



# SAW Components

## SAW RF low loss filter

SCR

<b>Series/type:</b>	<b>B1636</b>
<b>Ordering code:</b>	<b>B39162B1636U510</b>
<b>Date:</b>	<b>September 16, 2008</b>
<b>Version:</b>	<b>2.1</b>

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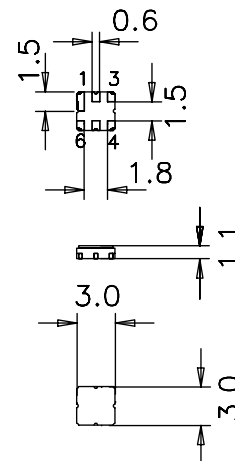
**Data Sheet**

**Application**

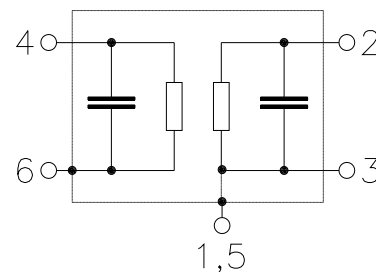
- Low loss RF filter for satellite channel router
- Usable passband 40.5 MHz
- High rejection
- 200  $\Omega$  balanced to 75  $\Omega$  unbalanced operation


**Features**

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- Maximum height of 1.225 mm
- Package code DCC6D
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**


**Pin configuration**

- 4 Input
- 6 Input
- 2 Output
- 1, 3, 5 Case ground



**SAW Components**
**B1636**
**SAW RF low loss filter**
**1632.0 MHz**
**Data Sheet**

**Characteristics**

Temperature range for specification:

$$T = +25\text{ °C} \pm 2\text{ °C}$$

Terminating source impedance:

$$Z_S = 200\ \Omega \text{ and matching network}$$

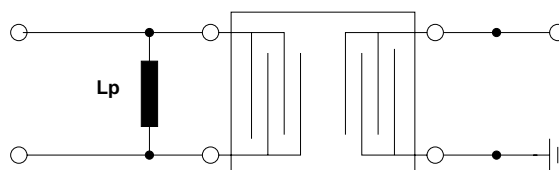
Terminating load impedance:

$$Z_L = 75\ \Omega$$

		min.	typ. @ 25 °C	max.	
<b>Nominal frequency</b>	$f_N$	—	1632.0	—	MHz
<b>Insertion attenuation</b> at 1632.0 MHz	$\alpha_0$	—	2.6	3.0	dB
<b>Pass bandwidth</b> $\alpha_{rel} \leq 1.0\text{ dB}$	$B_{1\text{ dB}}$	—	58.0	—	MHz
<b>Amplitude ripple (p-p)</b> 1608.4 ... 1655.5 MHz	$\Delta\alpha$	—	0.6	1.0	dB
<b>Group delay ripple (p-p)</b> 1613.6 ... 1650.3 MHz	$\Delta\tau$	—	6.0	10.0	ns
<b>Relative attenuation (relative to <math>\alpha_0</math>)</b>	$\alpha_{rel}$				
0.3 ... 862.0 MHz		60.0	70.0	—	dB
862.0 ... 1423.9 MHz		50.0	55.0	—	dB
1423.9 ... 1539.7 MHz		42.0	47.0	—	dB
1724.6 ... 2000.0 MHz		33.0	40.0	—	dB
2000.0 ... 2500.0 MHz		40.0	46.0	—	dB
2500.0 ... 3500.0 MHz		30.0	36.0	—	dB
<b>Common Mode Rejection Ratio (CMRR)</b> 1608.4 ... 1655.5 MHz		20.0	29.0	—	dB
<b>Input VSWR</b> 1608.4 ... 1655.5 MHz		—	1.7	2.0	
<b>Output VSWR</b> 1608.4 ... 1655.5 MHz		—	1.8	2.0	

