SAW Components

SAW band-stop filter

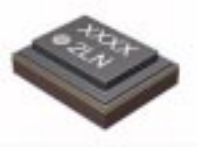
DVB-H

Series/type:	**B8764**
Ordering code:	**B39901-B8764-P810**
Date:	August 03, 2010
Version:	2.0

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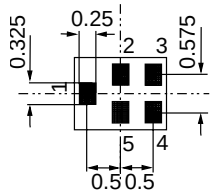
Application

- Low-loss GSM 850 and GSM 900 reject filter for DVB-H
- Low amplitude ripple
- Low group delay ripple
- Very low insertion attenuation
- Usable passband 280 MHz

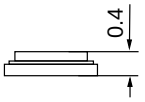


Features

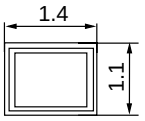
- Package size 1.4 × 1.1 × 0.4 mm³
- Maximum height of 0.45 mm
- Package code QCS5W
- RoHS compatible
- Approximate weight 0.003 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



bottom view



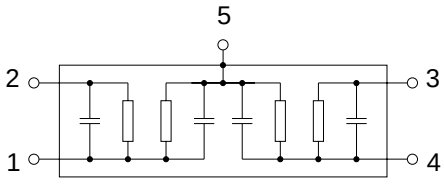
side view



top view

Pin configuration

■	1	Input
■	2	Coupling pin out
■	3	Coupling pin input
■	4	Output
■	5	Case ground

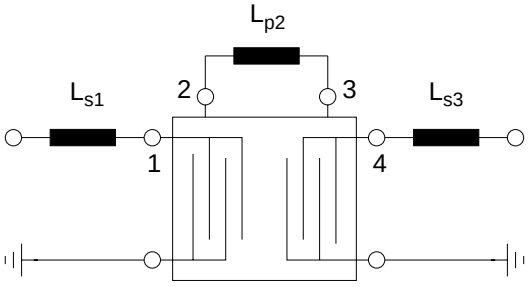


Characteristics

Temperature range for specification: T = +25 °C ± 2 °C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

		min.	typ. @ 25 °C	max.	
Nominal center frequency	f_N	—	836.5 897.5	—	MHz
Minimum insertion attenuation	α_{min}				
470.00 ... 750.00 MHz		—	1.1	1.3	dB
Maximum insertion attenuation	α_{max}				
470.00 ... 726.00 MHz		—	1.7	2.0	dB
726.00 ... 750.00 MHz		—	2.4	2.6	dB
Attenuation	α				
47.00 ... 68.00 MHz		28.0	31.0	—	dB
174.00 ... 230.00 MHz		15.0	17.0	—	dB
824.00 ... 849.00 MHz		35.0	37.0	—	dB
880.00 ... 915.00 MHz		38.0	41.0	—	dB
1400.00 ... 1710.00 MHz		23.0	27.0	—	dB
1710.00 ... 1785.00 MHz		36.0	41.0	—	dB
1920.00 ... 1980.00 MHz		44.0	49.0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
470.00 ... 750.00 MHz		—	4	—	ns

Matching network (element values depend on PCB layout)



L_{s1} = 20 nH
L_{p2} = 36 nH
L_{s3} = 20 nH

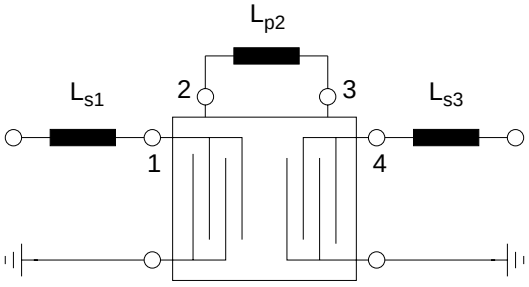
Q factor of inductors:
40 @ 770 MHz

Characteristics

Temperature range for specification: T = –30 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

		min.	typ. @ 25 ˚C	max.	
Nominal center frequency	f_N	—	836.5 897.5	—	MHz
Minimum insertion attenuation	α_{min}				
470.00 ... 750.00 MHz		—	1.1	1.3	dB
Maximum insertion attenuation	α_{max}				
470.00 ... 726.00 MHz		—	1.7	2.2	dB
726.00 ... 750.00 MHz		—	2.4	2.6	dB
Attenuation	α				
47.00 ... 68.00 MHz		28.0	31.0	—	dB
174.00 ... 230.00 MHz		14.0	17.0	—	dB
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1920.00 ... 1980.00 MHz		44.0	49.0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
470.00 ... 750.00 MHz		—	4	—	ns

