



SAW Components

SAW Tx filter

CDMA 800

Series/type:	B5059
Ordering code:	B39871B5059U410
Date:	January 04, 2011
Version:	2.0



SAW Components

B5059

SAW Tx filter

867.50 MHz

Data sheet

SMD

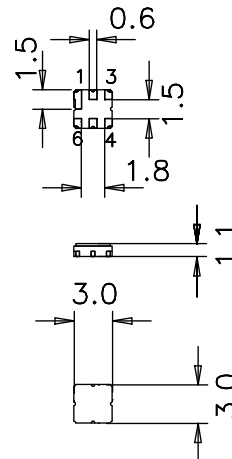
Application

- Low-loss RF filter for mobile telephone CDMA systems, transmit path (TX)
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Usable passband 25 MHz
- No external matching requirement



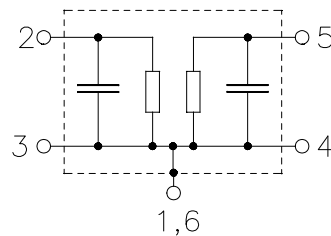
Features

- Package size 3.0 x3.0 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)**



Pin configuration

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



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



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Characteristics

Temperature range for specification: T = -10 °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	—	867.5	—	MHz
Maximum insertion attenuation	α _{max}				
855.0 ... 880.0 MHz		—	2.5	3.0	dB
Amplitude ripple (p-p)	Δα				
855.0 ... 880.0 MHz		—	0.9	1.5	dB
Return Loss(Input and Output)					
855.0 ... 880.0 MHz		7.5	9.4	-	dB
Group Delay Ripple (p-p)					
855.0 ... 880.0 MHz		—	23.0	50.0	ns
Attenuation	α				
0.0 ... 750.0 MHz		40	56	—	dB
750.0 ... 835.0 MHz		35	47	—	dB
915.0 ... 1000.0 MHz		35	48	—	dB
1000.0 ... 2000.0 MHz		30	45	—	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}	5	V	
ESD voltage	V _{ESD}	100 ¹⁾	V	machine model, 1 pulse
Input power at 855.0 ...880.0MHz	P _{IN}	15	dBm	10000hrs, CW

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



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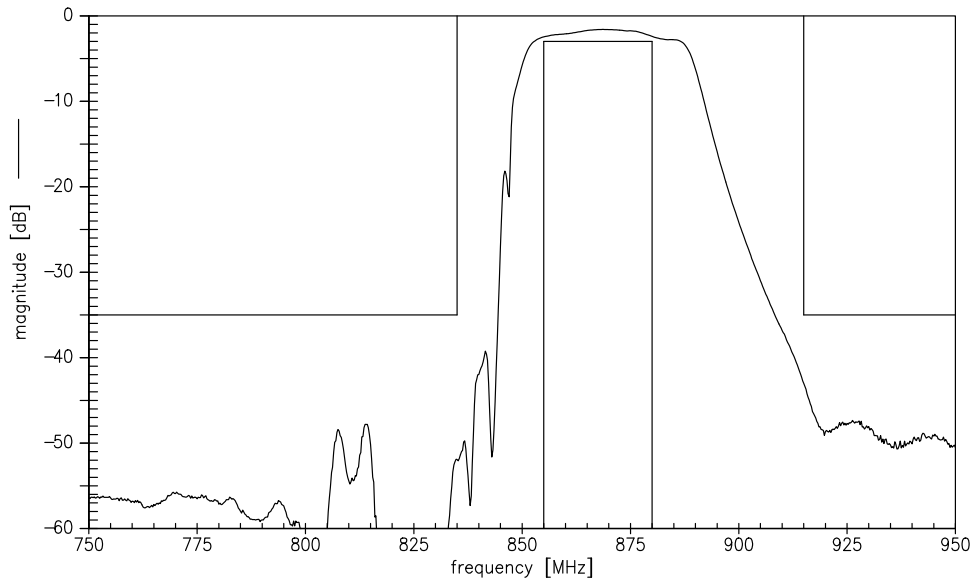
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867.50 MHz

