



SAW Components

SAW RF filter for base stations

LTE 800

Series/type:	B5131
Ordering code:	B39811B5131U410
Date:	December 16, 2010
Version:	2.0



Data sheet



Application

- RF filter for LTE800MHz BTS Tx
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Usable passband of 30 MHz
- No matching required for operation at 50Ω



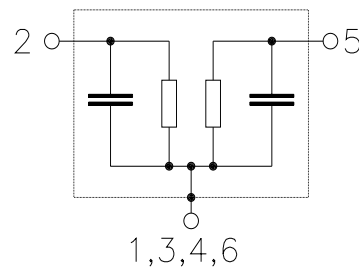
Features

- Package size 3.0 x3.0 x 1.10 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



Pin configuration

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



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



SAW Components	B5131
SAW RF filter	806.0 MHz

Data sheet



Characteristics

Temperature range for specification: T = -40 °C to +85 °C
 Terminating source impedance: Z_S = 50 Ω
 Terminating load impedance: Z_L = 50 Ω

		min.	typ. @ 25 °C	max.	
Center frequency	f _C	—	806.0	—	MHz
Minimum insertion attenuation 791.0 ... 821.0 MHz	α _{min}	—	1.20	—	dB
Maximum insertion attenuation 791.0 ... 821.0 MHz	α _{max}	—	1.8	3.0	dB
Amplitude ripple (p-p) 791.0 ... 821.0 MHz	Δα	—	0.8	1.0	dB
Group delay ripple (p-p) 791.0 ... 821.0 MHz	Δτ	—	30	50	ns
Input return loss 791.0 ... 821.0 MHz		9	11	—	dB
Output return loss 791.0 ... 821.0 MHz		9	11	—	dB
Relative attenuation (relative to α_{min})	α _{rel}				
1.0 ... 715.4 MHz		25	31	—	dB
715.4 ... 770.0 MHz		15	23	—	dB
832.0 ... 880.0 MHz		13	15	—	dB
880.0 ... 921.0 MHz		20	26	—	dB
921.0 ... 3800.0 MHz		25	30	—	dB



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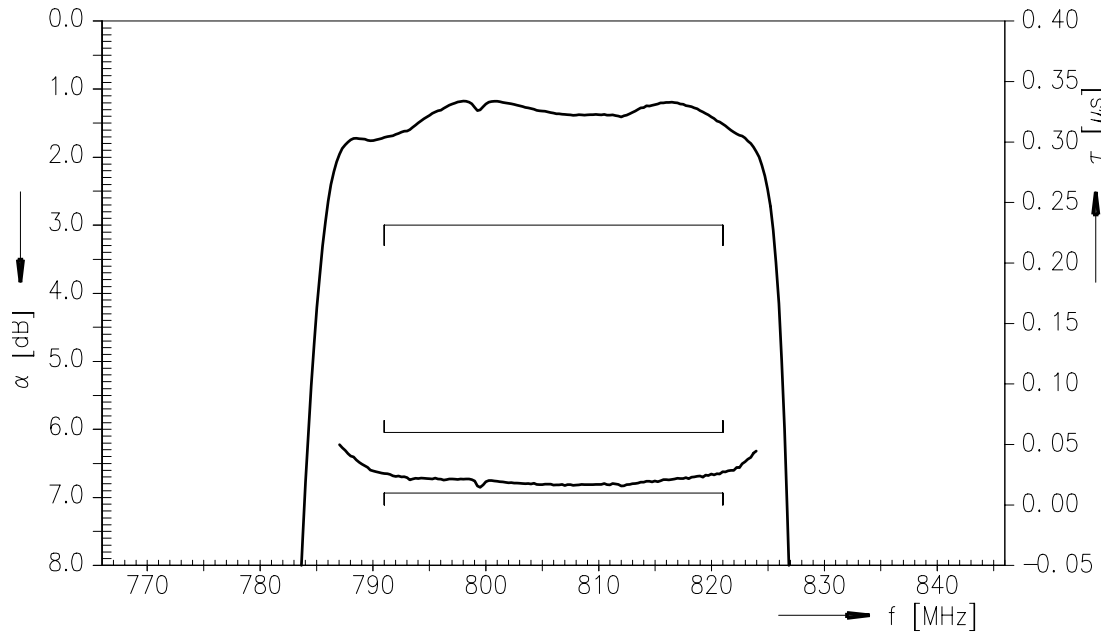
Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	0	V	
ESD voltage	V _{ESD}	100 ¹⁾	V	machine model, 1 pulse
Input power at 791.0 ... 821.0	P _{IN}	15	dBm	CW

