



SAW Components

SAW filter

iDEN

Series/type:	B3836
Ordering code:	B39821B3836U410
Date:	August 18, 2009
Version:	2.1

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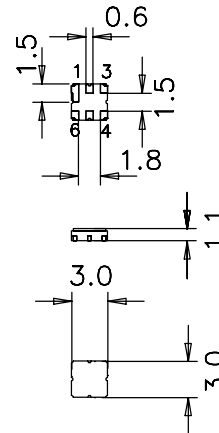
Application

- Low-loss RF filter for iDEN systems, transmit path (TX)
- No matching required for operation at 50Ω
- Usable passband 19 MHz



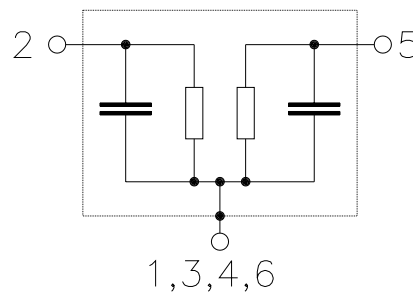
Features

- 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)**



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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815.50 MHz

Data sheet



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. @ 25 °C	max.	
Center frequency	f_C	—	815.50	—	MHz
Maximum insertion attenuation	α_{max}	—	2.7	3.7 ¹⁾	dB
806.00 ... 825.00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.4	1.5	dB
806.00 ... 825.00 MHz					
Group delay ripple (p-p)	$\Delta\tau$	—	25	50	ns
806.00 ... 825.00 MHz					
Return loss (input and output)		10.0	11.0	—	dB
806.00 ... 825.00 MHz					
Relative attenuation (relative to α_{min})	α_{rel}				
851.00 ... 870.00 MHz		45	52	—	dB
935.00 ... 940.00 MHz		45	48	—	dB
960.65 ... 979.65 MHz		42	46	—	dB
1115.30 ... 1134.30 MHz		40	45	—	dB
1269.95 ... 1288.95 MHz		35	45	—	dB
1612.00 ... 1650.00 MHz		25	32	—	dB
1650.00 ... 2600.00 MHz		25	27	—	dB

¹⁾ 3.0dB max. at 25°C



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Maximum ratings

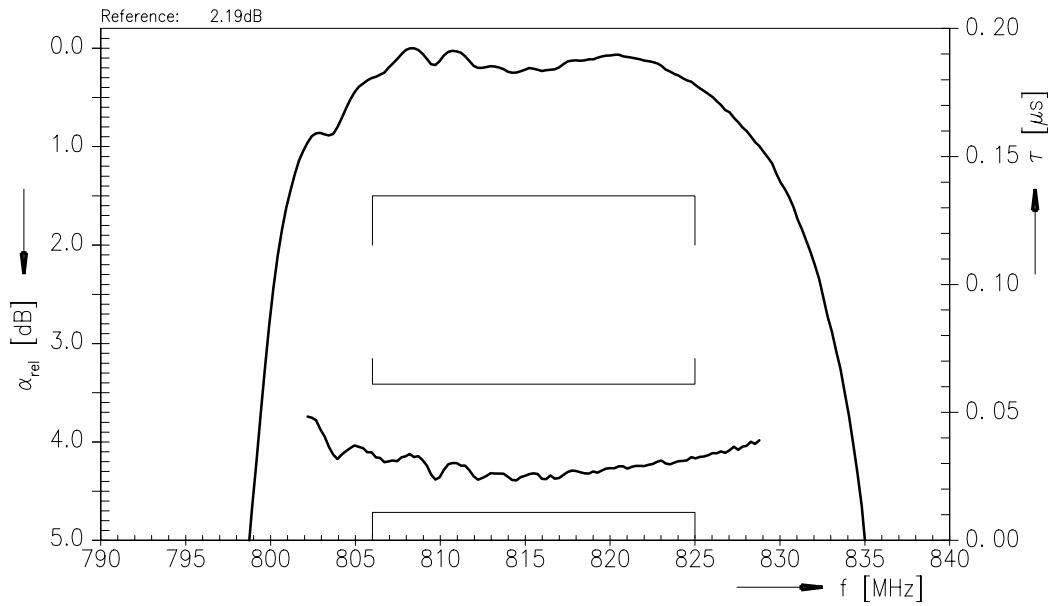
Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	100 ¹⁾	V	machine model, 1 pulse
Input power at iDEN	P _{IN}	7	dBm	continuous wave
Tx bands				

