SAW Components

SAW Filter

BC10 Downlink filter

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

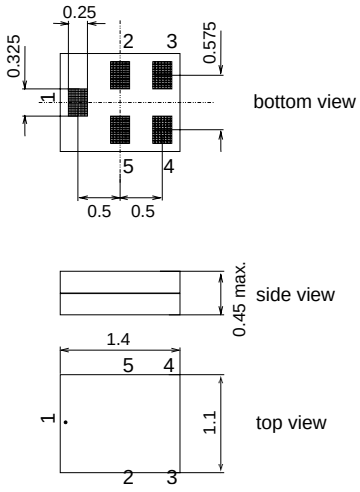
Data sheet SMD

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

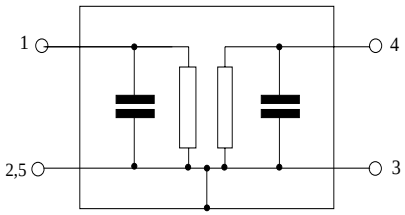
Features

- Package size 1.4 x 1.1 mm³
- max. Package height 0.45 mm
- RoHS compatible
- Approx. weight 0.003g
- Package for **S**urface **M**ount **T**echnology (**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



Data sheet SMD

Characteristics

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

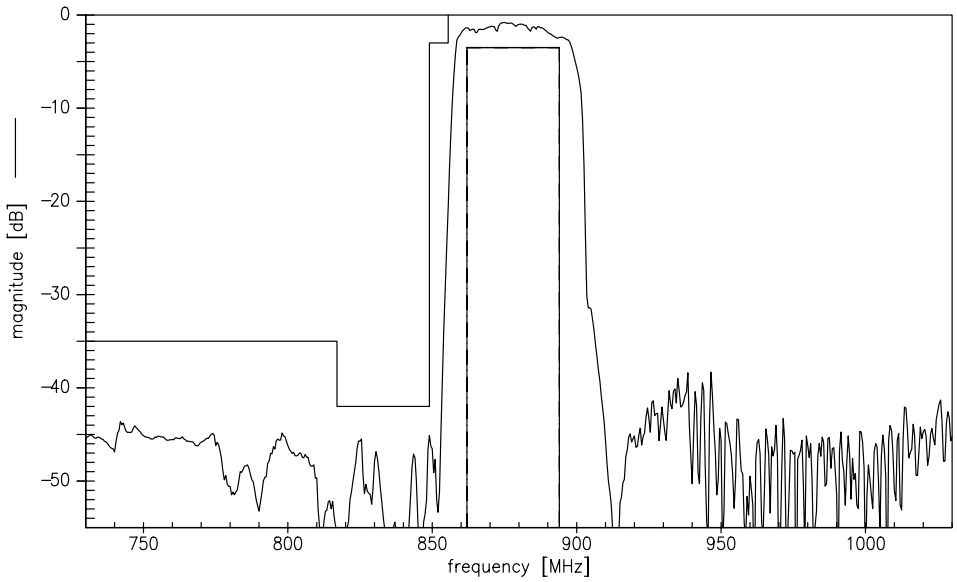
1) 3.1dB for temperature range from 0°C to +85°C

Maximum ratings

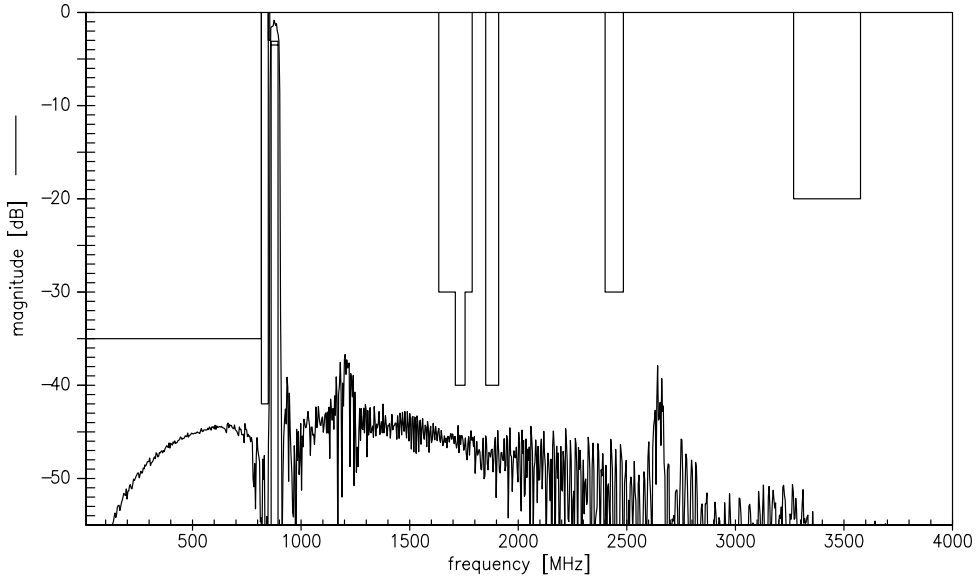
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}	100[1)]	V	machine model, 10 pulses
Input Power at 862.0 ... 894.0 MHz	P_{IN}	16	dBm	50,000h CW @Ta=55˚C

