

- Designed to Provide Front-end selectivity in 315.00 MHz
- Low-Loss, Coupled-Resonator Quartz Design
- Simple External Impedance Matching
- Rugged, Hermetic, Low Profile TO-39 Package

**SF315** 

Absolute Maximum Rating (Ta=25°C)							
Parameter		Rating	Unit				
CW RF Power Dissipation	Р	+10	dBm				
DC Voltage VDC Between Any Two Pins	$V_{ m DC}$	±30	V				
Operating Temperature Range	T <sub>A</sub>	-10 ~ +60	°C				
Storage Temperature Range	$T_{ m stg}$	-40 ~ +85	°C				

Electronic Characteristics						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Nominal Frequency (at 25°C) (Center frequency between 3dB point)		f <sub>C</sub>	NS	315.00	NS	MHz
Insertion Loss		IL	-	3.0	4.5	dB
3dB Passband		BW <sub>3</sub>	-	600	800	KHz
Rejection	at f <sub>C</sub> - 21.4 MHz (Image)	-	40	50	-	dB
	at f <sub>C</sub> - 10.7 MHz (LO)	-	20	30	-	dB
	Ultimate	-	-	60	-	dB
Temperature Stability	Operating Temperature Range	T <sub>C</sub>	-10	-	+60	°C
	Turnover Temperature	To	25	-	55	°C
	Turnover Frequency	f <sub>O</sub>	-	f <sub>C</sub>	-	MHz
	Frequency Temperature Coefficient	FTC	-	0.032	-	ppm/C <sup>2</sup>
Frequency Aging Absolute Value during the First Year		fA	-	-	10	ppm/yr
DC Insulation Resistance Between any Two Pins		-	1.0	-	-	MΩ

NS = Not Specified

#### Notes:

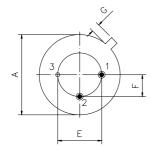
- The frequency f<sub>C</sub> is defined as the midpoint between the 3dB frequencies.
- 2. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50Ω test system with VSWR ≤ 1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency, f<sub>C</sub>. Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
- Unless noted otherwise, specifications apply over the entire specified operating temperature range.
- 4. Frequency aging is the change in f<sub>C</sub> with time and is specified at +65°C or less. Aging may exceed the specification for prolonged temperatures above +65°C. Typically, aging is greatest the first year after manufacture, decreasing in subsequent years.

- Turnover temperature, T<sub>0</sub>, is the temperature of maximum (or turnover) frequency, f<sub>0</sub>. The nominal frequency at any case temperature, T<sub>C</sub>, may be calculated from: f = f<sub>0</sub> [1 - FTC (T<sub>0</sub> - T<sub>C</sub>)<sup>2</sup>].
- The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice
- All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
- Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
- For questions on technology, prices and delivery please contact our sales offices or email to sales@vanlong.com.



# Package Dimensions (TO-39)





### **Electrical Connections**

Terminals	Connection	
1	Input/Output	
2	Output/Input	
3	Case Ground	

## **Package Dimensions**

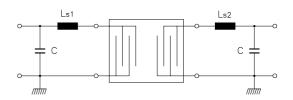
Dimensions	Nom. (mm)	Tol. (mm)	
А	9.35	±0.10	
В	3.40	±0.10	
С	3.00	±0.20	
D	0.45	±0.10	
Е	5.08	±0.10	
F	2.54	±0.20	
G	0.45		

## Marking



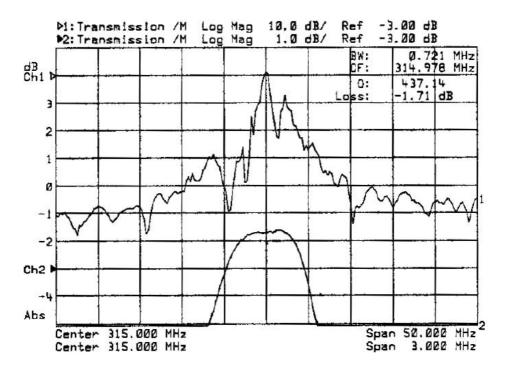
Ink Marking Color: Black or Blue

## **Test Circuit**



C = 13 pF\* Ls1 = Ls2 = 80 nH

### **Typical Frequency Response**



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