- ***Surface Acoustic Wave Resonator Filter***
- ***Low-Loss, Coupled-Resonator Quartz Design***
- ***Simple External Impedance Matching***
- ***F-16 Metal Thru-Hole Package***

SF90.5B

Absolute Maximum Rating (Ta=25°C)			
Parameter		Rating	Unit
Input Power Level	P_{in}	0	dBm
DC Voltage VDC Between Any Two Pins	V_{DC}	30	V
Operating Temperature Range	T_A	-10 ~ +60	°C
Storage Temperature Range	T_{stg}	-40 ~ +85	°C

Electrical Characteristics						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Center Frequency (25°C)		*fc*	NS	90.50	NS	MHz
Insertion Loss at fc		*IL*	-	2.0	4.0	dB
3dB Bandwidth		*BW3*	45	62	-	KHz
Passband Ripple (*fc* ± 15 KHz)		$\Delta\alpha$	-	0.2	1.0	dB
Stopband Attenuation	*fc* ± 60 KHz	α	15	21	-	dB
	fc ± 120 KHz		42	47	-	dB
	fc - 930 …*fc* - 890 KHz		55	62	-	dB
	fc - 4020 …*fc* - 3980 KHz		70	80	-	dB
Temperature Stability	Turnover Temperature	*To*	25	-	55	°C
	Frequency Temperature Coefficient	*FTC*	-	0.032	-	ppm/°C
Group Delay	Absolute at *fc*	τ	10	15	18	μSec
	Deviation *fc* ± 10 KHz	$\Delta\tau$	-	2.0	8.0	μSec
DC Insulation Resistance Between any Two Pins		-	1.0	-	-	MΩ

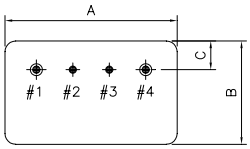
NS = Not Specified

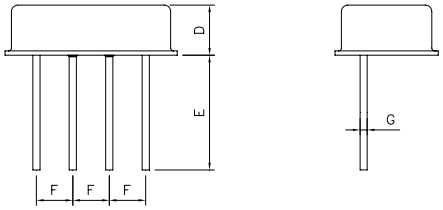
Notes:

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 e-mail sales@vanlong.com .

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Package Dimensions (F-16)





Electrical Connections

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

Package Dimensions

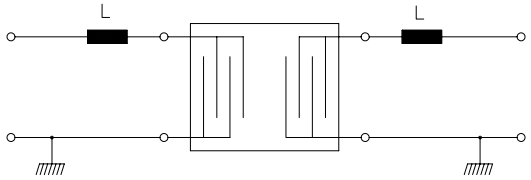
Dimensions	Nom (mm)	Dimensions	Nom (mm)
A	12.0	E	5.0
B	7.2	F	2.54
C	2.0	G	0.5
D	3.5		

Marking



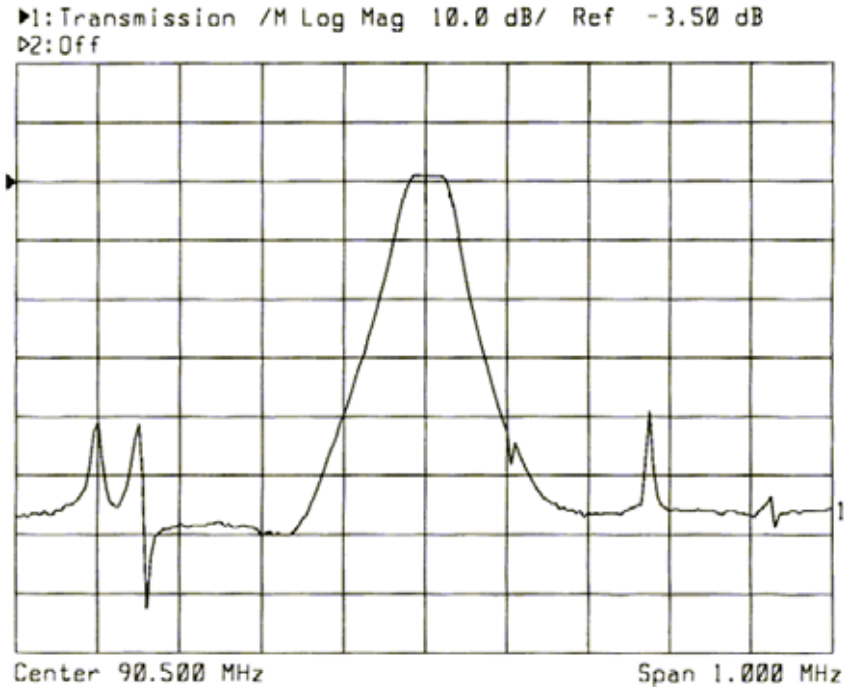
Ink Marking
Color: Black or Blue

Test Circuit



L = 12~20 turns of 0.51mm insulated copper, 4.0mm ID

Typical Frequency Response



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