

- 133.2 MHz IF SAW Filter / 430 kHz Bandwidth
- Revision 1: 19 Mar. 2010

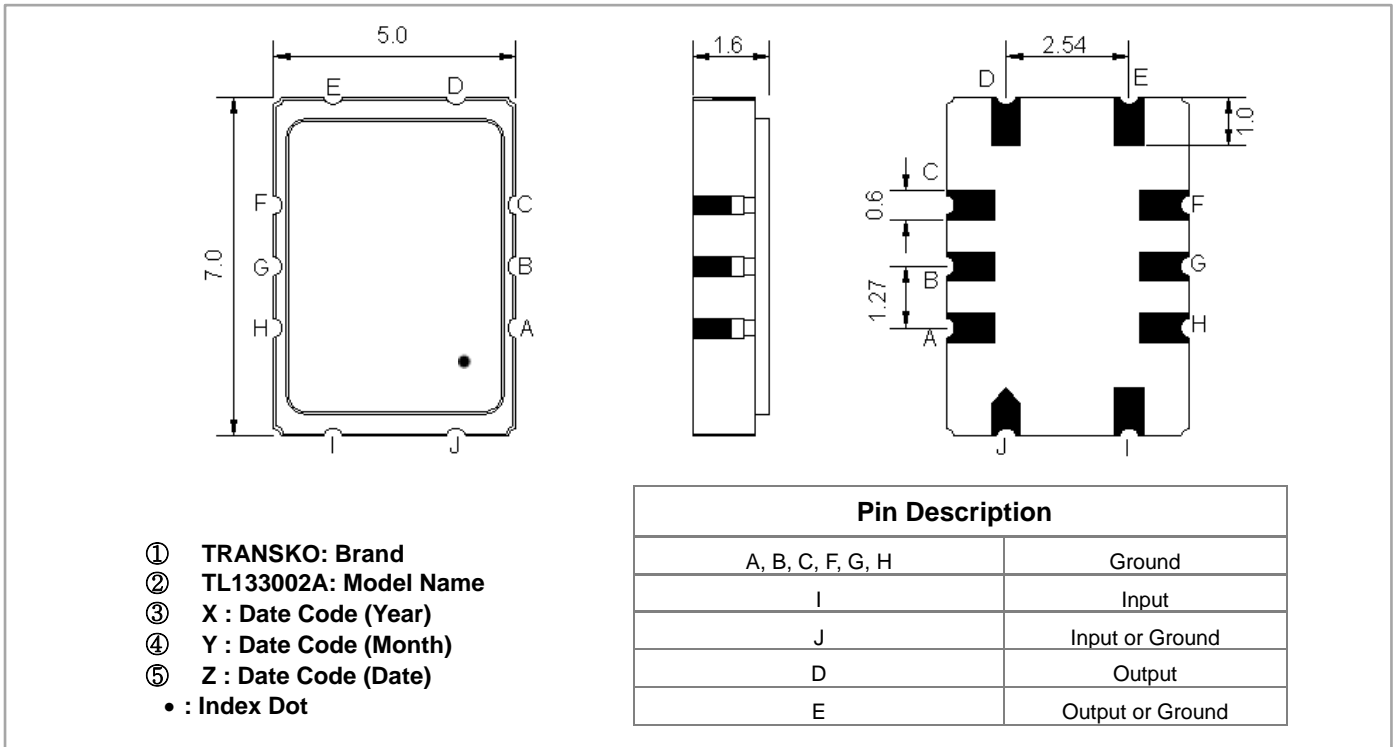
Electrical Characteristics

MAXIMUM RATING				
PARAMETERS DESCRIPTION	UNIT	MINIMUM	TYPICAL	MAXIMUM
Operating Temperature Range	°C	-40	-	85
Storage Temperature Range	°C	-40	-	85
Maximum DC Voltage	V _{DC}	-	-	5
Maximum Input Power	dBm	-	-	18
Source Impedance (Single/Balanced) ⁽¹⁾	Ω	-	50/200	-
Load Impedance (Single/Balanced) ⁽¹⁾	Ω	-	50/200	-
Package type & size	S			
Length x Width	mm ²	-	7.0 x 5.0	-
Height	mm	-	-	1.6

