



**1411 Size SAW Filter for CELL (GSM850)  
Low Insertion Loss Version  
SPEC SHEET**

*Preliminary*

Part No. WF897D0881FD

Document No. CE-897D-01

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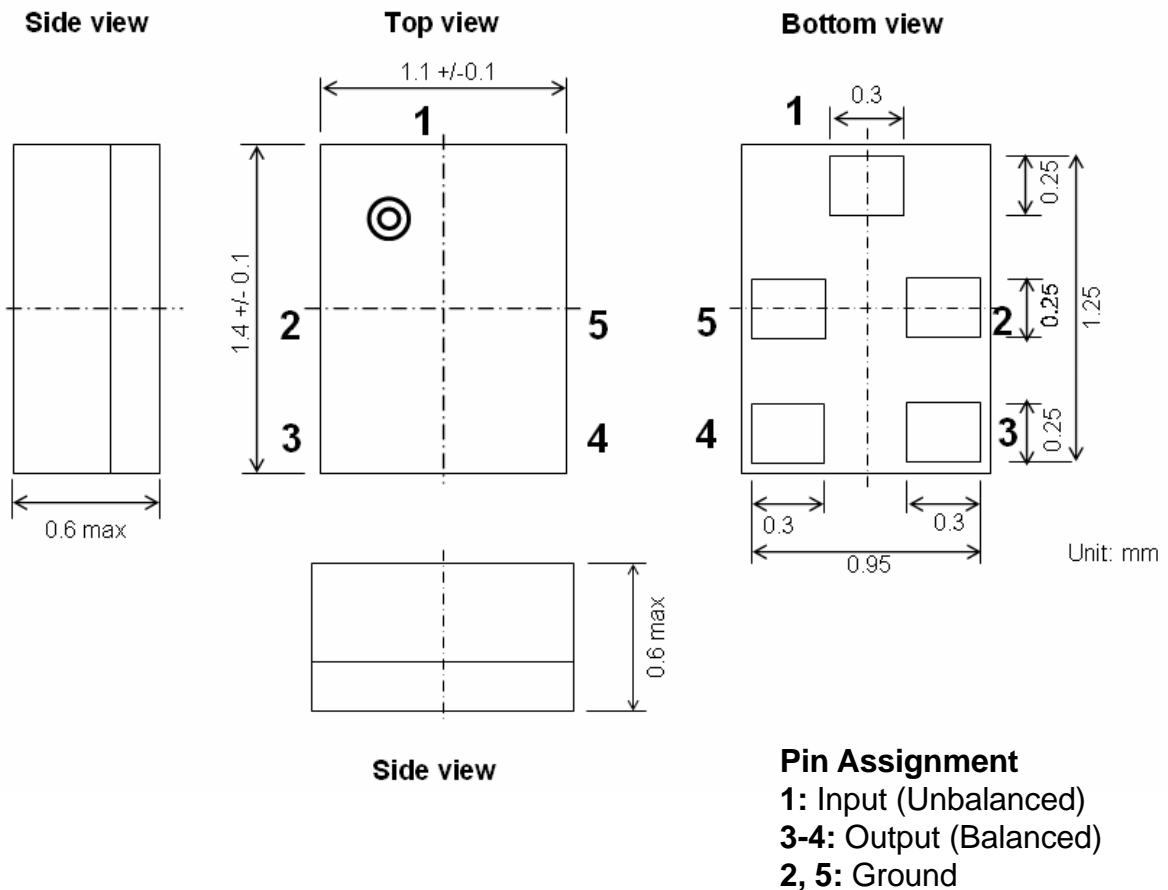
### 1. Scope

This document contains specification and data sheet which applies to 1411 size SAW filter for CELL (GSM850)-band.

