



SAW Components

SAW filter

AMPS TX

Series/type:	B4180
Ordering code:	B39841B4180U410
Date:	August 22, 2012
Version:	2.0

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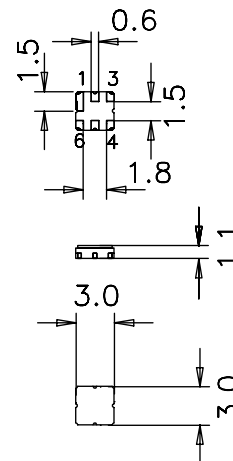
Application

- Low-loss RF filter for mobile telephone AMPS system, transmit path
- High selectivity
- Usable passband of 25MHz
- No matching required for operation at 50Ω



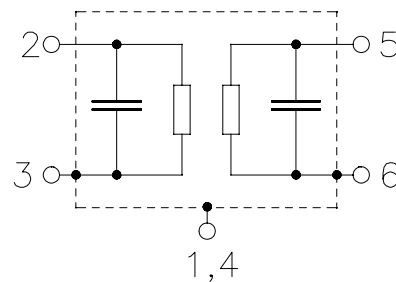
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 1**
- Filter surface passivated



Pin configuration

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





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836.5 MHz

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Characteristics

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

			min.	typ.	max.	
Center frequency	f_c		—	836,5	—	MHz
Maximum insertion attenuation	α_{max}	824,0 ... 849,0 MHz	—	2,2	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$	824,0 ... 849,0 MHz	—	1,0	1,5	dB
Group delay ripple (p-p)	$\Delta\tau$	824,0 ... 849,0 MHz	—	30	50	ns
VSWR		824,0 ... 849,0 MHz	—	1,9	2,1	
Attenuation	α					
		0,0 ... 300,0 MHz	25,0	27,0	—	dB
		300,0 ... 800,0 MHz	22,0	24,0	—	dB
		869,0 ... 894,0 MHz	30,0	32,0	—	dB
		894,0 ... 1800,0 MHz	25,0	27,0	—	dB
		1800,0 ... 2200,0 MHz	20,0	22,0	—	dB
		2200,0 ... 3000,0 MHz	13,0	15,0	—	dB



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Characteristics

Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input power at 824.0 ... 849.0 MHz	P _{IN}	15	dBm	CW

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



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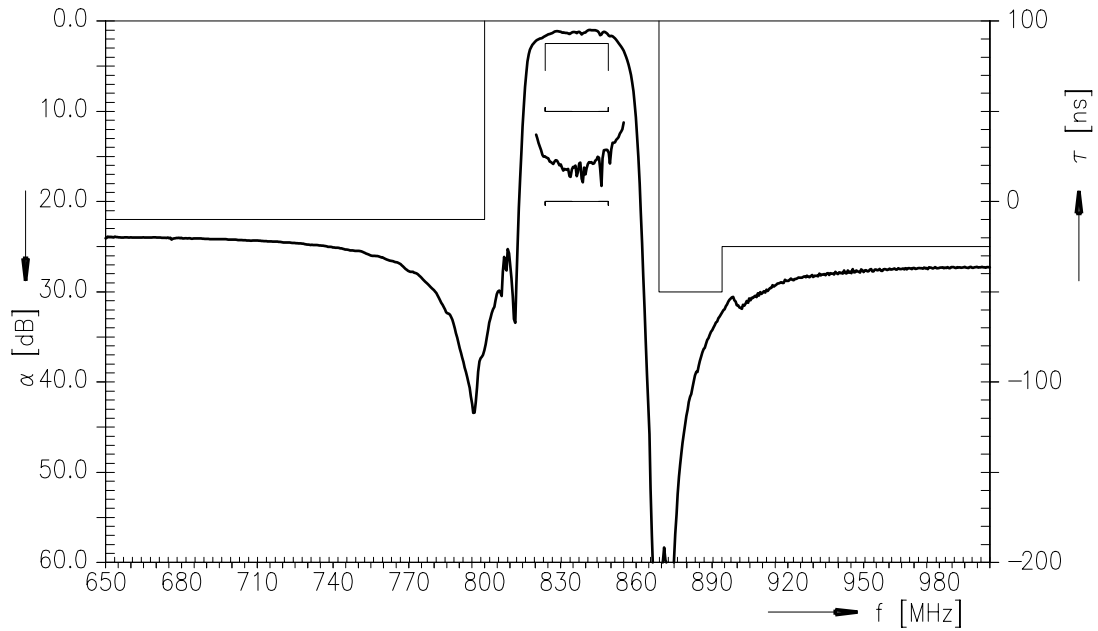
SAW filter