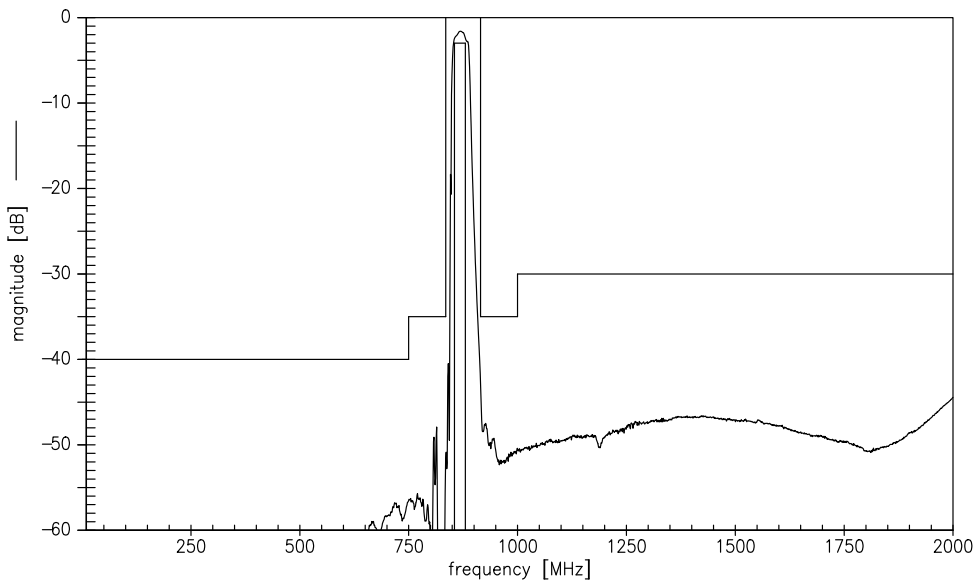
Data sheet



Transfer function



Transfer function (wideband)



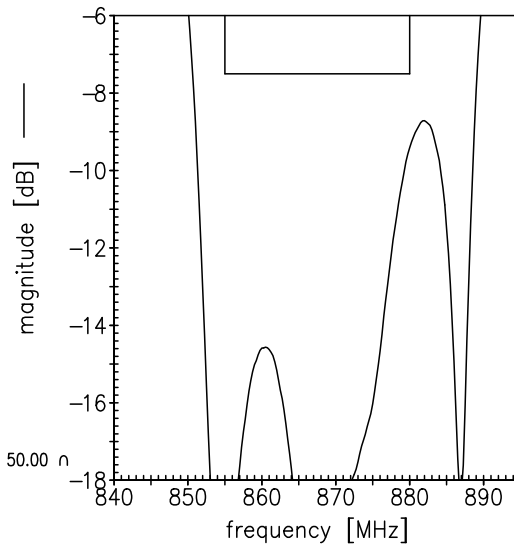
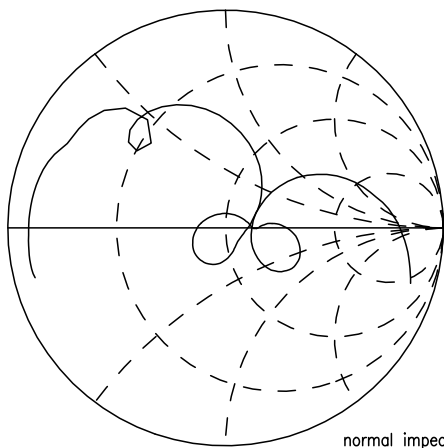
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Data sheet

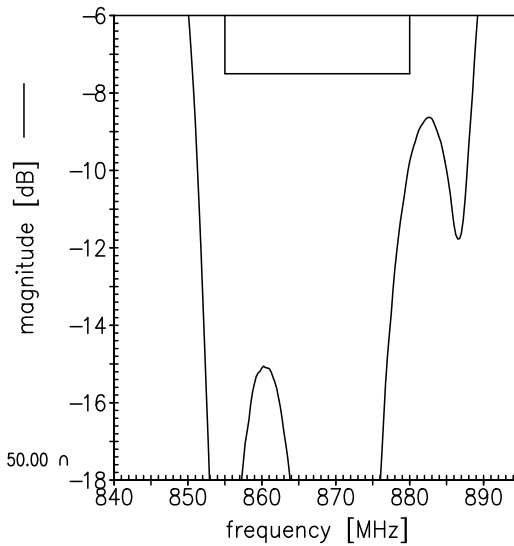
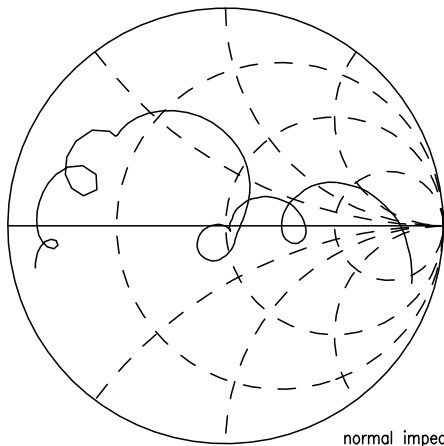
SMD

Smith charts

S₁₁ function



S₂₂ function





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References

Type	B5059
Ordering code	B39871B5059U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5059_NB.s2p B5059_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 further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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



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