

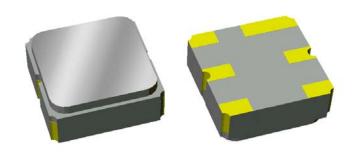
# **Data Sheet**

# Part Number 855821 836.5 MHz SAW Filter

### **Features**

- For AMPS, CDMA and TDMA applications
- Usable bandwidth 25 MHz
- Low loss
- No impedance matching required for operation at 50  $\Omega$
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free (14)





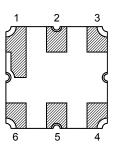
### **Package**

Surface Mount 3.00 x 3.00 x 1.22 mm

# 1.22 NOM. 1.32 MAX. 0.69 3.00 0.75 0.69

### **Pin Configuration**

**Bottom View** 



Pin No.	Description
2,5	Input/Output
1,3,4,6	Case ground

Dimensions shown are nominal in millimeters All tolerances are  $\pm 0.15$ mm except overall length and width  $\pm 0.10$ mm

Body: Al<sub>2</sub>O<sub>3</sub> ceramic Lid: Kovar, Ni plated Terminations: Au plating 0.5 - 1.0μm, over a 2 - 6μm Ni plating



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# **Data Sheet**

# Electrical Specifications (1)

Operating Temperature Range: (2) -40 to +85 °C

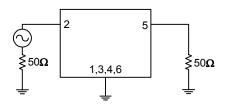
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
Center Frequency	-	836.5	-	MHz
Maximum Insertion Loss				
824 - 849 MHz	-	1.9	3	dB
Amplitude Variation				
824 - 849 MHz	-	0.8	1.5	dB p-p
Absolute Attenuation				
10 - 800 MHz	25	30	-	dB
869 - 894 MHz	35	40	-	dB
978 - 1006 MHz	25	35	-	dB
1050 - 2600 MHz	20	28	-	dB
Input/Output Return Loss				
824 - 849 MHz	10	14	-	dB
Source Impedance (4)	-	50	-	Ω
Load Impedance (4)	-	50	-	Ω

#### Notes:

- 1. All specifications are based on the test circuit shown below
- 2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
- Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
- 4. This is the optimum impedance in order to achieve the performance shown

#### **Test Circuit:**

 $50~\Omega \\ \text{Single-ended}$ 



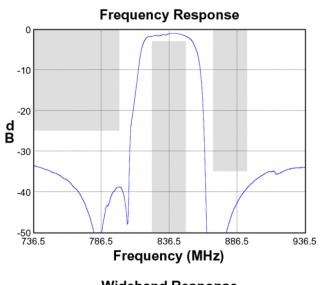
No impedance matching required

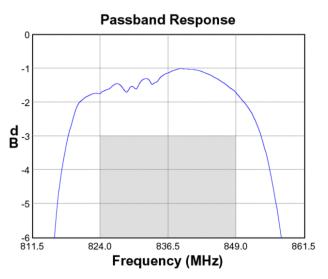


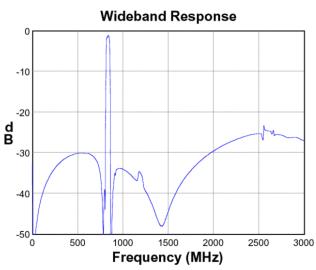
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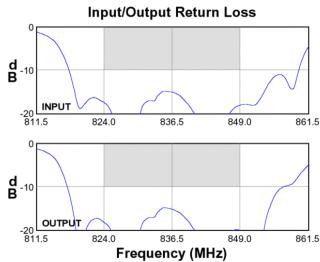
# **Data Sheet**

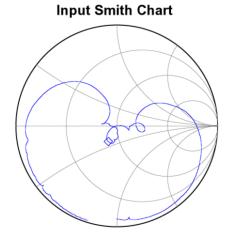
# Typical Performance (at +25°C)

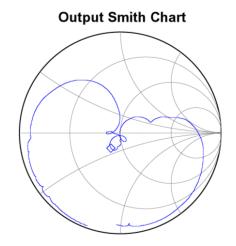












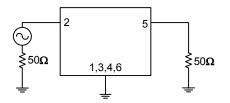


# **Data Sheet**

# Part Number 855821 836.5 MHz SAW Filter

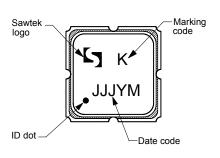
### **Matching Schematics**

 $50~\Omega \\ \text{Single-ended}$ 

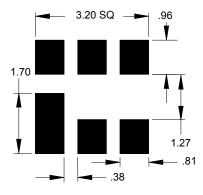


No impedance matching required

### **Marking**

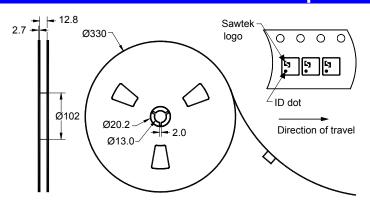


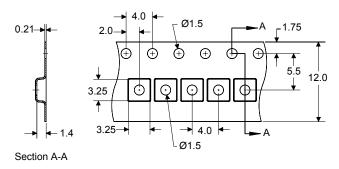
**PCB Footprint** 



The date code consists of: JJJ = Julian day, Y = last digit of year, M = manufacturing site code This footprint represents a recommendation only Dimensions shown are nominal in millimeters

## **Tape and Reel**





Dimensions shown are nominal in millimeters Packaging quantity: 5000 units/reel



# Part Number 855821 836.5 MHz SAW Filter

### **Data Sheet**

Maximum Ratings							
Parameter	Symbol	Minimum	Maximum	Unit			
Operating Temperature Range	T	-40	+85	°C			
Storage Temperature Range	T <sub>stg</sub>	-40	+85	°C			
RF Power	P <sub>in</sub>	-	+23	dBm			

### **Important Notes**

#### Warnings

Electrostatic Sensitive Device (ESD)



Avoid ultrasonic exposure

#### **RoHS Compliance**

This product complies with EU directive 2002/95/EC (RoHS) (Pb



#### **Solderability**

Compatible with JEDEC J-STD-020C Pb-free process, 260°C peak reflow temperature (see soldering profile)

### **Links to Additional Technical Information**

Qualification Flowchart **PCB Layout Tips** Soldering Profile

S-Parameters **RoHS Information** Other Technical Information

Sawtek's liability is limited only to the Surface Acoustic Wave (SAW) component(s) described in this data sheet. Sawtek does not accept any liability for applications, processes, circuits or assemblies, which are implemented using any Sawtek component described in this data sheet.

#### Contact Information

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