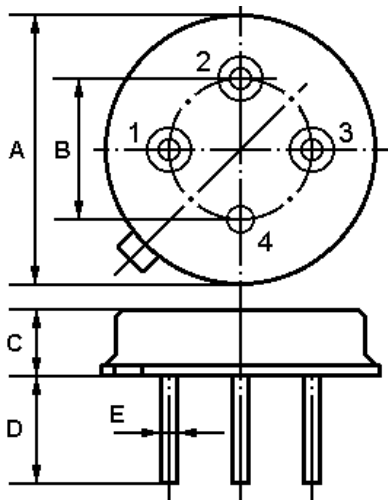


The **ACTF27-03/926.5-903.75/TO39** is a low-loss, compact, & economical surface-acoustic-wave (SAW) filter in a low-profile metal **TO-39** case. It is designed as RF duplexer for cordless telephone ISM. Centre frequency is 926.25 / 903.75 MHz.

### 1. Package Dimension (TO-39)

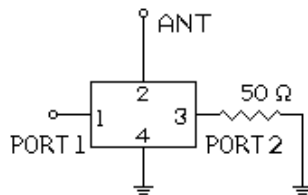


### 2.

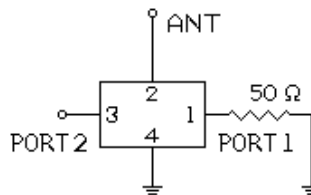
Pin	Configuration
1	Port 1 / Port 2
2	Antenna
3	Port 2 / Port 1
4	Case Ground

Dimensions	Data (Unit: mm)
A	9.35±0.10
B	5.08±0.10
C	3.40±0.10
D	3.00±0.20
E	0.45±0.20

### 3. Test Circuit



Between Port1 and Antenna



Between Port2 and Antenna

### 4. Features

- I High stability and reliability with good performance
- I No matching network required for operation at 50 Ω
- I Wide and sharp pass band characteristics
- I Low insertion loss and deep stop band attenuation for interference

In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

**ISO9001: 2000 Registered - Registration number 6830/2**

**For quotations or further information please contact us at:**

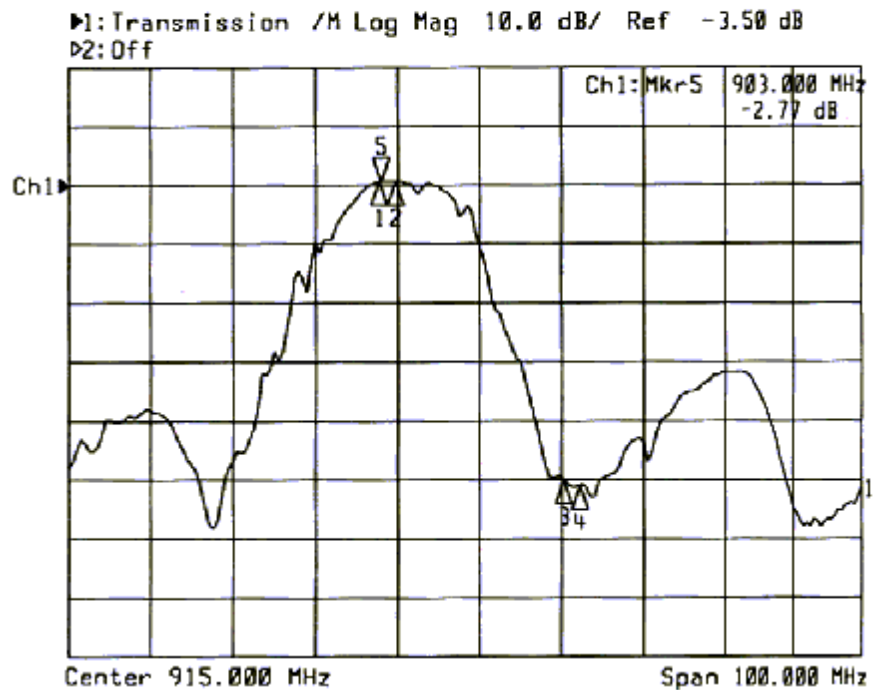
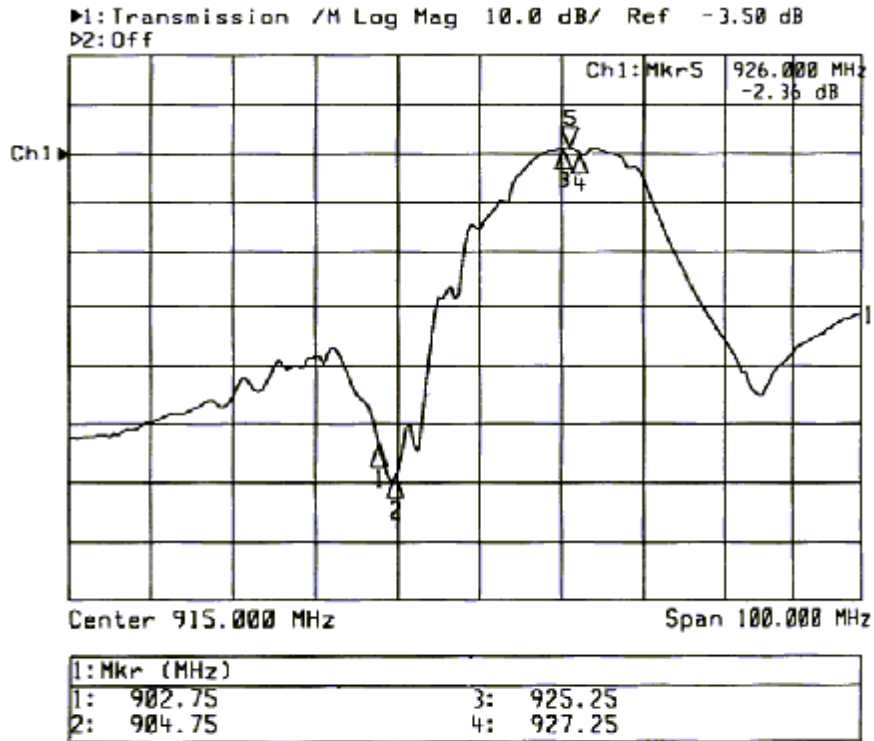
**3 The Business Centre, Molly Millars Lane, Wokingham, Berks, RG41 2EY, UK**

