SAW Components

SAW filter

Short range devices

Series/type:	**B4146**
Ordering code:	**B39881B4146U510**
Date:	June 26, 2006
Version:	2.0

EPCOS

SAW Components	B4146
SAW filter	**881.50 MHz**

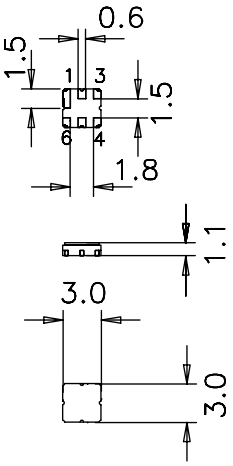
Data sheet SMD

Application

- Low-loss RF filter for mobile telephone AMPS systems, receive path
- Low amplitude ripple
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 200 Ω

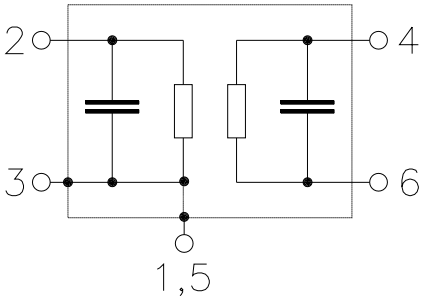
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6D
- RoHS compatible
- Approximate weight 0.037 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- AEC-Q200 qualified component family
- **E**lectrostactic **S**ensitive **D**evice (**ESD**)



Pin configuration

- 2 Input
- 4 Balanced output
- 6 Balanced output
- 1, 3, 5 Ground, to be grounded



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Data sheet SMD

Characteristics

Reference temperature: T_A = + 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 68nH(balanced)

		min.	typ.	max.	
Center frequency	f_C	—	881.50	—	MHz
Maximum insertion attenuation	α_{max}				
869.00 ... 894.00 MHz		—	2.5	3.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869.00 ... 894.00 MHz		—	0.7	1.2	dB
VSWR					
869.00 ... 894.00 MHz		—	1.8	1.9	
Attenuation	α				
0.00 ... 824.00 MHz		50	60	—	dB
824.00 ... 849.00 MHz		35	40	—	dB
924.00 ... 970.00 MHz		30	40	—	dB
970.00 ... 1300.00 MHz		50	65	—	dB
1300.00 ... 2000.00 MHz		40	60	—	dB
2000.00 ... 3000.00 MHz		30	50	—	dB

Characteristics

Temperature range for specification: T_A = –30 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 68nH(balanced)

		min.	typ. @ 25˚C	max.	
Center frequency	f_C	—	881.50	—	MHz
Maximum insertion attenuation	α_{max}				
869.00 ... 894.00 MHz		—	2.5	3.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869.00 ... 894.00 MHz		—	0.7	1.2	dB
VSWR					
869.00 ... 894.00 MHz		—	1.8	1.9	
Attenuation	α				
0.00 ... 824.00 MHz		50	60	—	dB
824.00 ... 849.00 MHz		35	40	—	dB
924.00 ... 970.00 MHz		30	40	—	dB
970.00 ... 1300.00 MHz		50	65	—	dB
1300.00 ... 2000.00 MHz		40	60	—	dB
2000.00 ... 3000.00 MHz		30	50	—	dB