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

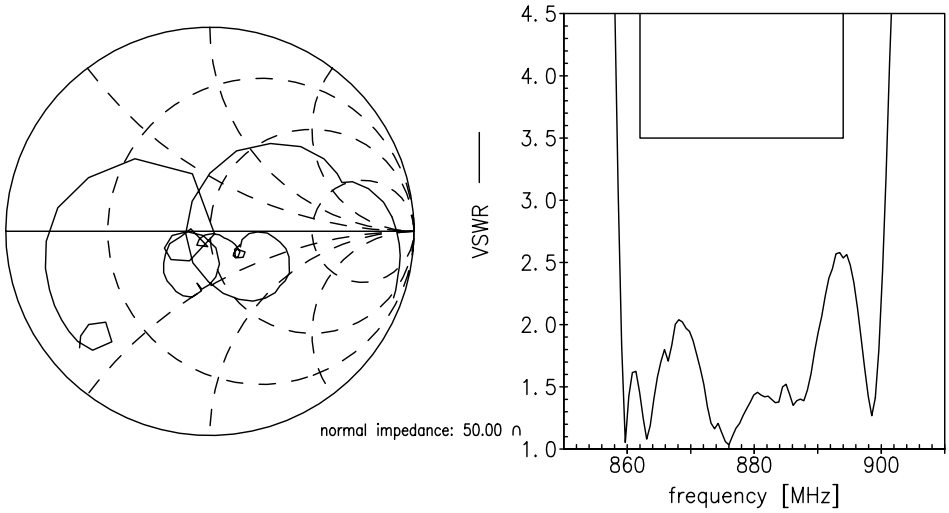
Transfer function (narrow band)



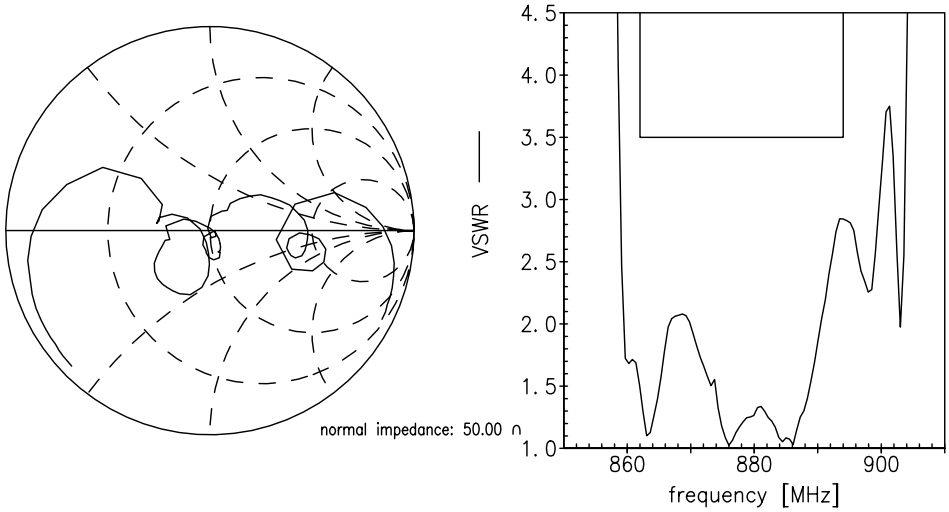
Transfer function (wide band)



S_{11} function



S_{22} function



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."
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