



SAW Components

SAW Filter

BC10 Downlink filter

Series/type:	B8303
Ordering code:	B39881B8303P810
Date:	Sep 10 , 2012
Version:	2.2



Data sheet



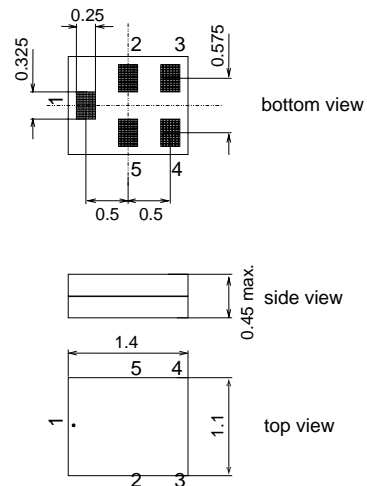
Application

- Low-loss filter for CDMA small cells application
- Usable passband for 32MHz
- Impedance 50 Ω at input and output
- Very high suppression
- Unbalanced to unbalanced operation



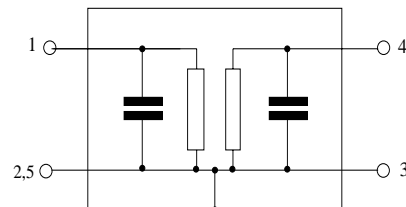
Features

- Package size 1.4 x 1.1 mm³
- max. Package height 0.45 mm
- RoHS compatible
- Approx. weight 0.003g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (ESD)
- **M**oisture **S**ensitive **L**evel 3



Pin configuration

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





SAW Components	B8303
SAW Filter	878.0 MHz

Data sheet



Characteristics

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

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	878.0	—	MHz
Maximum insertion attenuation	862.0 ... 894.0 MHz α_{max}	—	2.6	3.5 ¹⁾	
Input VSWR	862.0 ... 894.0 MHz	—	2.6	3.5	
Output VSWR	862.0 ... 894.0 MHz	—	2.9	3.5	
Attenuation	α_{abs}				
	50.0 ... 817.0 MHz	35	43	—	dB
	817.0 ... 849.0 MHz	42	44	—	dB
	849.0 ... 855.5 MHz	3	22	—	dB
	1634.0 ... 1788.0 MHz	30	44	—	dB
	1710.0 ... 1755.0 MHz	40	45	—	dB
	1850.0 ... 1910.0 MHz	40	45	—	dB
	2400.0 ... 2484.0 MHz	30	46	—	dB
	3268.0 ... 3576.0 MHz	20	49	—	dB

¹⁾ 3.1dB for temperature range from 0 °C to +85 °C



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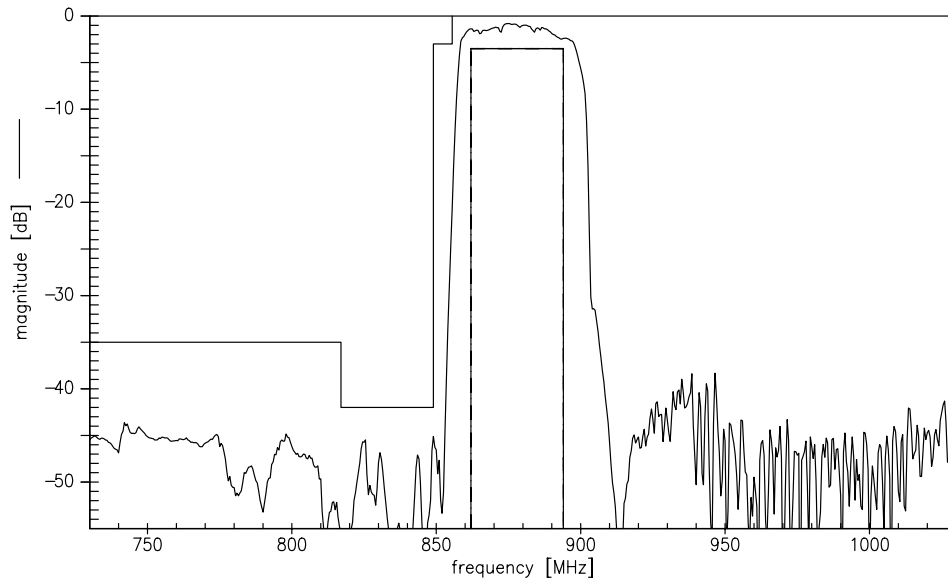
Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	3	V	
ESD voltage	V _{ESD}	100 ¹⁾	V	machine model, 10 pulses
Input Power at 862.0 ... 894.0 MHz	P _{IN}	16	dBm	50,000h CW @Ta=55°C