Characteristics

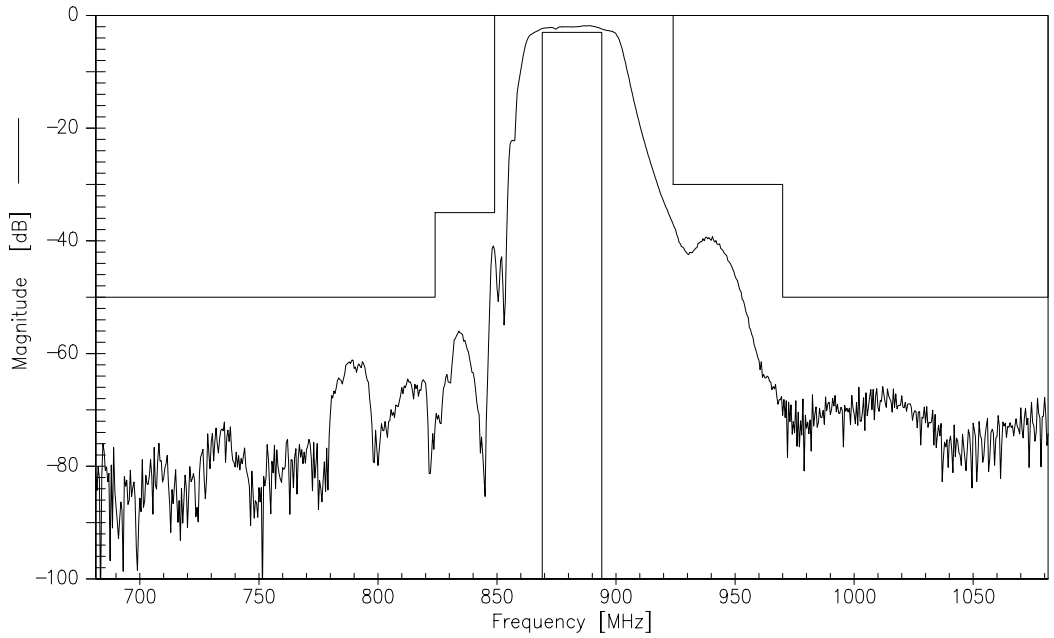
Temperature range for specification: T_A = –40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω || 68nH(balanced)

		min.	typ. @ 25˚C	max.	
Center frequency	f_C	—	881.50	—	MHz
Maximum insertion attenuation	α_{max}				
869.00 ... 894.00 MHz		—	2.8	3.1	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869.00 ... 894.00 MHz		—	1.0	1.3	dB
VSWR					
869.00 ... 894.00 MHz		—	1.8	1.9	
Attenuation	α				
0.00 ... 824.00 MHz		50	60	—	dB
824.00 ... 849.00 MHz		35	40	—	dB
924.00 ... 970.00 MHz		30	40	—	dB
970.00 ... 1300.00 MHz		50	65	—	dB
1300.00 ... 2000.00 MHz		40	60	—	dB
2000.00 ... 3000.00 MHz		30	50	—	dB