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

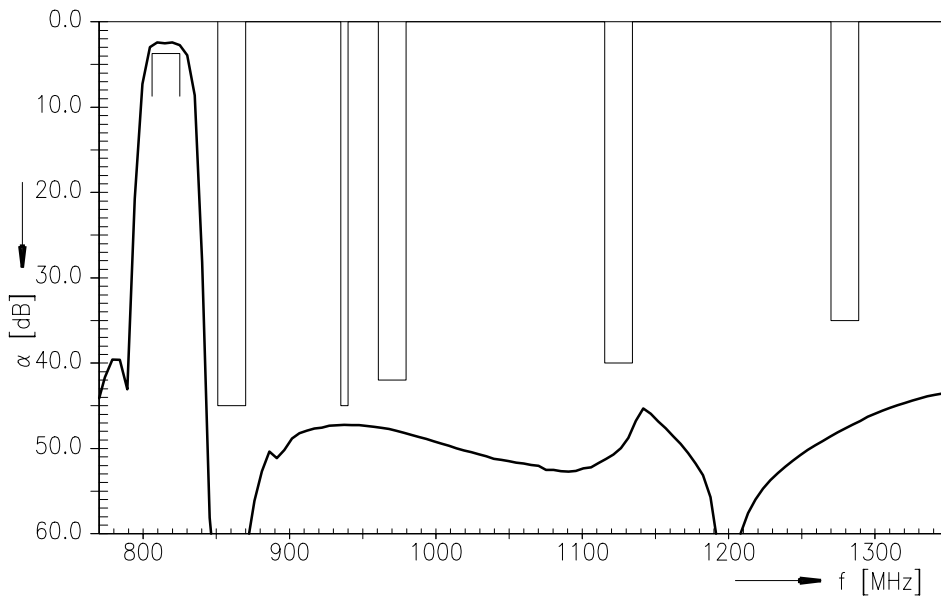
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Transfer function



Transfer function (wideband)



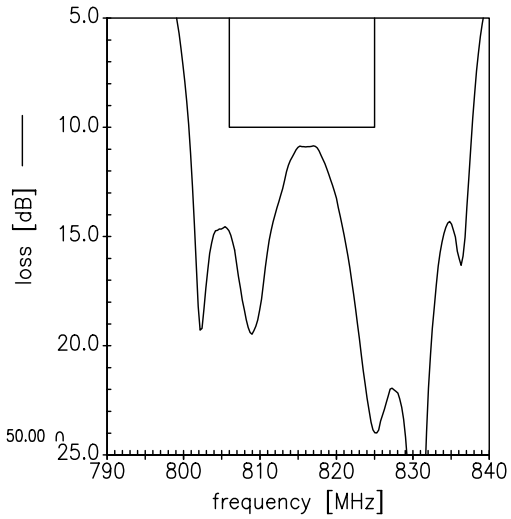
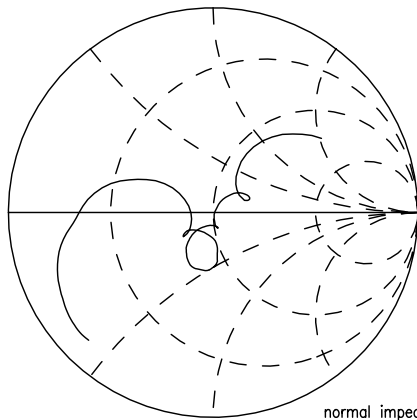
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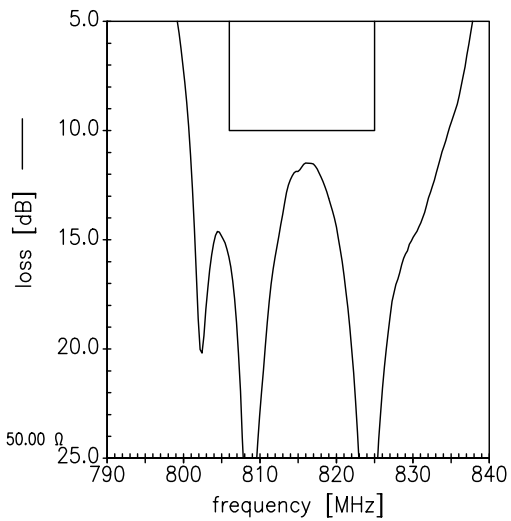
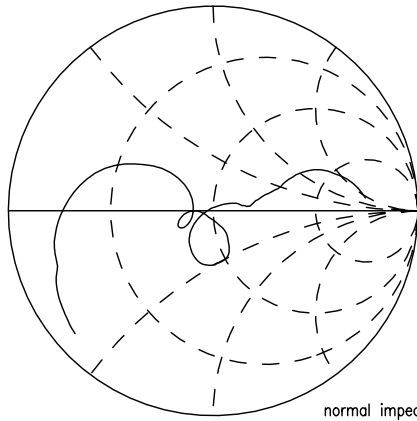


Smith charts

S₁₁ function



S₂₂ function



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References

Type	B3836
Ordering code	B39821B3836U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B3836_NB.s2p B3836_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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