



RF360  
Europe GmbH

## SAW Components

### SAW band-stop filter

ISDB-T

Series/type:	B8731
Ordering code:	B39871B8731P810

Date:	June 17, 2015
Version:	2.0

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## SAW band-stop filter

ISDB-T

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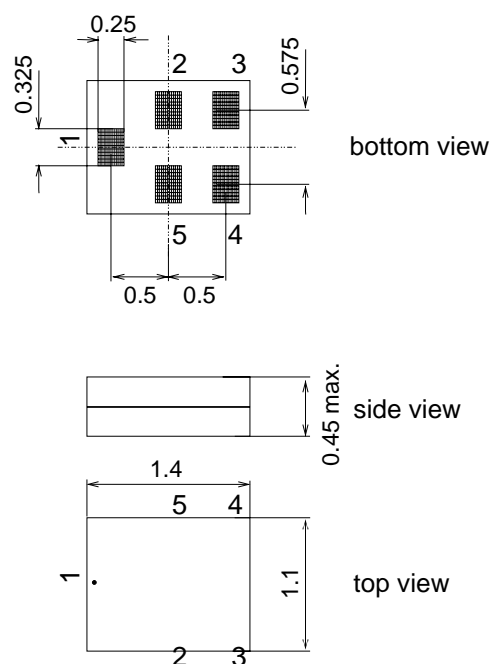
### Application

- Low-loss RF band-stop filter for ISDB-T
- Low insertion loss
- Low amplitude ripple
- Usable pass band width 240 MHz
- Impedance at input and output 50  $\Omega$
- Unbalanced to unbalanced operation



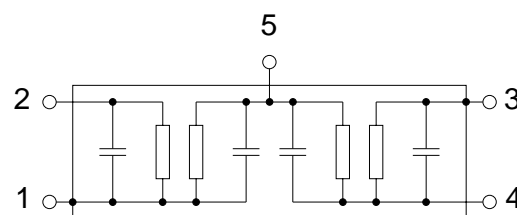
### Features

- Package size  $1.4 \times 1.1 \text{ mm}^2$
- Maximum package height of 0.45 mm
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- **Electrostatic Sensitive Device (ESD)**
- Ni, gold-plated terminals
- **Moisture Sensitivity Level 3**



### Pin configuration

- 1 Input
- 2 Coupling pin
- 3 Coupling pin
- 4 Output
- 5 Case ground



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B8731

## SAW band-stop filter

865.00 MHz

### Data sheet

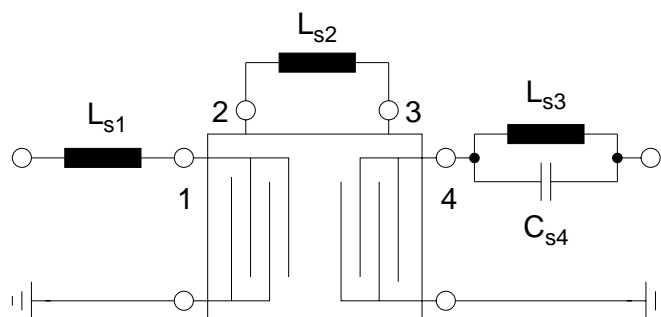


### Characteristics (including losses in the matching network)

Temperature range for specification:	$T$	=	-30 °C to +85 °C
Terminating source impedance:	$Z_S$	=	50 $\Omega$ and matching network
Terminating load impedance:	$Z_L$	=	50 $\Omega$ and matching network

		min.	typ. @ 25 °C	max.	
<b>Nominal center frequency</b>	$f_N$	—	865.00	—	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$	—	1.1	1.5	dB
470.00 ... 710.00 MHz		—			
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	2.2	2.7	dB
470.00 ... 710.00 MHz		—			
<b>Attenuation</b>	$\alpha$				
90.00 ... 222.00 MHz		12.0	18.0	—	dB
815.00 ... 830.00 MHz		38.0	43.0	—	dB
830.00 ... 845.00 MHz		41.0	48.0	—	dB
845.00 ... 880.00 MHz		38.0	45.0	—	dB
880.00 ... 900.00 MHz		42.0	48.0	—	dB
900.00 ... 915.00 MHz		40.0	47.0	—	dB
1427.90 ... 1462.90 MHz		50.0	60.0	—	dB
1749.90 ... 1784.90 MHz		50.0	60.0	—	dB
1920.00 ... 1980.00 MHz		50.0	60.0	—	dB
2496.00 ... 2690.00 MHz		50.0	60.0	—	dB

### Matching network (element values depend on PCB layout)



$L_{s1} = 24.0 \text{ nH}$   
 $L_{s2} = 36.0 \text{ nH}$   
 $L_{s3} = 19.0 \text{ nH}$   
 $C_{s4} = 0.50 \text{ pF}$

