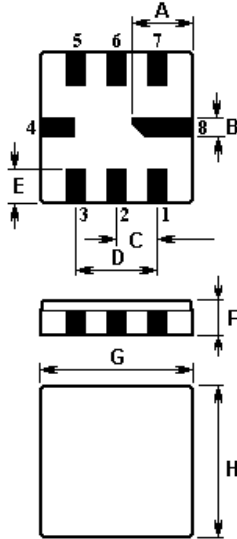


The **ACTF9696-869.690MHz-QCC8C** is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter in a surface-mount ceramic **QCC8C** case for remote control receivers.

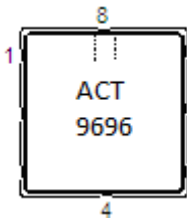
1. Package Dimension (QCC8C)



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

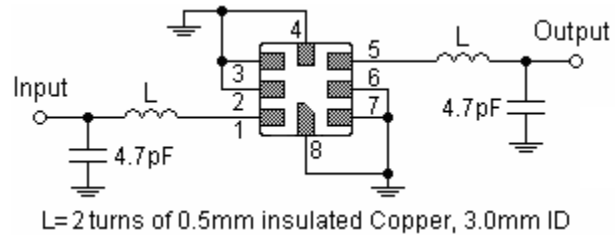
Sign	Data (unit: mm)	Sign	Data (unit: mm)
A	2.08	E	1.20
B	0.60	F	1.35
C	1.27	G	5.00
D	2.54	H	5.00

2. Marking

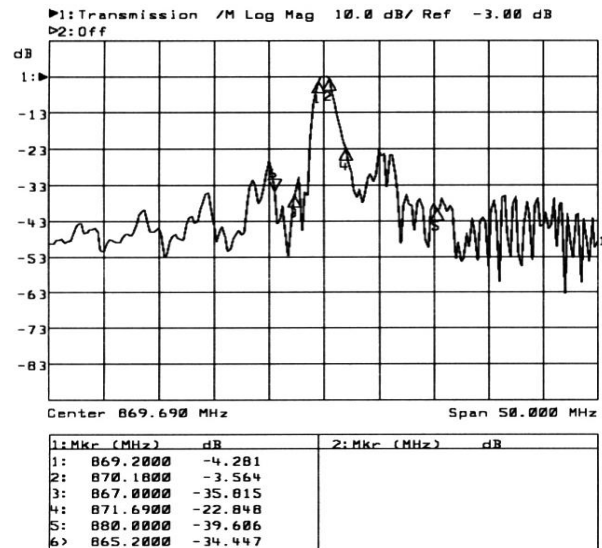
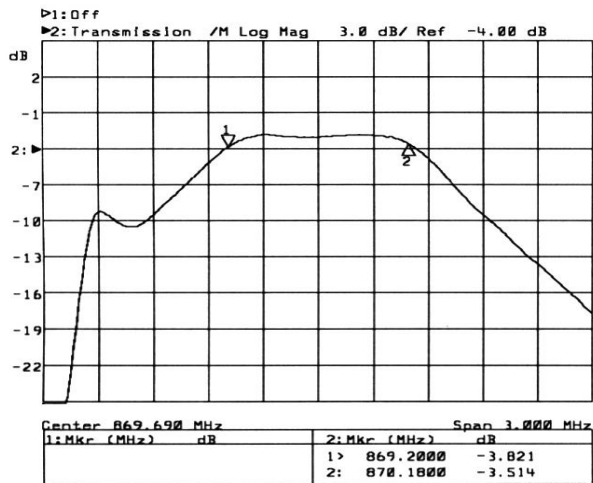


Laser Printing, Top View

3. Test Circuit



4. Typical Frequency response:



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

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<http://www.actcrystals.com>

5. Performance

5-1. Maximum Rating

Rating		Value	Unit
Source Power	P_s	0	dBm
DC Voltage	V_{DC}	0	V
Storage Temperature Range	T_{stg}	-40 to +85	°C
Operating Temperature Range	T_A	-40 to +85	°C

5-2. Electronic Characteristics

Characteristics		Minimum	Typical	Maximum	Unit
Center frequency (center frequency between 3dB points)	f_c	--	869.690	--	MHz
Insertion loss 869.20 ... 870.18 MHz	IL	--	3.8	5.0	dB
Pass band (relative to IL) 869.20 ... 870.18 MHz			1.2	3.0	dB
869.12 ... 870.26 MHz			1.8	6.0	dB
Relative attenuation (relative to IL)	α_{rel}				
10.00 ... 700.00 MHz		50	55	--	dB
700.00 ... 843.00 MHz		35	40	--	dB
843.00 ... 865.20 MHz		28	33	--	dB
865.20 ... 867.00 MHz		15	22	--	dB
871.69 ... 872.50 MHz		10	15	--	dB
872.50 ... 880.00 MHz		15	20	--	dB
880.00 ... 910.00 MHz		24	29	--	dB
910.00 ... 1000.0 MHz		35	40	--	dB
Temperature coefficient of frequency	TC_f	--	-0.03	--	ppm/K ²

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

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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_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.

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