- ***Designed to Provide Front-end selectivity in 303.825 MHz***
- ***Low-Loss, Coupled-Resonator Quartz Design***
- ***Simple External Impedance Matching***
- ***Rugged, Hermetic, Low Profile TO-39 Package***

SF303

Absolute Maximum Rating (Ta=25°C)			
Parameter		Rating	Unit
CW RF Power Dissipation	P	+10	dBm
DC Voltage V_{DC} Between Any Two Pins	V_{DC}	±30	V
Operating Temperature Range	T_A	-10 ~ +60	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C

Electronic Characteristics						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Nominal Frequency (at 25°C) (Center frequency between 3dB point)		f_C	NS	303.825	NS	MHz
Insertion Loss		IL	-	3.0	4.5	dB
3dB Passband		BW_3	-	600	800	KHz
Rejection	at f_C - 21.4 MHz (Image)	-	40	50	-	dB
	at f_C - 10.7 MHz (LO)	-	20	30	-	dB
	Ultimate	-	-	60	-	dB
Temperature Stability	Operating Temperature Range	T_C	-10	-	+60	°C
	Turnover Temperature	T_O	25	-	55	°C
	Turnover Frequency	f_O	-	f_C	-	MHz
	Frequency Temperature Coefficient	FTC	-	0.032	-	ppm/C^2
Frequency Aging	Absolute Value during the First Year	$\|f_A\|$	-	-	10	ppm/yr
DC Insulation Resistance Between any Two Pins		-	1.0	-	-	MΩ

NS = Not Specified

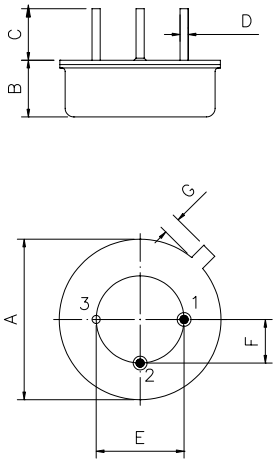
Notes:

1. The frequency f_C 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_C. Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
3. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
4. Frequency aging is the change in f_C 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.
5. Turnover temperature, T_0, is the temperature of maximum (or turnover) frequency, f_0. The nominal frequency at any case temperature, T_C, may be calculated from: $f = f_0 [1 - FTC (T_0 - T_C)^2]$.
6. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
7. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
8. 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.
9. For questions on technology, prices and delivery please contact our sales offices or email to sales@vanlong.com.

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Package Dimensions (TO-39)



Electrical Connections

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

Package Dimensions

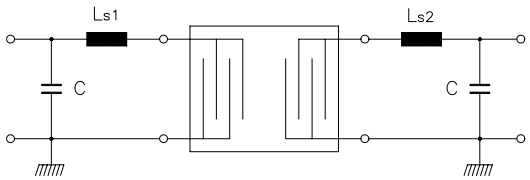
Dimensions	Nom. (mm)	Tol. (mm)
A	9.35	±0.10
B	3.40	±0.10
C	3.00	±0.20
D	0.45	±0.10
E	5.08	±0.10
F	2.54	±0.20
G	0.45	

Marking



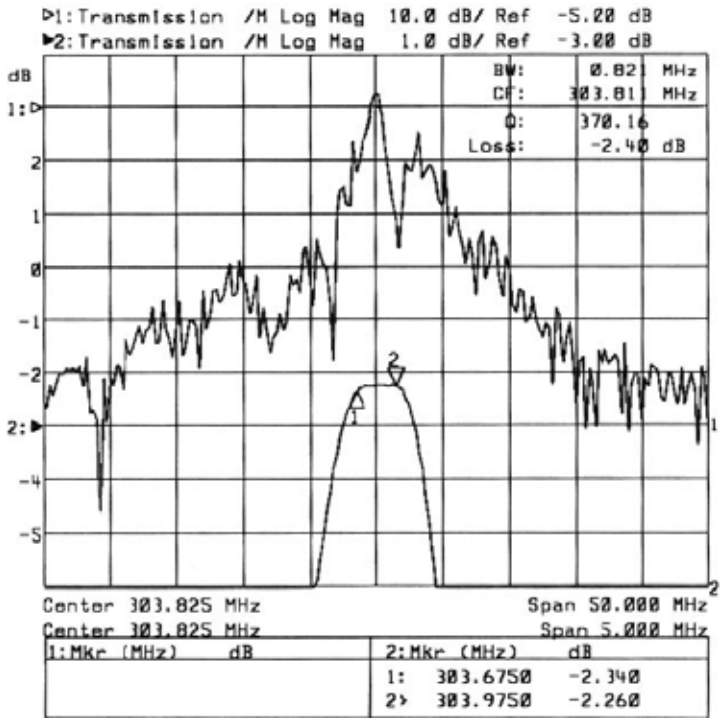
Ink Marking
Color: Black or Blue

Test Circuit



C = 15 pF*
Ls1 = Ls2 = 70 nH

Typical Frequency Response



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