868.30 MHz RF Low-Loss SAW Filter

- ***Ideal Front-End Filter for European Wireless Receivers***
- ***Low-Loss, Coupled-Resonator Quartz Design***
- ***Simple External Impedance Matching***
- ***Surface-Mount, F-11 Surface Mount Type***

SF868S1

Absolute Maximum Rating (Ta=25°C)		
Parameter	Rating	Unit
CW RF Power Dissipation	+ 0	dBm
DC Voltage V_{DC}	0	V
Operating Temperature Range	-45 ~ +85	°C
Storage Temperature Range	-45 ~ +85	°C

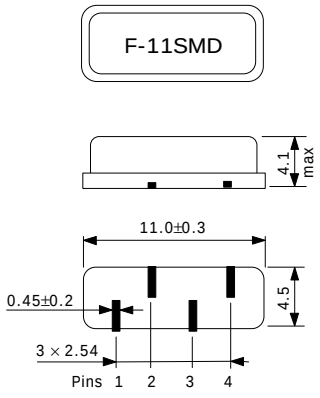
Specifications					
Parameter	Sym	Minimum	Typical	Maximum	Unit
Frequency (25°C) Nominal Frequency	fc	NS	868.30	NS	MHz
Minimum Insertion Loss Attenuation 868.00 ~ 868.78MH	α_{min}	-	2.7	4.7	dB
Passband (Relative to α_{min})					
868.00 ~ 868.60 MHz	-	-	1.0	3.0	dB
867.90 ~ 868.70 MHz	-	-	1.5	6.0	dB
Attenuation (Relative to α_{min})					
10.00 ~ 700.00 MHz	-	50	55	-	dB
700.00 ~ 830.00 MHz	-	35	45	-	dB
830.00 ~ 850.00 MHz	-	32	40	-	dB
850.00 ~ 865.02 MHz	-	25	30	-	dB
871.00 ~ 874.50 MHz	-	11	16	-	dB
874.50 ~ 883.00 MHz	-	22	27	-	dB
883.00 ~ 900.00 MHz	-	30	35	-	dB
900.00 ~ 1000.00 MHz	-	35	40	-	dB
Temperature Coefficient of Frequency	FTC	-	-0.03	-	ppm/K^2
Turnover Temperature	To	15	-	35	°C
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

1. 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.
2. The frequency f_c id the frequency of minimum IL with the resonator in the specified test fixture in a 50 Ω test system with VSWR ≤ 1.2 : 1. Typically, $f_{oscillator}$ or $f_{transmitter}$ is less than the resonator f_c.
3. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
4. Unless noted otherwise , case temperature T_C = +25°C ± 2°C.
5. The design, manufacturing process, and specifications of this device are subject to change without notice.
6. Derived mathematically from one or more of the following directly measured parameters: f_c, IL, 3dB bandwidth, f_c versus T_C , and C_O.
7. Turnover temperature, T_O, is the temperature of maximum (or turnover) frequency, f_c. The nominal center frequency at any case temperature , T_C, may be calculated from: $f = f_c [1\text{-FTC } (T_O - T_C)^2]$ .Typically, oscillator T_O is 20° less than the specified resonator T_O.
8. This equivalent RLC model approximates resonator performance near the resonant frequency and is provided for reference only. The capacitance C_0 is the measured static (nonmotional) capacitance between either pin 1 and ground or pin 2 and ground. The measurement includes case parasitic capacitance.

Package Outline (F-11SMD)



Pin	Connection
1	Input/Output
2	Ground
3	Ground
4	Output/Input

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