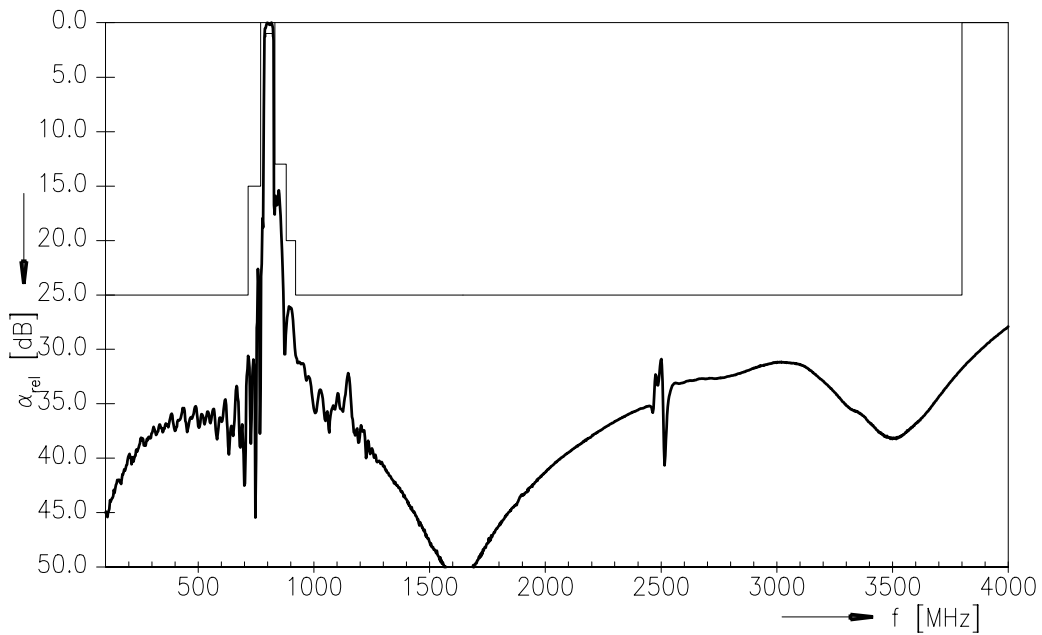
¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function



Transfer function (wide band, normalized)



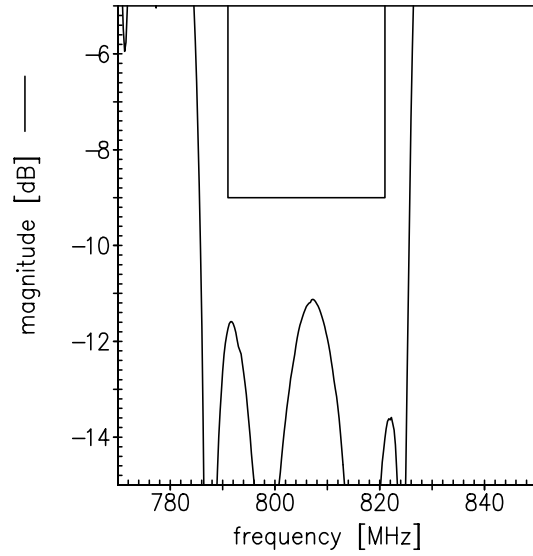
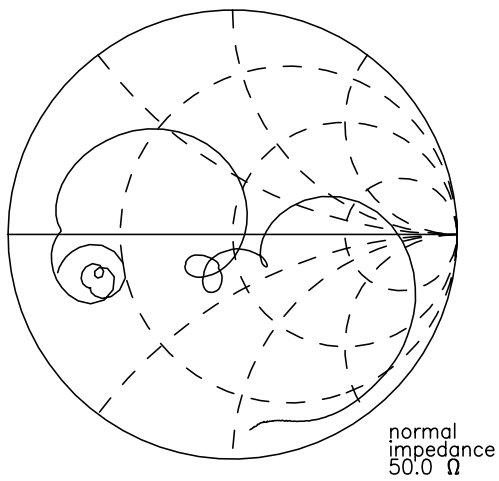


Data sheet

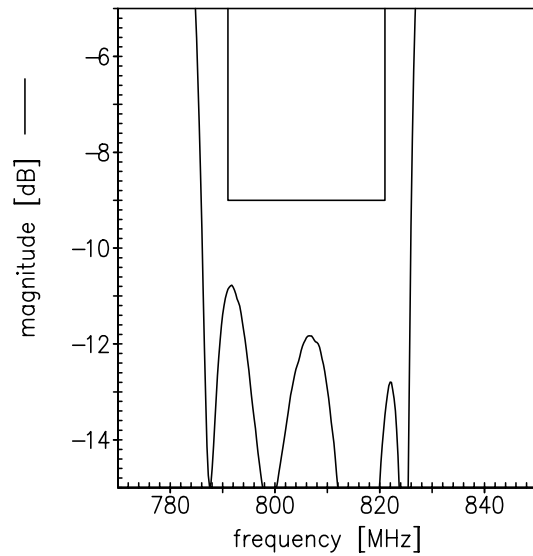
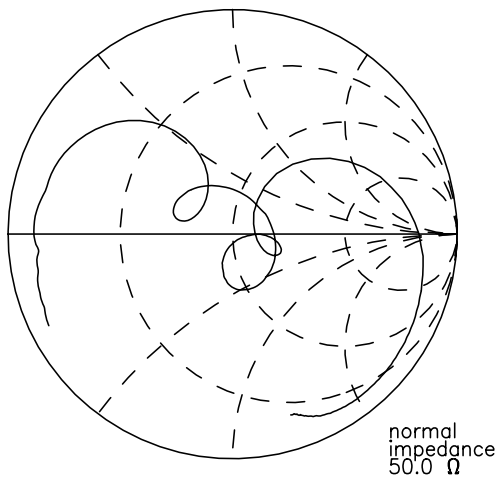


Smith charts

S₁₁ function



S₂₂ function





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B5131

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806.0 MHz

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References

Type	B5131
Ordering code	B39811B5131U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5131_NB.s2p, B5131_WB.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."
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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

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