

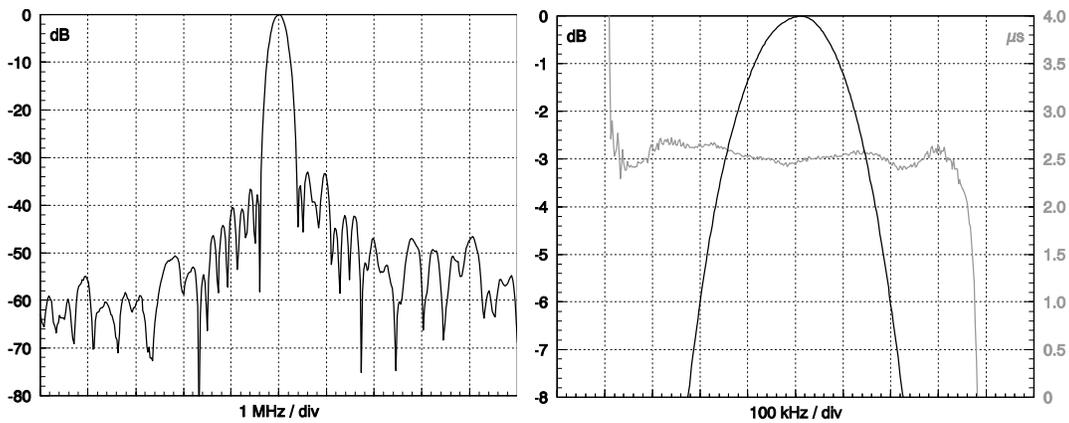


# SF1041-1

- Designed for GSM IF Filter Applications
- Advanced Low-Loss Quartz Design
- Simple Source/Load Matching
- Hermetic Metal DIP Package

## 71 MHz Low-Loss SAW Filter

The SF1041-1 is designed as an IF filter for GSM radiotelephone applications. The SF1041-1 utilizes RFM's advanced SAW design and fabrication technology to achieve high performance, low loss, and simple source/load matching. Quartz construction provides excellent frequency stability over a wide operating temperature range.



### Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Filter Operating Frequency	$f_o$	1		71.00		MHz
Insertion Loss	IL	1,2		6.5	9.5	dB
3 dB Bandwidth	$B_3$	1,2	$\pm 100$		$\pm 200$	kHz
30 dB Bandwidth	$B_{30}$	1,2			$\pm 400$	kHz
35 dB Bandwidth	$B_{35}$	1,2			$\pm 1200$	kHz
40 dB Bandwidth	$B_{40}$	1,2			$\pm 1600$	kHz
45 dB Bandwidth	$B_{45}$	1,2			$\pm 2400$	kHz
Ultimate Rejection		1,2	45	50		dB
Group Delay Deviation ( $F_o \pm 100$ kHz)	GDD	1,2,3		0.35	0.50	$\mu s_{p-p}$
Operating Temperature	$T_A$	1	-10		+85	$^{\circ}C$



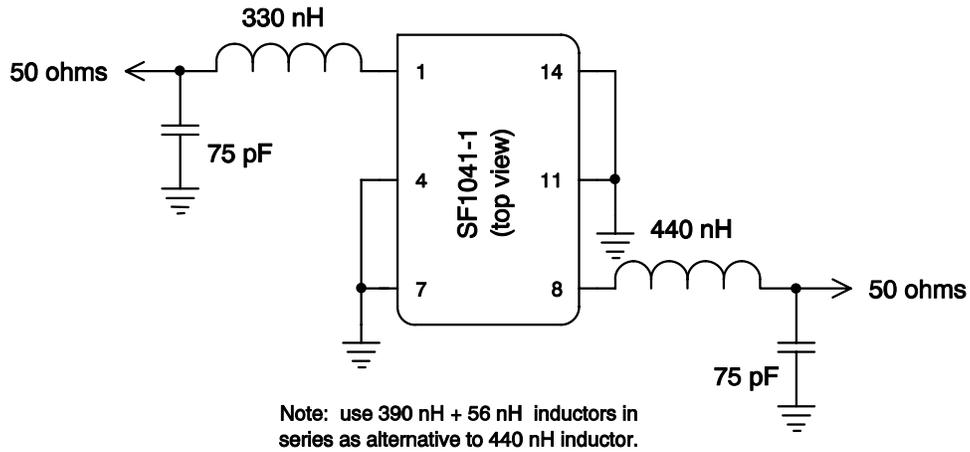
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

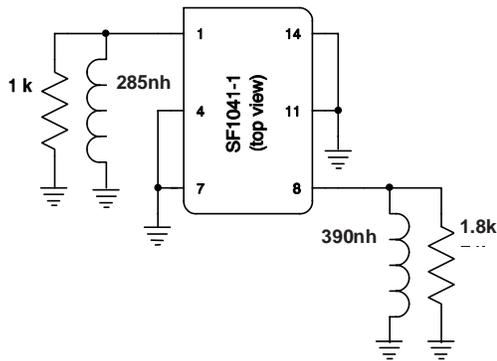
1. Specifications are referenced to  $f_o = 71.00$  MHz. Bandwidth specifications include manufacturing frequency tolerance and frequency drift over temperature range  $T_A$ .
2. Specifications are given with filter matched to 50 ohms. Input match (pin 1) is 330 nH  $\pm 2\%$  series L with 75pF  $\pm 5\%$  shunt C on 50 ohm side; output match (pin 8) is 440 nH  $\pm 2\%$  series L with 75pF  $\pm 5\%$  shunt C on 50 ohm side. Nominal inductor Q is 50 at 71 MHz.
3. Ultimate rejection specified from 1 to 110 MHz. Spurious responses at 1.6 and 1.8 times  $f_o$  suppressed by matching networks.
4. The following U.S. Patents apply: 4,353,046 and 5,073,763. Specifications subject to change without notice.
5. RFM® is registered in the US Patent and Trademark office.

## The SF1041-1 71 MHz Low-Loss SAW Filter

### SF 1041-1 Match to 50 ohms



### External Shunt Equivalent RL Values for SF1041-1 Match



### SF1041-1 Package Drawing (all dimensions in mm)