### 2. Part Number

Part Number	Center Frequency	Part Size	Shipment
WF897D0881FD	881.5MHz	1.4mmx1.1mmx0.6mm	Tape and reel

### 3. Dimensions



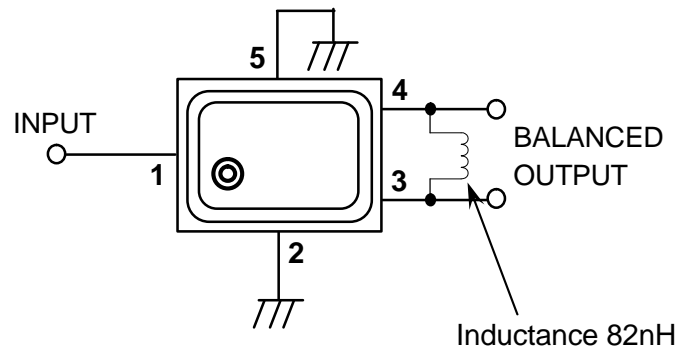
#### 4. Maximum Ratings

4-1 Operating temperature range (Ta): -20°C to 85°C

4-2 Storage temperature range: -40°C to 85°C

4-3 Input RF power: 15dBm max. (GSM signal peak power, 4:8 duty cycle)

#### 5. Test Circuit



## 6. Electrical Characteristics

### 6-1 Specification

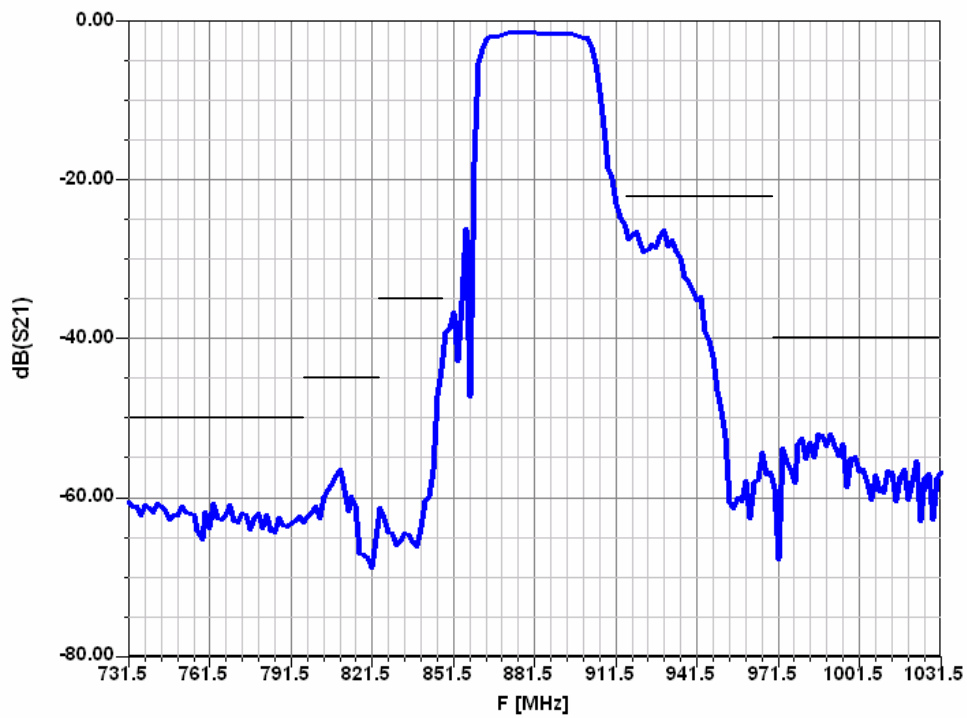
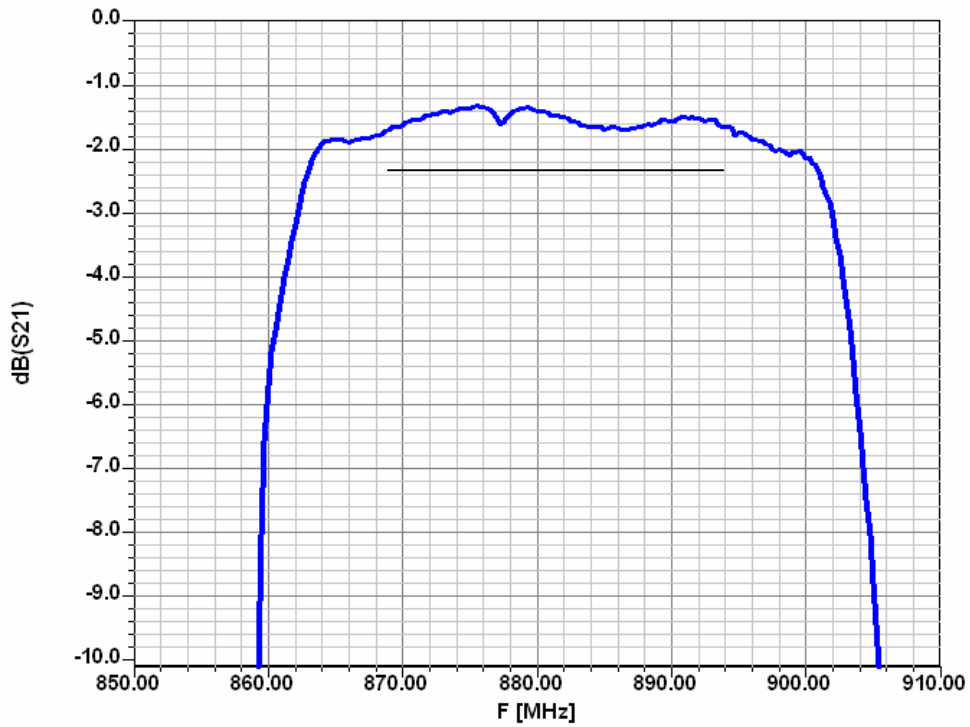
#### 1) at 25+/- 2 °C (room temp.)

