



SAW Components

SAW RF low loss filter

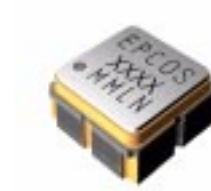
Digital radio

Series/type:	B1646
Ordering code:	B39232-B1646-U410
Date:	March 25, 2010
Version:	2.0



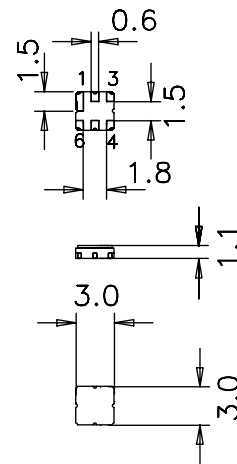
Application

- Low-loss RF filter for digital radio
- Unbalanced to unbalanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 12.5 MHz
- no matching network required



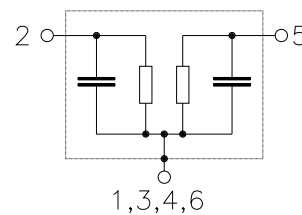
Features

- Package size 3.0 x3.0 x 1.1 mm³
- Maximum height of 1.225 mm
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 5 Input unbalanced
- 2 Output unbalanced
- 1,3,4,6 To be grounded





SAW Components **B1646**

SAW RF low loss filter **2326.25 MHz**

Data sheet



Characteristics

Temperature range for specification: $T = -20\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	2326.25	—	MHz
Maximum insertion attenuation	α_{max}	—	2.5	3.5	dB
2320.0 ... 2332.5 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.6	1.5	dB
2320.0 ... 2332.5 MHz					
Input return loss		10.0	16.0	—	dB
Output return loss		10.0	15.0	—	dB
Attenuation	α				
50.0 ... 2175.0 MHz		27	34	—	dB
2227.0 MHz		19	26	—	dB
2400.0 MHz		12	18	—	dB
2500.0 MHz		23	29	—	dB
2700.0 ... 3000.0 MHz		27	34	—	dB
Group delay ripple (p-p)		—	5	15	ns
2320.0 ... 2332.5 MHz					



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Characteristics

Temperature range for specification: $T = -40\text{ °C to }+105\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Nominal frequency	f_N	—	2326.25	—	MHz
Maximum insertion attenuation	α_{max}	—	2.5	4.5	dB
2320.0 ... 2332.5 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.6	2.6	dB
2320.0 ... 2332.5 MHz					
Input return loss		8.1	16.0	—	dB
Output return loss		8.1	15.0	—	dB
Attenuation	α				
50.0 ... 2175.0 MHz		27	34	—	dB
2227.0 MHz		19	26	—	dB
2400.0 MHz		12	18	—	dB
2500.0 MHz		23	29	—	dB
2700.0 ... 3000.0 MHz		27	34	—	dB
Group delay ripple (p-p)		—	5	30	ns
2320.0 ... 2332.5 MHz					

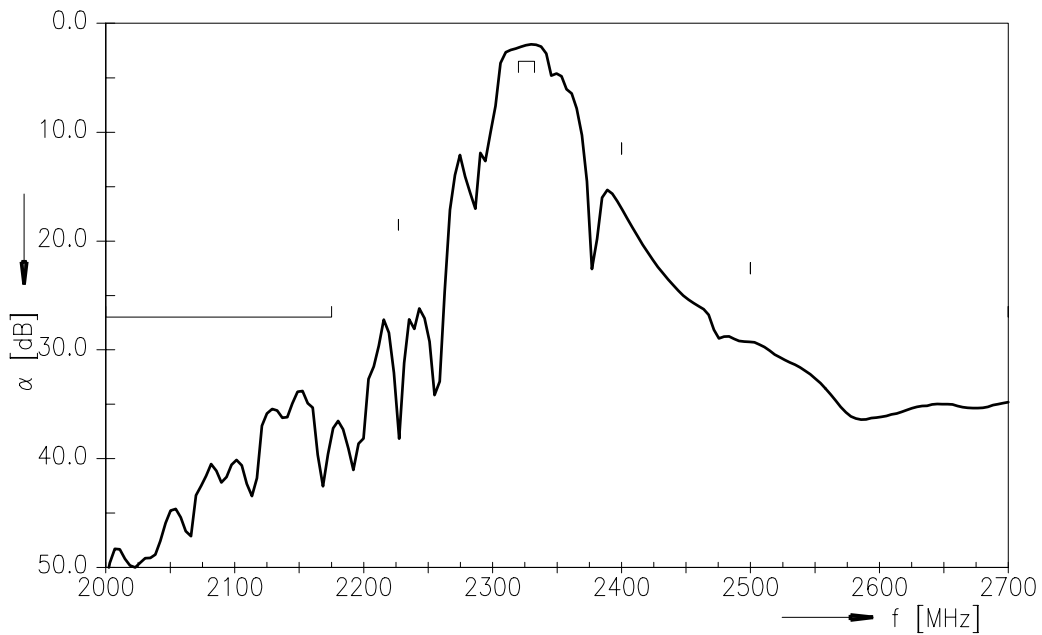


Maximum ratings

Operable temperature range	T	-40/+105	°C	
Storage temperature range	T _{stg}	-40/+105	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Input power at				
824.0 ... 849.0 MHz	P _{IN}	30	dBm	
1850.0...1910.0 MHz	P _{IN}	25	dBm	
2320.0...2332.5 MHz	P _{IN}	8	dBm	source impedance 50 Ω

1) according to JESD22-A115A (machine model), 1 negative & 1 positive pulse.

