

- **Ideal for Receiver in 110.592 MHz**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Rugged, Hermetic, Low Profile F-11 Package**

# SF110N

Absolute Maximum Rating (Ta=25°C)		
Parameter	Rating	Unit
CW RF Power Dissipation $P$	+0	dBm
DC Voltage VDC Between Any Two Pins $V_{dc}$	±10	V
Operating Temperature Range $T_A$	-20 ~ +55	°C
Storage Temperature Range $T_{stg}$	-40 ~ +85	°C

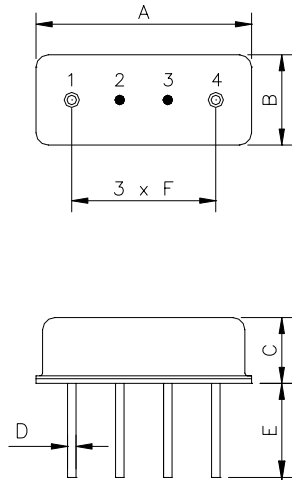
Electronic Characteristics					
Parameter	Sym	Minimum	Typical	Maximum	Unit
Nominal Frequency (at 25°C) (Center frequency between 3dB point)	$f_c$	NS	110.592	NS	MHz
Insertion Loss	$IL$	-	4.5	5.0	dB
User Signal Passband	$BW$	-	±576	-	KHz
Stopband Attenuation					
$f_c - 5.0$ MHz	$\alpha_{rel}$	50	-	-	dB
$f_c - 3.5$ MHz		45	-	-	dB
$f_c \pm 2.0$ MHz		30	-	-	dB
$f_c + 3.5$ MHz		40	-	-	dB
$f_c + 5.0$ MHz		40	-	-	dB
Group Delay Deviation	-	-	0.7	-	µSec
Frequency Aging Absolute Value during the First Year	$ fA $	-	-	10	ppm/yr
DC Insulation Resistance Between any Two Pins	-	1.0	-	-	MΩ
Input / Output Impedance (nominal)	-	-	300//1.2	-	Ω//µH

NS = Not Specified

**Notes:**

- The frequency  $f_c$  is defined as the midpoint between the 3dB frequencies.
- 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.
- Unless noted otherwise, specifications apply over the entire specified operating temperature range.
- 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 (F-11)



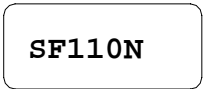
Electrical Connections

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

Package Dimensions

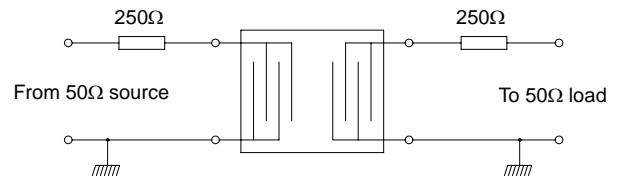
Dimensions	Nom. (mm)	Tol. (mm)
A	11.0	±0.3
B	4.5	±0.3
C	3.2	±0.3
D	0.45	±0.1
E	5.0	±0.5
F	2.54	±0.2

Marking



Ink Marking  
Color: Black or Blue

Test Circuit



Typical Frequency Response