<http://www.actcrystals.com>

Issue : 1 C1

Date : SEPT 04

## 5. Typical Frequency Response



In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

**ISO9001: 2000 Registered - Registration number 6830/2**

For quotations or further information please contact us at:

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

<http://www.actcrystals.com>

Issue : 1 C1

Date : SEPT 04

## 6. Electronic Specification

### 6-1.Maximum Ratings

Item	Symbol	Rating	Unit
Input Signal Level	$I_{S_{max}}$	5	dBm
DC Permissive Voltage	$V_{DC}$	0	V
Operating Temperature Range	$T_A$	-10 ~ +60	°C
Storage Temperature Range	$T_{stg}$	-40 ~ +85	°C

### 6-2.Electronic Characteristics

Ant term. impedance  $Z_{Ant} = 50\Omega$   
 Port 1 term. impedance  $Z_{Port1} = 50\Omega$   
 Port 2 term. impedance  $Z_{Port2} = 50\Omega$

Items	Symbol	Port 1				Port 2				Unit
		Test condition	Min.	Typ.	Max.	Test condition	Min.	Typ.	Max.	
Centre Frequency	$f_c$	-	-	926.25	-	-	-	903.75	-	MHz
Bandwidth	$BW_{3dB}$	-	$\pm 1.0$	-	-	-	$\pm 1.0$	-	-	MHz
Insertion Loss	$IL_{PASS}$	$f_c \pm 1.0\text{MHz}$	-	-	4.5	$f_c \pm 1.0\text{MHz}$	-	-	4.5	dB
Ripple Level	$A_{RIP}$	$f_c \pm 1.0\text{MHz}$	-	-	2.0	$f_c \pm 1.0\text{MHz}$	-	-	2.0	dB
Rejection Level	$IL_{STOP}$	450.0~870.0MHz	52	-	-	450.0~861.95MHz	47	-	-	dB
		870.0~882.45MHz	44	-	-	861.95~883.35MHz	30	-	-	dB
		882.45~904.75MHz	30	-	--	883.35~894.05MHz	5	--	-	dB
		904.75~905.85MHz	36	-	-	913.45~924.15MHz	5	-	-	dB
		905.85~916.55MHz	8	-	-	924.15~927.25MHz	38	-	-	dB
		935.95~946.65MHz	5	-	-	945.55~970.0MHz	23	-	-	dB
		946.65~948.65MHz	30	-	-	970.0~1050MHz	45	-	-	dB
		968.05~1000MHz	26	-	-	1050~1350MHz	42	-	-	dB
		1000~1350MHz	42	-	-	1350~1800MHz	22	-	-	dB
1350~1800MHz	22	-	-					dB		
Isolation (between port1 and port2)	$IL_{RX \leftrightarrow TX}$	902.75~904.75MHz	36	-	-	925.25~927.25MHz	36	-	-	dB
Input / Output Impedance	$Z_I / Z_O$	-	-	50	-	-	-	50	-	$\Omega$

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

1. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture that is connected to a 50 $\Omega$  test system with VSWR $\leq$ 1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter centre frequency,  $f_c$ . Note that insertion loss, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
2. Unless noted otherwise, specifications apply over the entire specified operating temperature range.
3. The specifications of this device are based on the test circuit shown above and subject to change or obsolescence without notice.
4. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
5. 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.

In keeping with our ongoing policy of product evolution and improvement, the above specification is subject to change without notice.

**ISO9001: 2000 Registered - Registration number 6830/2**

**For quotations or further information please contact us at:**

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

<http://www.actcrystals.com>

Issue : 1 C1

Date : SEPT 04