**Data Sheet**

**Matching network** (element value depends on PCB layout)

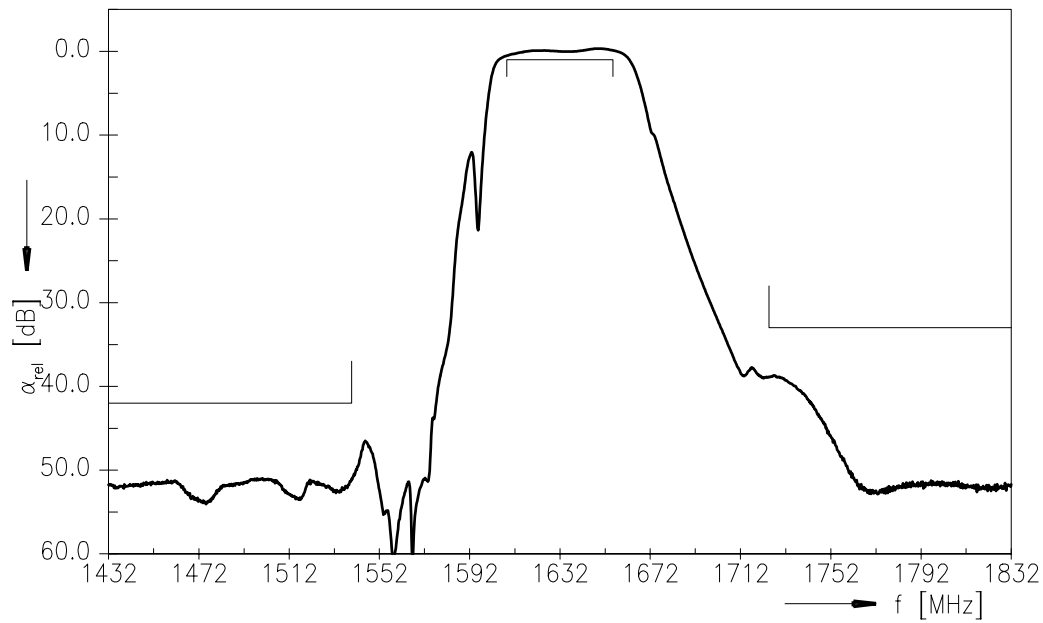
 $L_p = 18 \text{ nH}$ 

**Maximum ratings**

Operable temperature range	T	-30/+80	°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>	50 <sup>1)</sup>	V	machine model, 1 pulse
Input power at 1608.4... 1655.5 MHz	P <sub>IN</sub>	0	dBm	source impedance 200 Ω

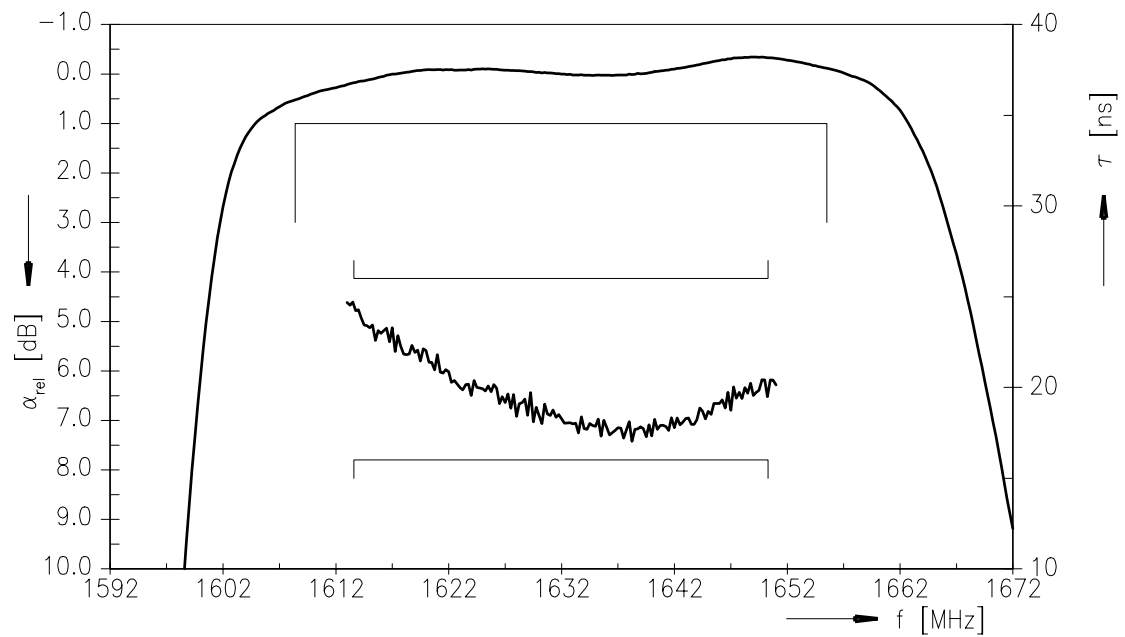
<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulses.



Transfer function  $S_{21}$  with matching network



Transfer function  $S_{21}$ (passband) with matching network




**References**

<b>Type</b>	B1636
<b>Ordering code</b>	B39162B1636U510
<b>Marking and package</b>	C61157-A7-A68
<b>Packaging</b>	F61074-V8168-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	LI18A_NB_UN.s3p
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	<p>defined as compatible with the following documents:</p> <p>"DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."</p>

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