Transfer function





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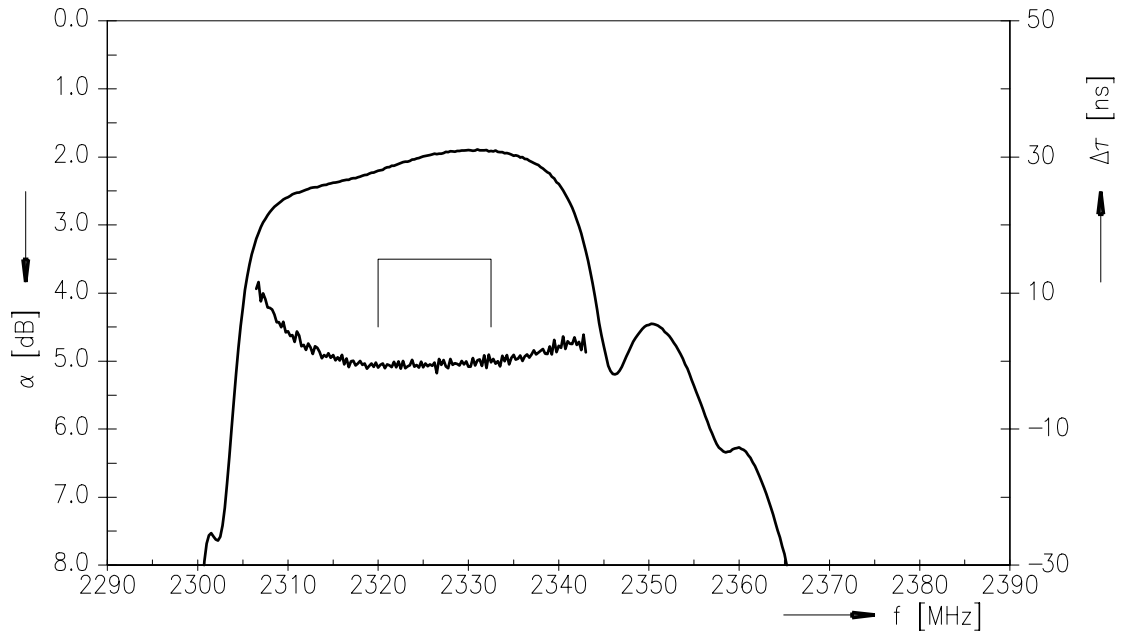
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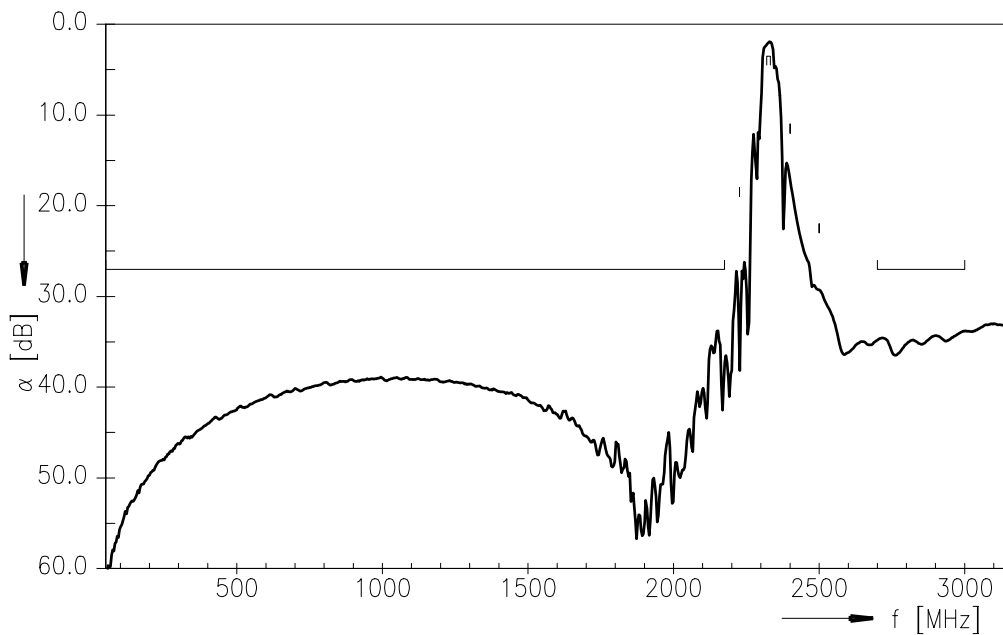
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Transfer function (passband)



Transfer function (wideband)



Please read *cautions and warnings* and *important notes* at the end of this document.



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References

Type	B1646
Ordering code	B39232-B1646-U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B1646_NB.s2p See file header for port/pin assignment table.
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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Please read *cautions and warnings and important notes* at the end of this document.



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