# SAW Components

B8731

## SAW band-stop filter

865.00 MHz

### Data sheet

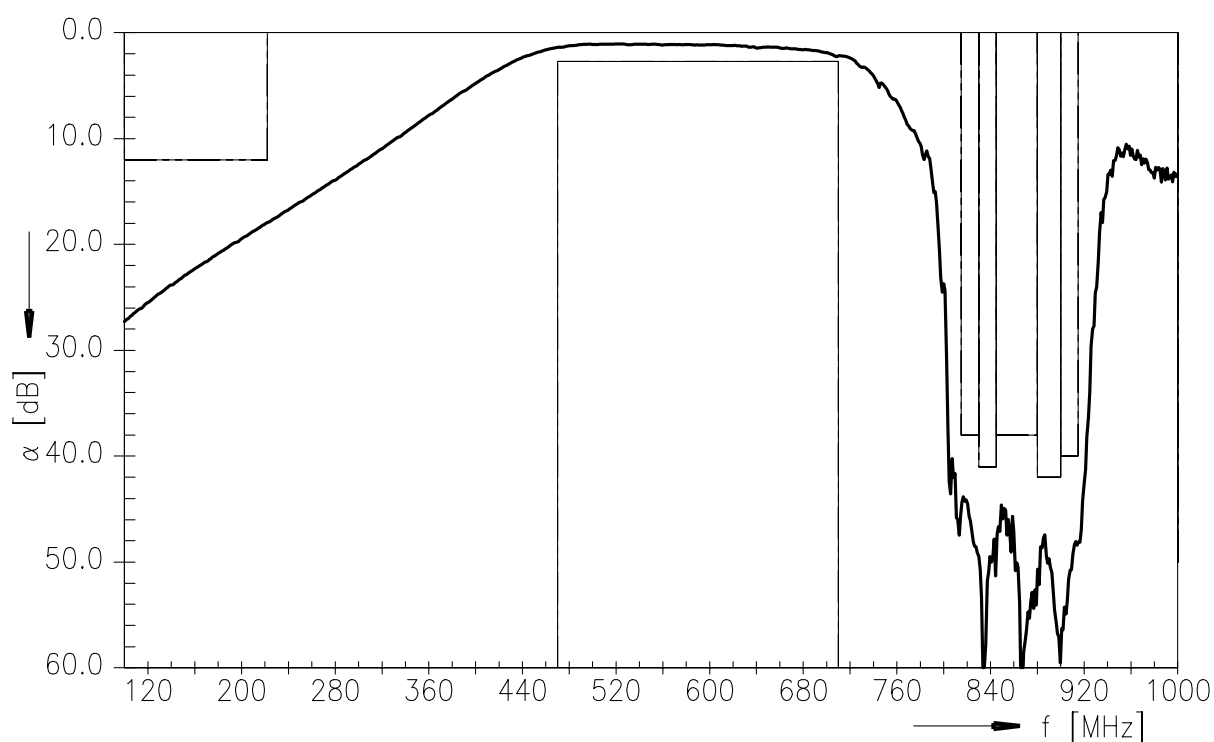


### Maximum ratings

Operable temperature range	T	−40/+85	°C	
Storage temperature range	T <sub>stg</sub>	−40/+85	°C	
DC voltage	V <sub>DC</sub>	0	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	machine model, 10 pulses
Source power at				
815 ... 845 MHz				
880 ... 915 MHz	P <sub>IN</sub>	21	dBm	CW, 10000hrs @ 85 °C

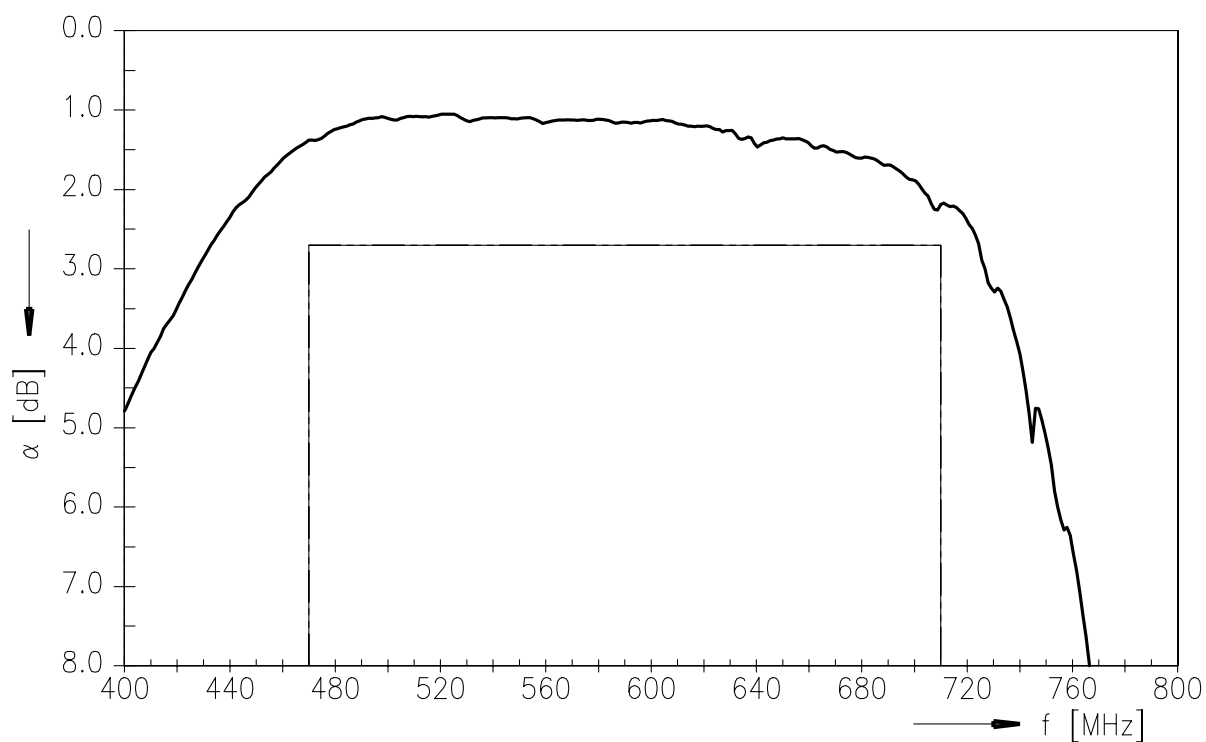
<sup>1)</sup> acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.

