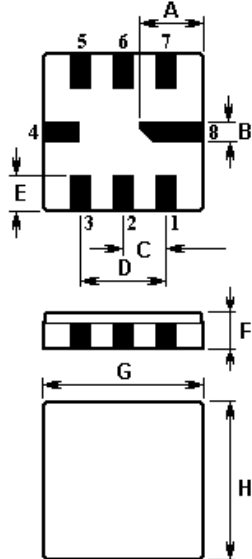


The **NDF3017** is a low-loss, compact, and economical surface-acoustic-wave (**SAW**) filter in a surface-mount ceramic **QCC8C** case designed to provide front-end selectivity in **303.875 MHz** receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen.

1. Package Dimension (QCC8C)



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

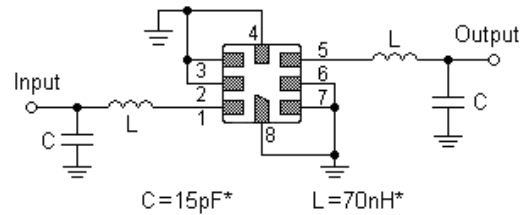
Sign	Data (unit: mm)	Sign	Data (unit: mm)
A	2.08	E	1.20
B	0.60	F	1.35
C	1.27	G	5.00
D	2.54	H	5.00

2. Marking

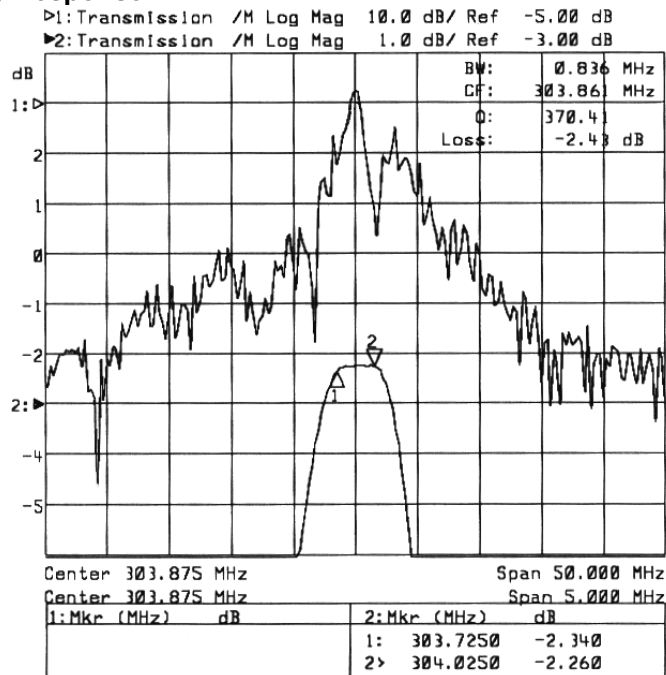
NDF3017

Laser Marking

3. Test Circuit



4. Typical Frequency Response



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 +85	°C
Operable Temperature Range	T_A	-10 to +60	°C

5-2. Electronic Characteristics

Characteristic		Minimum	Typical	Maximum	Unit	
Center Frequency (center frequency between 3dB points)		f_c	303.875		MHz	
Insertion Loss		IL	--	3.0	4.5	dB
3dB Pass band		BW_3	600	900	kHz	
Rejection	at f_c -21.4 MHz (Image)	40	50	--	dB	
	at f_c -10.7 MHz (LO)	20	30	--		
	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 ²	
Frequency Aging	Absolute Value during the First Year	$ fA $	10		ppm/yr	

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

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- 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.
- For questions on technology, prices and delivery, please contact our sales offices or e-mail winnsky@winnsky.com