

- **Ideal Front-End Filter for Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Ultra Miniature Ceramic QCC8C SMD Package**
- **Complies with Directive 2002/95/EC (RoHS Compliant)**

SF5502

Absolute Maximum Rating (Ta=25°C)		
Parameter	Rating	Unit
Input Power Level	P_{in}	10
DC Voltage	V_{DC}	12
Operating Temperature Range	T_A	-35 ~ +85
Storage Temperature Range	T_{stg}	-40 ~ +85

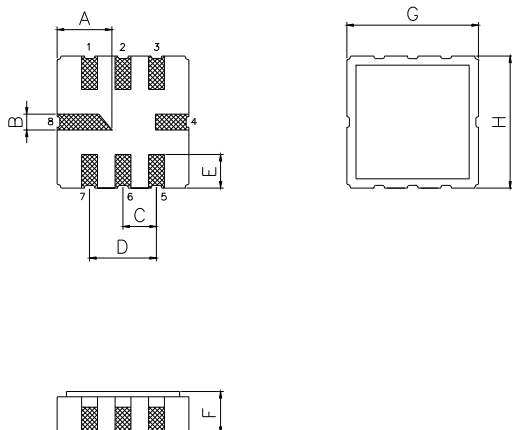
Electronic Characteristics						
Parameter	Sym	Minimum	Typical	Maximum	Unit	
Center Frequency (25°C) (center frequency between 3dB points)	f_c	NS	406.025	NS	MHz	
Insertion Loss	IL	-	4.0	5.0	dB	
3dB Bandwidth	BW_3	-	300	-	KHz	
User Signal Bandwidth	BW	$f_c \pm 10$	-	-	KHz	
Passband Ripple ($f_c \pm 10$ KHz)	$\Delta\alpha$	-	0.5	-	dB	
Stopband Attenuation	α_{rel}	40	-	-	dB	
Temperature Stability	Operating Temperature Range	T_C	-35	-	+85	°C
	Turnover Temperature	T_0	25	-	55	°C
	Turnover Frequency	f_0	-	f_c	-	KHz
	Frequency Temperature Coefficient	FTC	-	-0.032	-	ppm/°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:

- 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_0 , is the temperature of maximum (or turnover) frequency, f_0 . The nominal frequency at any case temperature, T_C , may be calculated from: $f = f_0 [1 - FTC (T_0 - T_C)^2]$.
- 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 e-mail to sales@vanlong.com.

Package Dimensions (QCC8C)



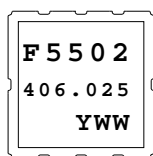
Electrical Connections

Terminals	Connection
1	Input Ground
2	Input
5	Output Ground
6	Output
3,7	To be Grounded
4,8	Case Ground

Package Dimensions

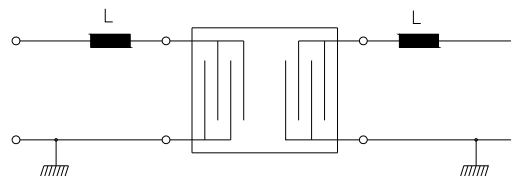
Dimensions	Nom (mm)	Dimensions	Nom (mm)
A	2.08	E	1.20
B	0.60	F	1.35
C	1.27	G	5.00
D	2.54	H	5.00

Marking



1. F5502 - Part Code
2. Frequency (KHz) in 6 digits
3. Date Code:
 Y : Last digit of year
 WW : Week No.

Test Circuit



L = 4 turns of 0.5mm insulated copper, 3.0mm ID

Typical Frequency Response