836.5 MHz

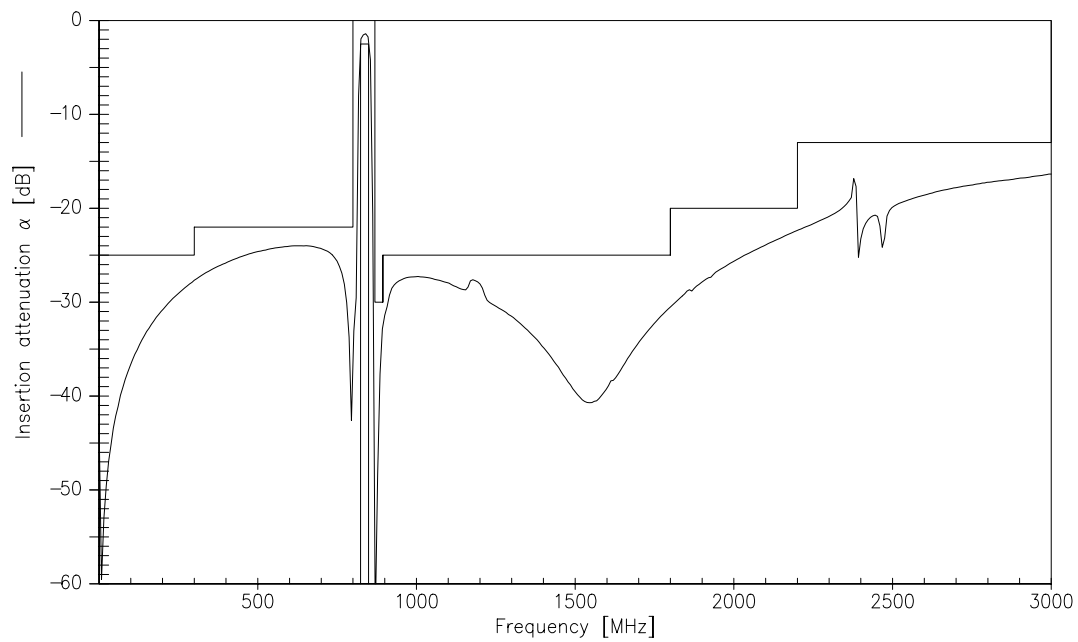
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Transfer function (narrowband)(-30 to 85°C)



Transfer function (wideband)



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

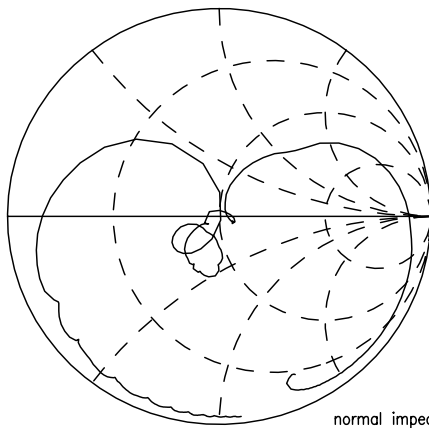
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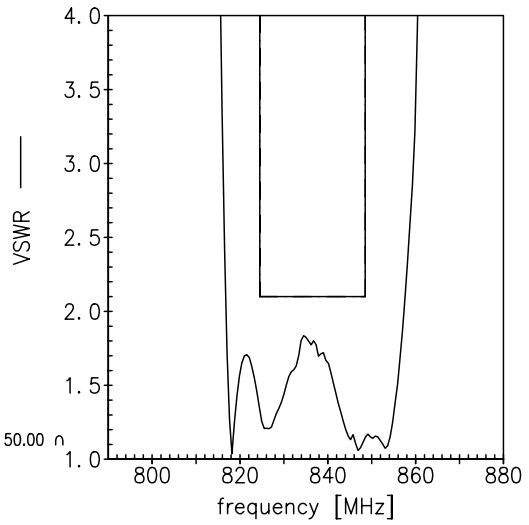


Smith charts

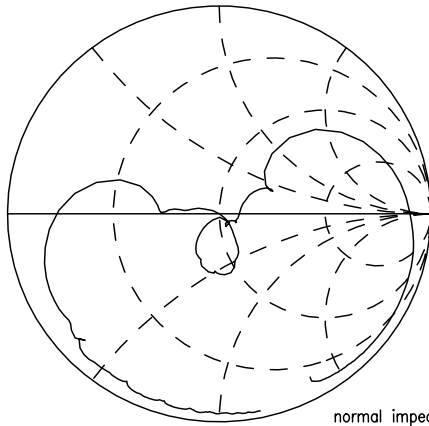
S₁₁ function



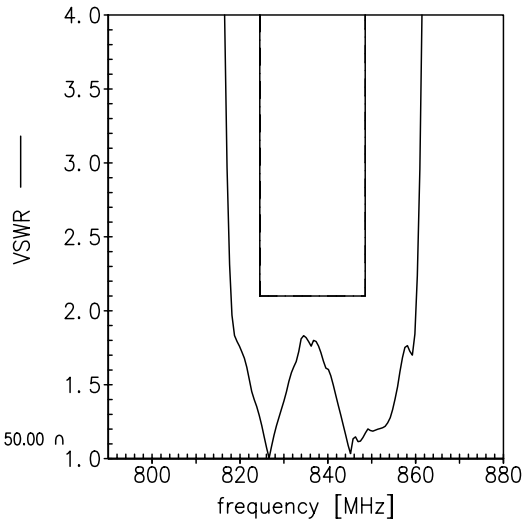
normal impedance: 50.00 Ω



S₂₂ function



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References

Type	B4180
Ordering code	B39841B4180U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B4180_NB.s2p, B4180_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.

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