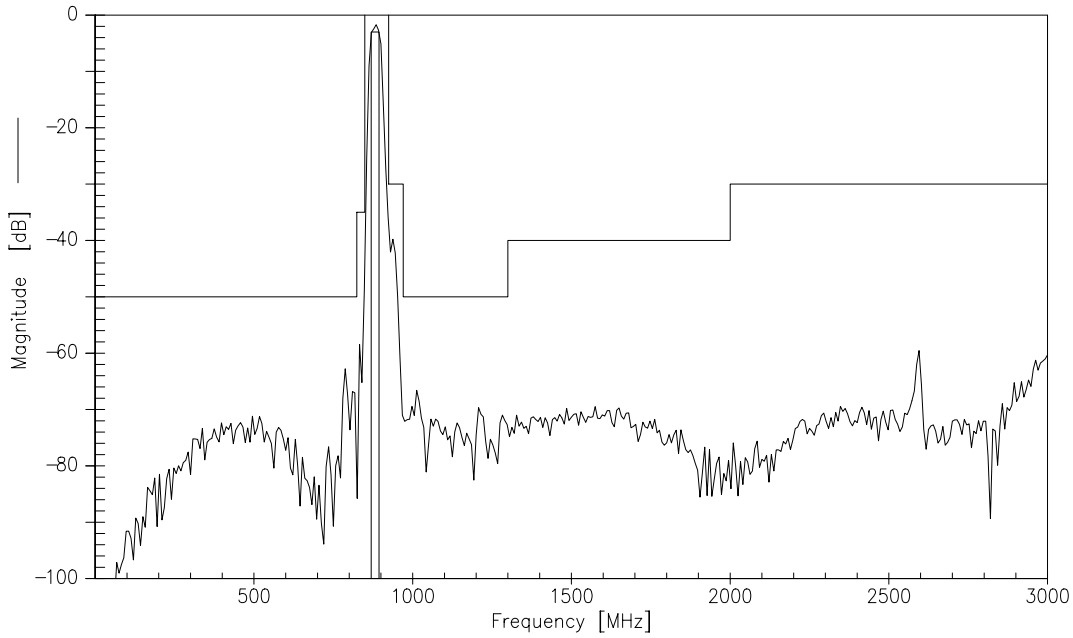
Maximum ratings

Operable temperature range	T_A	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD	V_{ESD}	50	V	Human Body Model
Input power max.	P_{IN}	5	dBm	source impedance 50 Ω

Transfer function

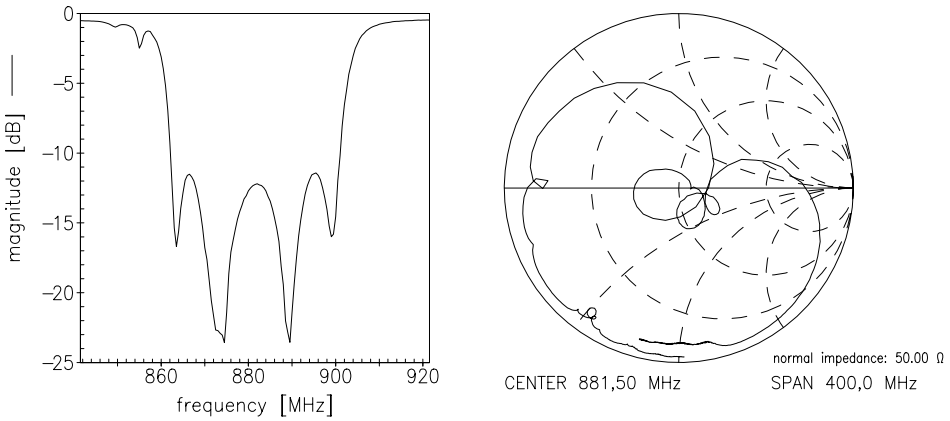


Transfer function

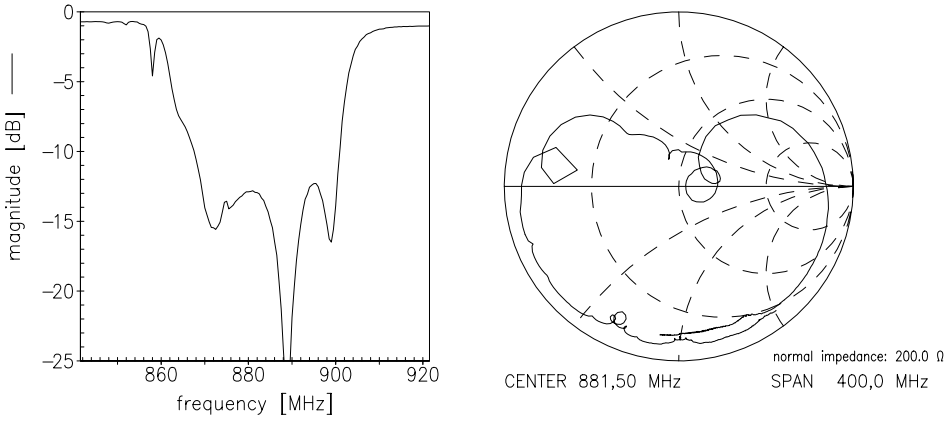


Reflection functions (measurement)

S_{11}



S_{22}



References

Type	B4146
Ordering code	B39881B4146U510
Marking and package	C61157-A7-A68
Packaging	F61074-V8089-Z000
Date codes	L_1126
S-parameters	B4146_SB.s2p B4146_WB.s2p
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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