Item	Min.	Typ.	Max.	Unit	
Center Frequency	-	881.5	-	MHz	
Insertion Loss	869 ... 894 MHz	-	1.5	1.9	dB
Amplitude Ripple	869 ... 894 MHz	-	0.4	0.7	dB
Input VSWR	869 ... 894 MHz	-	1.7	1.9	-
Output VSWR	869 ... 894 MHz	-	1.7	1.9	-
Absolute Attenuation					
	100 ... 800 MHz	50	56	-	dB
	800 ... 824 MHz	45	56	-	dB
	824 ... 849 MHz	35	40	-	dB
	914 ... 970 MHz	23	25		dB
	970 ... 2400 MHz	40	48		dB
	2400 ... 4500 MHz	40	48		dB
	4500 ... 6000 MHz	35	50	-	dB
Amplitude Balance	-0.6	-0.3/+0.3	0.6	dB	
Phase Balance	-6.0	-3/+3	6.0	deg.	
Input Impedance (unbalanced)	50			ohm	
Output Impedance(balanced)	150//82nH			ohm	

## 2) at operating temp. from -20 to 85°C.

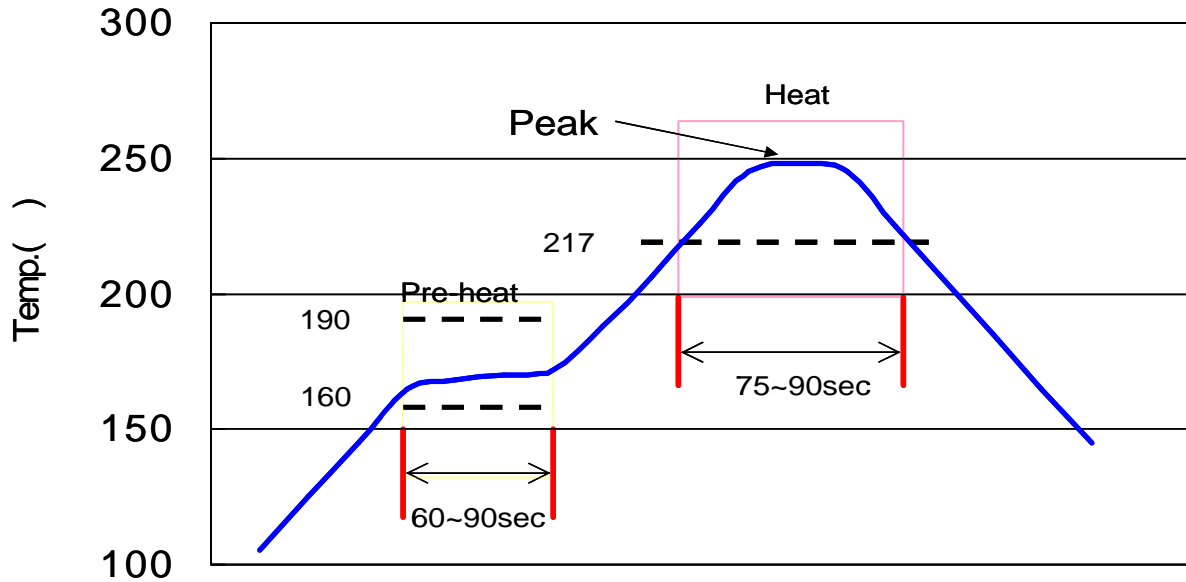
Item	Min.	Typ.	Max.	Unit
Center Frequency	-	881.5	-	MHz
Insertion Loss                      869 ... 894 MHz	-	1.5	2.3	dB
Amplitude Ripple                      869 ... 894 MHz	-	0.4	1.0	dB
Input VSWR                              869 ... 894 MHz	-	1.7	2.0	-
Output VSWR                            869 ... 894 MHz	-	1.7	2.0	-
Absolute Attenuation				
100 ... 800 MHz	50	56	-	dB
800 ... 824 MHz	45	56	-	dB
824 ... 849 MHz	35	40	-	dB
914 ... 970 MHz	22	25		dB
970 ... 2400 MHz	40	48		dB
2400 ... 4500 MHz	40	48		dB
4500 ... 6000 MHz	35	50	-	dB
Amplitude Balance	-0.6	-0.3/+0.3	0.6	dB
Phase Balance	-6.0	-3/+3	6.0	deg.
Input Impedance (unbalanced)	50			ohm
Output Impedance(balanced)	150//82nH			ohm

6-2 Measured characteristics



### 7. Reflow Profile

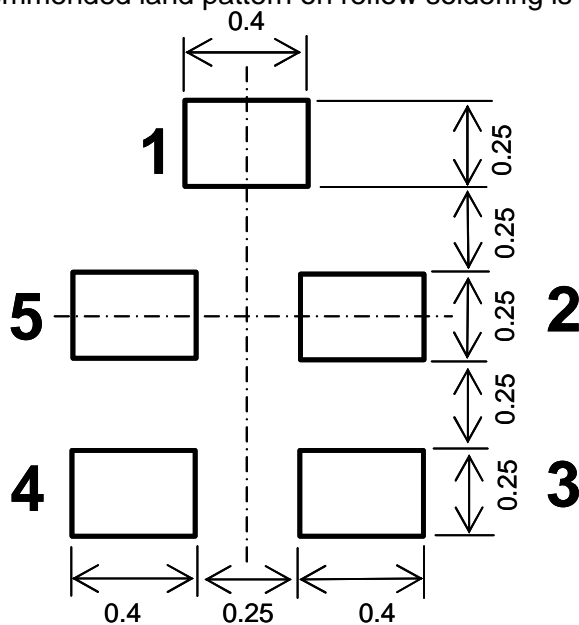
Recommended lead free reflow profile is as follows.