ELECTRICAL SPECIFICATION				
PARAMETERS DESCRIPTION	UNIT	MINIMUM	TYPICAL	MAXIMUM
Center Frequency (Fo)	MHz	-	133.2	-
Insertion Loss at Fo (including losses in matching circuit)	dB	-	4.5	8.0
Group Delay variation at Fo ± 100 KHz	nsec	-	300	1000
Amplitude ripple variation at Fo ± 100 KHz	dB _{p-p}	-	0.50	1.00
Temperature Coefficient	ppm/°C	-	-0.036	-
Bandwidth at -3dB	KHz	-	430	-
Relative Attenuation				
Fc ±250KHz ~ Fc ±400KHz	dBc	3	5	
Fc ±400KHz ~ Fc ±600KHz	dBc	15	16	
Fc ±600KHz ~ Fc ±800KHz	dBc	20	28	
Fc ±800KHz ~ Fc ±3.0MHz	dBc	29	31	
Fc ±3.0MHz ~ Fc ±7.0MHz	dBc	35	42	
Fc ±7.0MHz ~ Fc ±30MHz	dBc	40	47	

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.

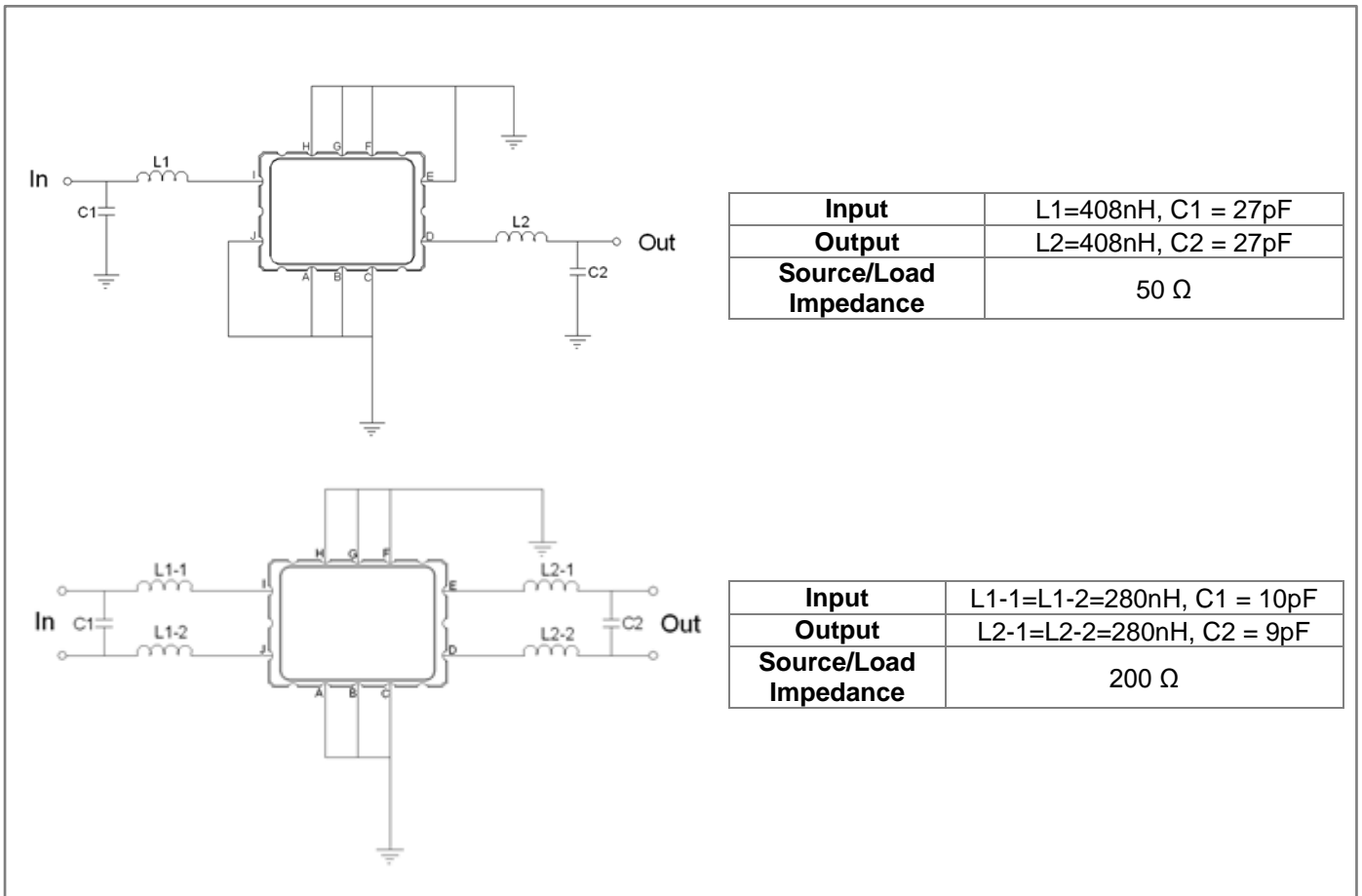
Package Dimensions



① **TRANSKO:** Brand
 ② **TL133002A:** Model Name
 ③ **X :** Date Code (Year)
 ④ **Y :** Date Code (Month)
 ⑤ **Z :** Date Code (Date)
 • : Index Dot

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

Testing Environment



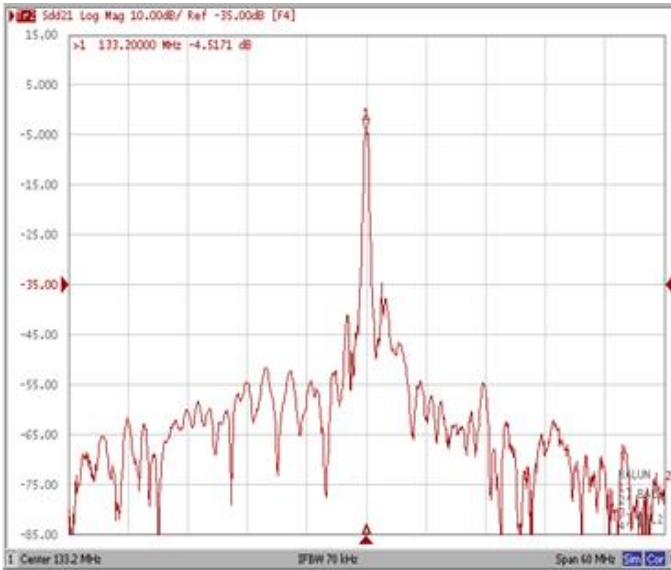
Input	L1=408nH, C1 = 27pF
Output	L2=408nH, C2 = 27pF
Source/Load Impedance	50 Ω

Input	L1-1=L1-2=280nH, C1 = 10pF
Output	L2-1=L2-2=280nH, C2 = 9pF
Source/Load Impedance	200 Ω

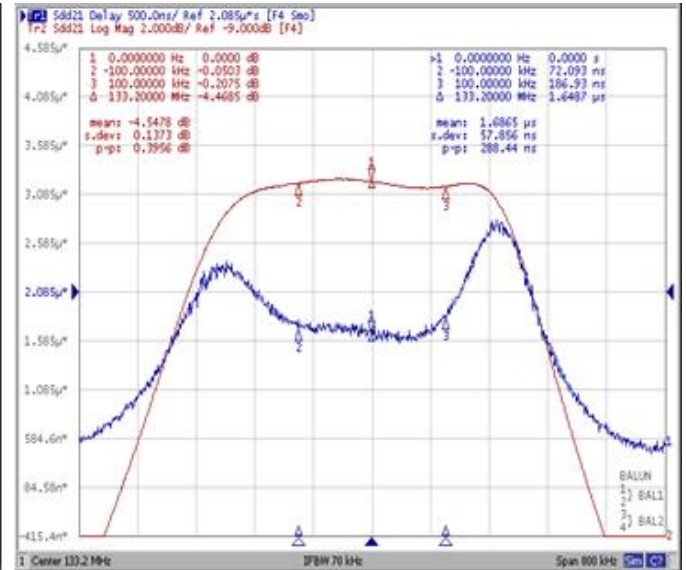
Frequency Characteristics

Frequency Response

Frequency Response



Ripple & Group Delay Variation Fo±100 KHz



Relative Attenuation



Smith Chart

