

- **Designed to Provide Front-end selectivity in 859.15 MHz**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Rugged, Hermetic, Low Profile F-11 Package**

SF859

Absolute Maximum Rating (Ta=25°C)			
Parameter		Rating	Unit
CW RF Power Dissipation	P	+10	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

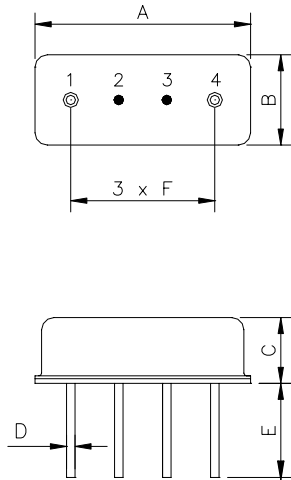
Electronic Characteristics						
Parameter	Sym	Minimum	Typical	Maximum	Unit	
Nominal Frequency (at 25°C) (Center frequency between 3dB point)	f_c	NS	859.15	NS	MHz	
Insertion Loss	IL	-	4.0	5.5	dB	
3dB Passband	BW_3	-	1.0	-	MHz	
Passband Ripple	$\Delta\alpha$	-	-	± 1.0	dB	
Rejection	at $f_c - 21.4$ MHz (Image)	-	40	50	-	dB
	at $f_c - 10.7$ MHz (LO)	-	25	40	-	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	$ fA $	-	-	10	ppm/yr	
DC Insulation Resistance Between any Two Pins	-	1.0	-	-	MΩ	

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 $\leq 1.2:1$. 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.
- 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.
- Turnover temperature, T_O , is the temperature of maximum (or turnover) frequency, f_O . The nominal frequency at any case temperature, T_C , may be calculated from: $f = f_O [1 - FTC (T_O - T_C)^2]$.
- 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

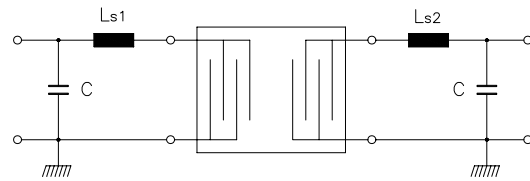
Dimensions	Nom. (mm)	Tol. (mm)
A	11.0	±0.3
B	4.5	±0.3
C	3.2	±0.3
D	0.45	±0.1
E	5.0	±0.5
F	2.54	±0.2

Marking



Ink Marking
Color: Black or Blue

Test Circuit



C = 4 ~ 8 pF*
Ls1 = Ls2 = 2 tunes of 0.5mm insulated copper, 2.0mm ID

Typical Frequency Response

