

SAW Filter

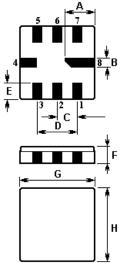
NDF4900

Output

C

The **NDF4900** 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 **390.000** 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		
5	Output		
2, 3, 6, 7	to be Grounded		
4, 8	Case Ground		

Sign	Data (unit: mm)	Sign	Data (unit: mm)		
А	2.08	Е	1.20		
В	0.60	F	1.35		
С	1.27	G	5.00		
D	2.54	Н	5.00		

6

 $L=47 nH^*$

3. Test Circuit

L

C=12pF*

Input

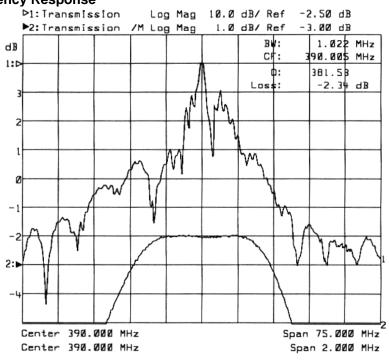
C

2. Marking

NDF4900

Laser Marking







SAW Filter

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	$T_{\rm stg}$	-40 to +85	°C
Operable Temperature Range	TA	-10 to +60	°C

5-2. Electronic Characteristics

Characteristic		Minimum	Typical	Maximum	Unit	
Center Frequency (center frequency between 3dB points)		f _C		390.000		MHz
Insertion Loss		IL		3.0	4.5	dB
3dB Pass band	I	BW ₃	±350	±500		kHz
Rejection	at f _C -21.4 MHz (Image)		35	45		dB
	at f _C -10.7 MHz (LO)		30	40		
	Ultimate			60		
Temperature	Turnover Temperature	To	25		55	°C
	Turnover Frequency	f _O		f _C		MHz
	Frequency Temperature Coefficient	FTC		0.032		ppm/℃²
Frequency Aging Absolute Value during the First Year		fA		10		ppm/yr

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

© NEDI 2003. All Rights Reserved.

- 1. The frequency f_C is defined as the midpoint between the 3dB frequencies.
- 2. 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.
- 3. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
- 4. 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.
- 5. 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: $f = f_0 [1 FTC (T_0 T_c)^2]$.
- 6. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
- 7. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
- 8. 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.
- 9. For questions on technology, prices and delivery, please contact our sales offices or e-mail <u>winnsky@winnsky.com</u>