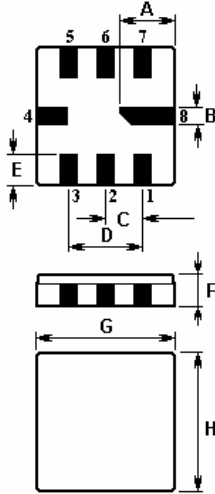


The **ACTF8037-868.95-QCC8C** is a low-loss, compact, and economical surface-acoustic-wave (**SAW**) filter in a surface-mount ceramic **QCC8C** case designed to provide front-end selectivity in **868.950** MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen.

### 1. Package Dimension (QCC8C)



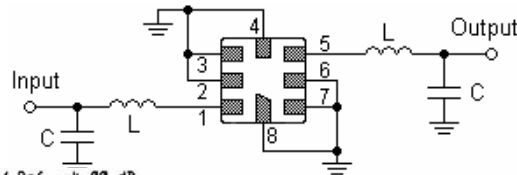
Pin	Connection
1	Input / Output
5	Output / Input
2, 3, 6, 7	To be Grounded
4,8	Case Ground

Sign	Data (unit: mm)	Sign	Data (unit: 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

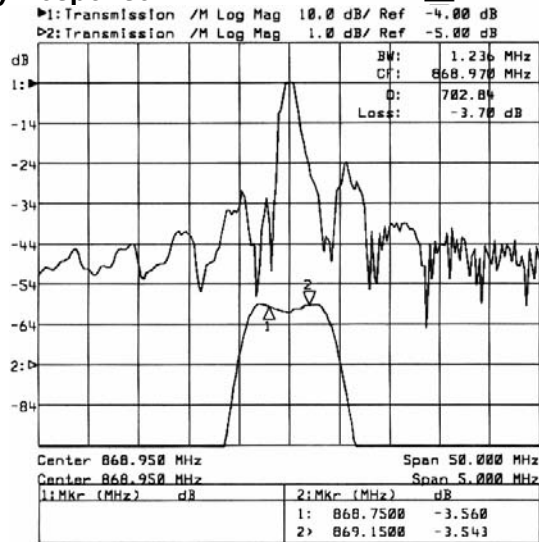
### 2. Marking

Laser Printing

### 3. Test Circuit



### 4. Typical Frequency Response



5mm insulated Copper, 3.0 ID

In line with our ongoing policy of product evolution and improvement, the above specification may subject to change without notice

**ISO9001:2000 Registered**

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3 The Business Centre, Molly Millars Lane, Wokingham, Berkshire, RG41 2EY, UK

<http://www.actcrystals.com>

## 5. Performance

### 5-1. Maximum Ratings

Rating		Value	Unit
Input Power Level	$P_{in}$	10	dBm
DC Voltage	$V_{DC}$	12	V
Storage Temperature Range	$T_{stg}$	-40 to +125	°C
Operating Temperature Range	$T_A$	-40 to +125	°C

### 5-2. Electronic Characteristics

Characteristic		Minimum	Typical	Maximum	Unit
Center Frequency (center frequency between 3dB points)	$f_c$		868.950		MHz
Insertion Loss	$IL$	--	3.5	5.0	dB
3dB Pass band	$BW_3$		1,200		kHz
Rejection	at $f_c - 21.4$ MHz (Image)	30	42	--	dB
	at $f_c - 10.7$ MHz (LO)	20	37	--	
	Ultimate	--	60	--	
Temperature	Turnover Temperature	$T_O$	25	55	°C
	Turnover Frequency	$f_O$	$f_c$		MHz
	Frequency Temperature Coefficient	$FTC$		0.032	ppm/°C
Frequency Aging	Absolute Value during the First Year	$ f_A $	10		ppm/yr

**ⓘ CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!**

#### NOTE:

- 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.
- 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.

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