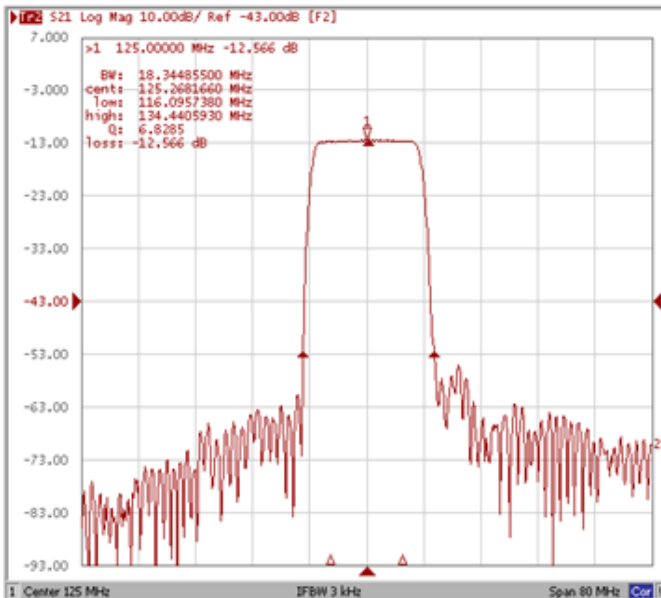
Bandwidth at -1.0 dB

Bandwidth at -3.0 dB



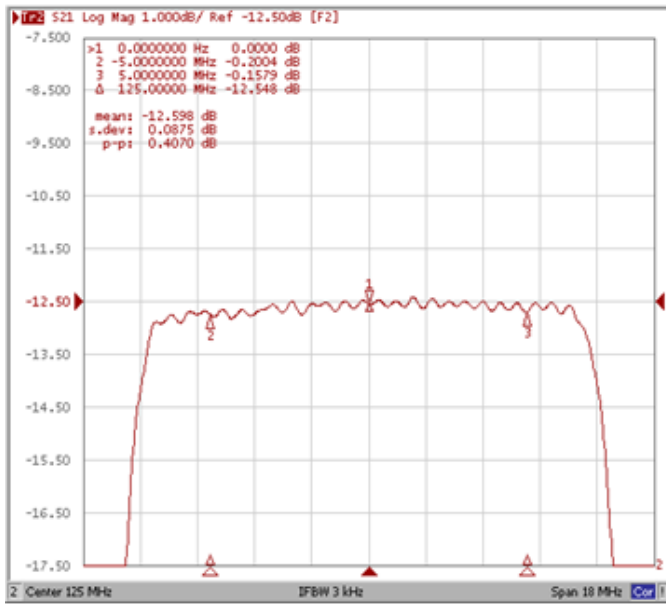
Bandwidth at -40.0 dB

Relative Attenuation Fo ± 13.0 MHz

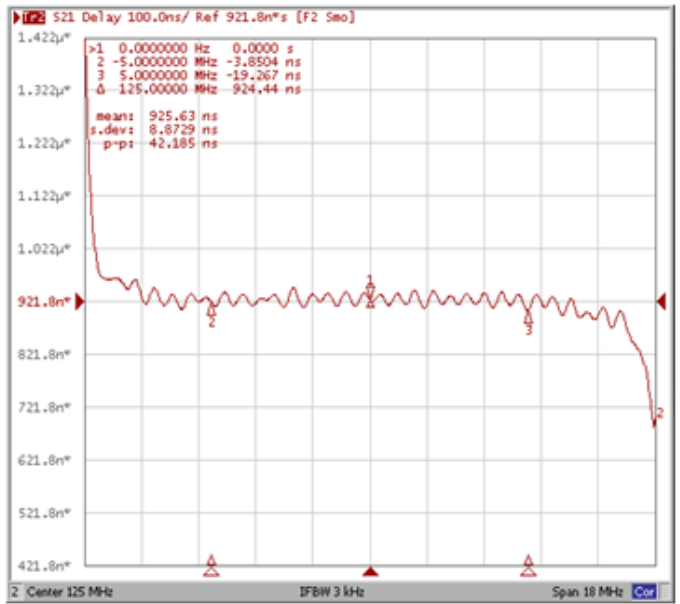


Frequency Response

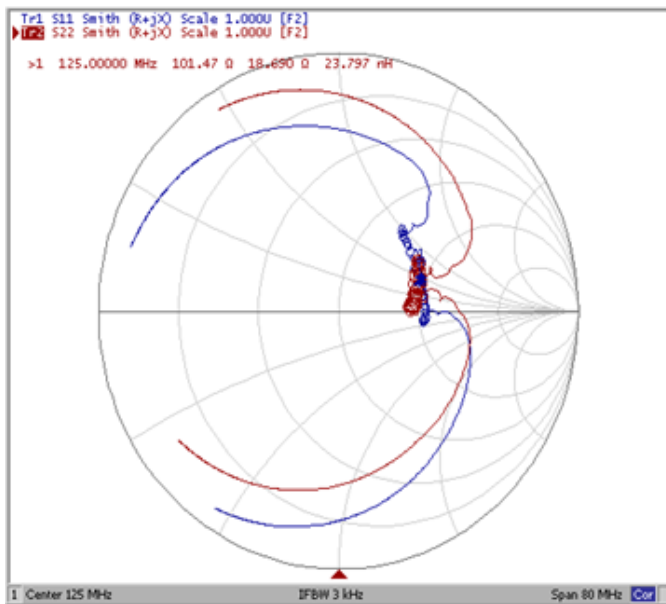
Ripple Variation Fo±9.5MHz



Group Delay Variation Fo±9.5MHz



Smith Chart



VSWR