### Transfer function

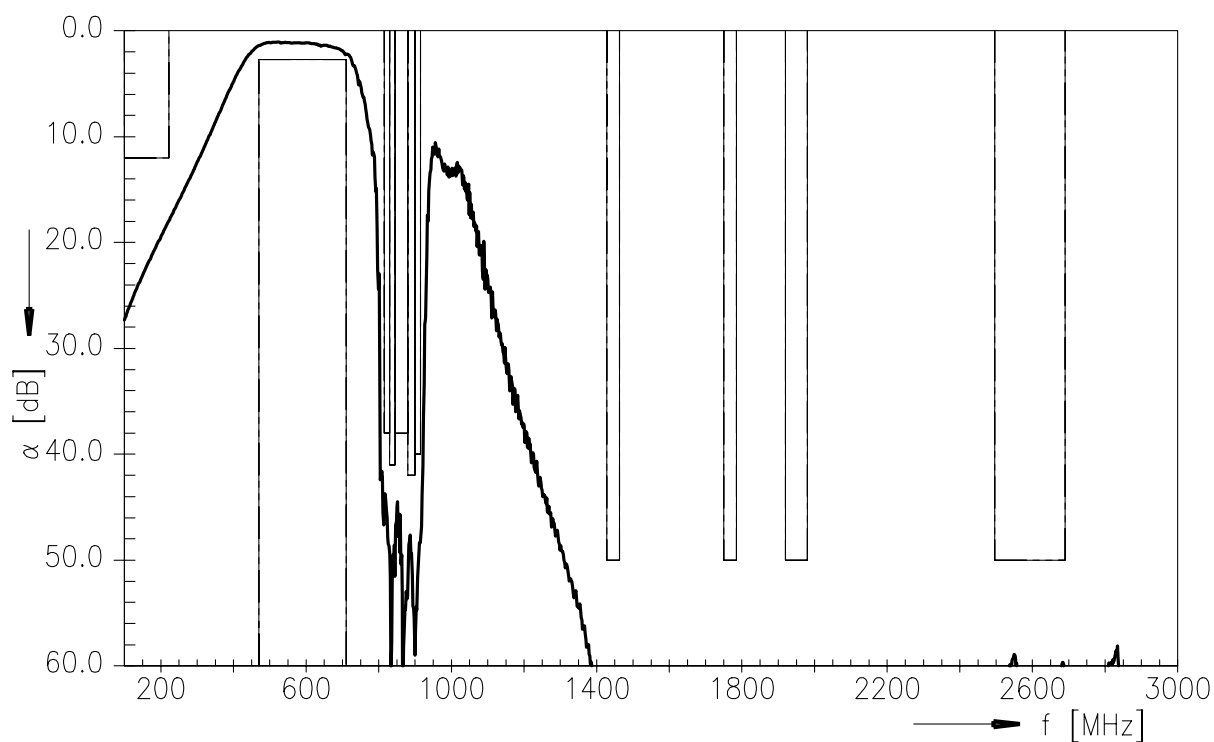




**Transfer function (pass band)**



**Transfer function (wide band)**



**SAW Components**
**B8731**
**SAW band-stop filter**
**865.00 MHz**

Data sheet


**References**

<b>Type</b>	B8731
<b>Ordering code</b>	B39871B8731P810
<b>Marking and package</b>	C61157-A8-A33
<b>Packaging</b>	F61074-V8237-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B8731_WB_UN.s4p (unmatched) B8731_WB.s2p (matched) see file header for port/pin assignment table
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 <sup>th</sup> , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
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<b>Matching coils</b>	See Inductor pdf-catalog <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> and Data Library for circuit simulation <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a> for a large variety of matching coils.

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