

- **Designed to Provide Front-end Selectivity in 345.00 MHz**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Ultra Miniature Ceramic QCC8C SMD Package**
- **Complies with Directive 2002/95/EC (RoHS Compliant)**

SF5402

ABSOLUTE MAXIMUM RATING ($T_A=25^{\circ}\text{C}$)			
Parameter		Rating	Unit
Source Power	P_S	0	dBm
DC Voltage VDC Between Any Two Pins	V_{DC}	0	V
Operating Temperature Range	T_A	-10 ~ +60	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-40 ~ +85	$^{\circ}\text{C}$

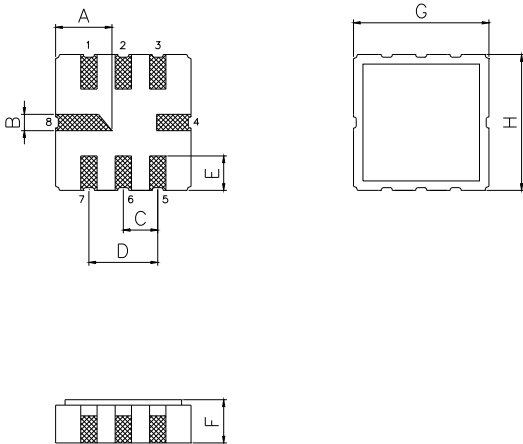
ELECTRONIC CHARACTERISTICS						
Parameter		Sym	Minimum	Typical	Maximum	Unit
Nominal Frequency (at 25 $^{\circ}\text{C}$) (Center frequency between 3dB point)		f_c	NS	345.00	NS	MHz
Insertion Loss	344.60 ... 345.60 MHz	IL	-	2.5	4.0	dB
Amplitude Ripple (p-p)	344.60 ... 345.60 MHz	$\Delta\alpha$	-	0.5	1.5	MHz
Relative Attenuation (relative to IL)						dB
	10.00 ... 320.00 MHz		48	53	-	dB
	320.00 ... 325.00 MHz		41	47	-	dB
	325.00 ... 337.00 MHz		32	39	-	dB
	337.00 ... 339.00 MHz		26	31	-	dB
	351.00 ... 358.00 MHz		13	16	-	dB
	358.00 ... 370.00 MHz		35	39	-	dB
	370.00 ... 700.00 MHz		47	52	-	dB
	700.00 ... 1000.00 MHz		40	45	-	dB
Frequency Aging	Absolute Value during the First Year	$ fA $	-	-	10	ppm/yr
DC Insulation Resistance Between any Two Pins		-	1.0	-	-	M Ω
Input / Output Impedance		-	-	50	-	Ω

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 50 Ω 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 $^{\circ}\text{C}$ or less. Aging may exceed the specification for prolonged temperatures above +65 $^{\circ}\text{C}$. 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 sales@vanlong.com.

PACKAGE DIMENSIONS (QCC8C)



Electrical Connections

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

Package Dimensions

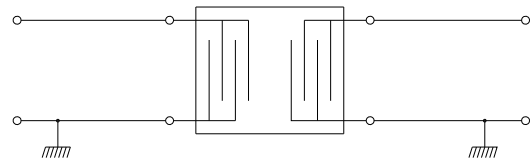
Dimensions	Nom (mm)	Dimensions	Nom (mm)
A	2.08	E	1.20
B	0.60	F	1.35
C	1.27	G	5.00
D	2.54	H	5.00

MARKING



- 1. SF5402 - Part Number
- 2. Date Code:
YY : Last 2 digits of year
WW : Week No.

TEST CIRCUIT



No matching network required for operation at 50Ω

TYPICAL FREQUENCY RESPONSE