1. Ramp1 : typ2.5 /sec, max 3.0 /sec to 160
2. Pre-heat : 160~190 for 60~90sec, typ75sec
3. Ramp2 : typ2.5 /sec, max 3.0 /sec to 240 (max 260 )
4. Heat : max temp. peak 260 , typ245  
Liquidus time max 90sec, typ80 ± 5sec
5. Ramp3 : typ-2.5 /sec to room temp

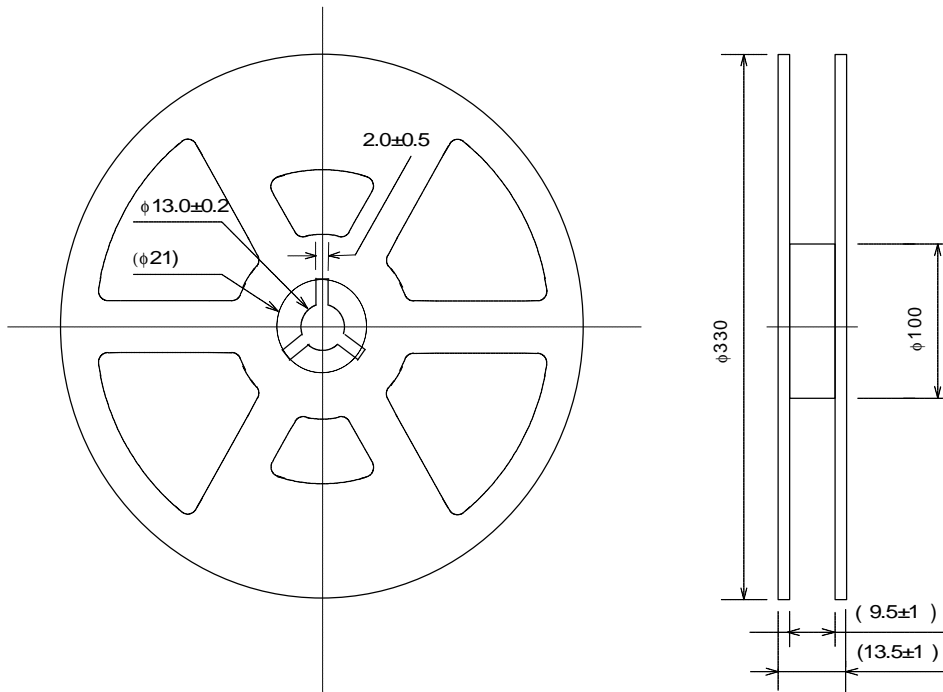
### 8. Standard Land Pattern

Recommended land pattern on reflow soldering is as follows.



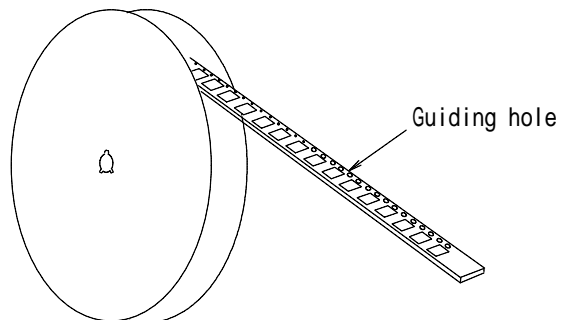
## 9. Tape and Reel

### 9-1 Dimension



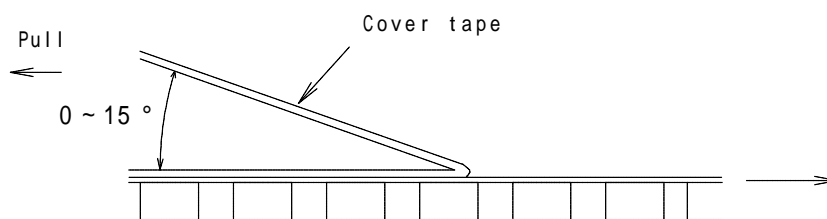
### 9-2 Pulling direction of tape

Guiding holes are on the right side of a carrier-tape when a tape is pulled off from upper side of the reel toward this side.



### 9-3 Cover tape

Pulling Force: 0.2N to 0.8N, Velocity: 300 $\pm$ 10 mm/min



Cover tape is not to be torn while being pulled off