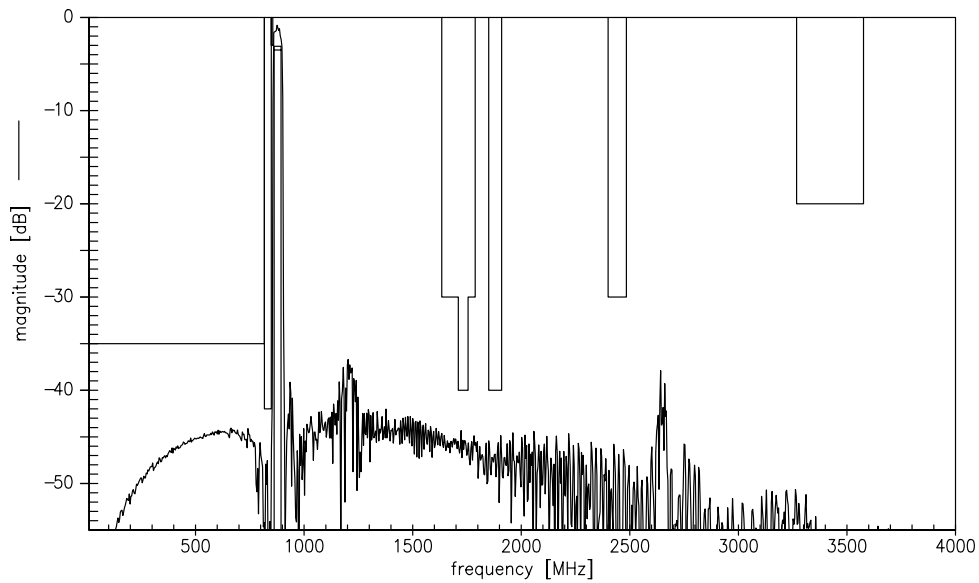
¹⁾ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



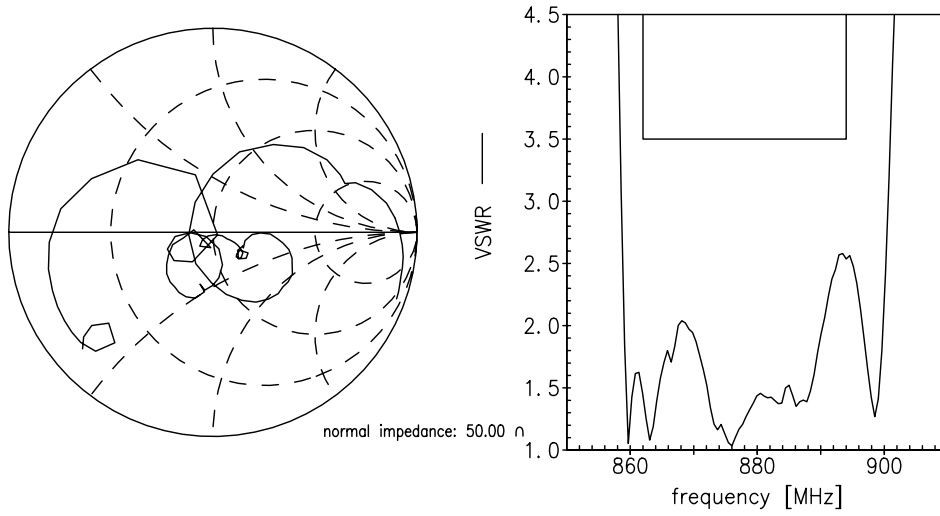
Transfer function (narrow band)



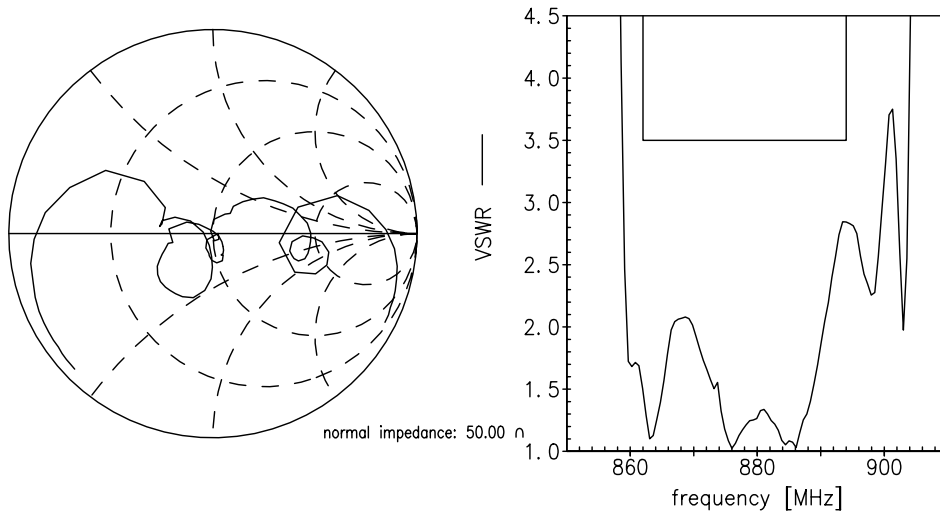
Transfer function (wide band)



S₁₁ function



S₂₂ function





SAW Components **B8303**

SAW Filter **878.0 MHz**

Data sheet



References

Type	B8303
Ordering code	B39881B8303P810
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B8303_NB.s2p, B8303_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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
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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