Matching network (element values depend on PCB layout),



L_{s1} = 20 nH
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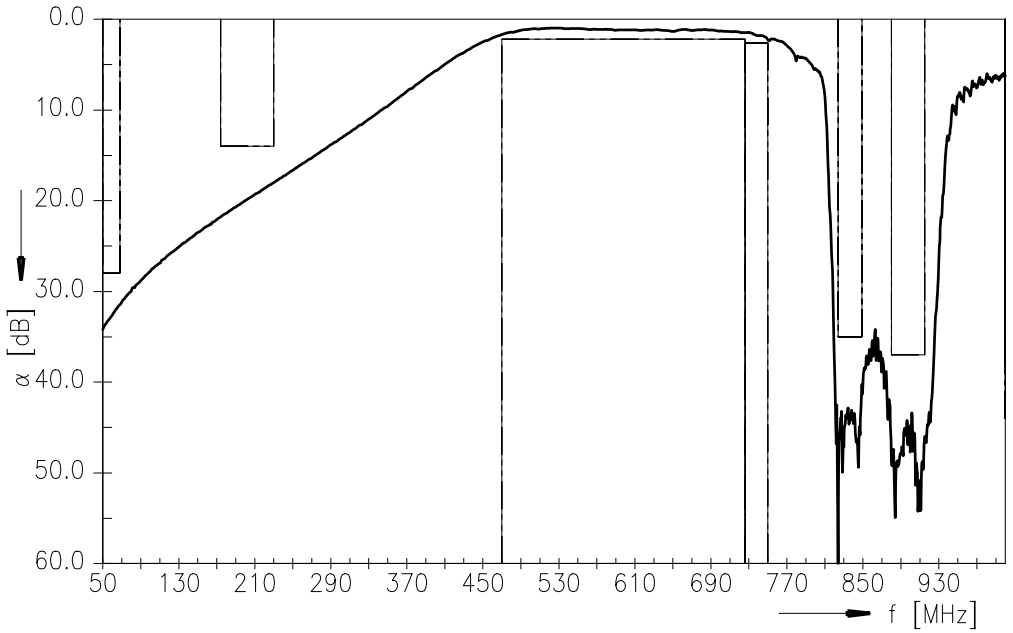
Q factor of inductors:
40 @ 770 MHz

Maximum ratings

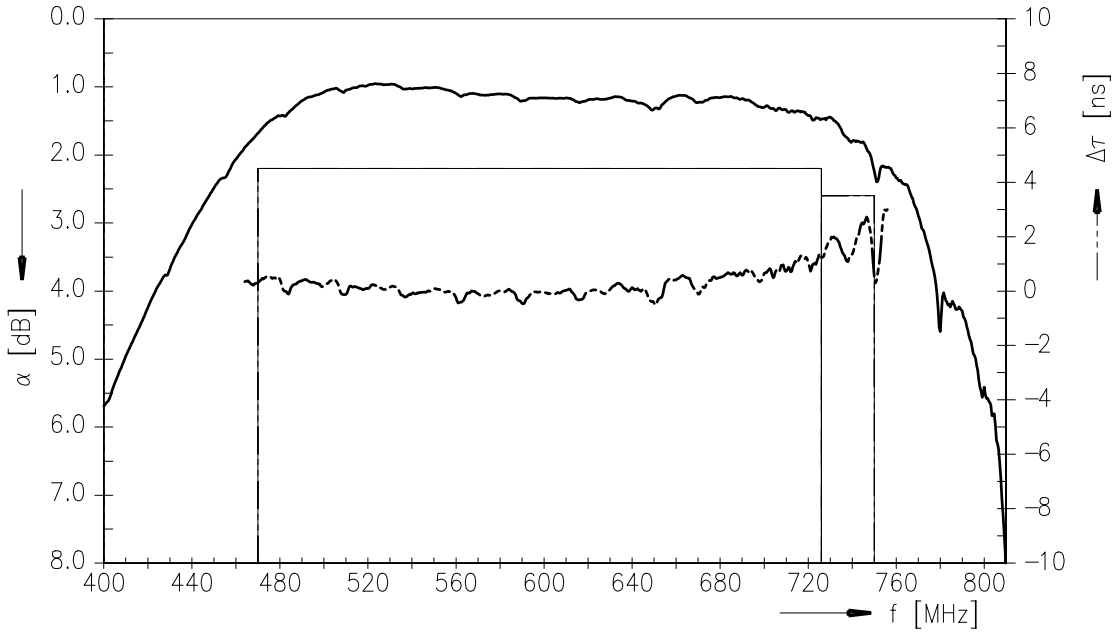
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100[1)]	V	machine model, 10 pulses
Source power at				
GSM 850, GSM 900 Tx bands	P_{IN}	24	dBm	effective power in the on-state duty cycle 2:8

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

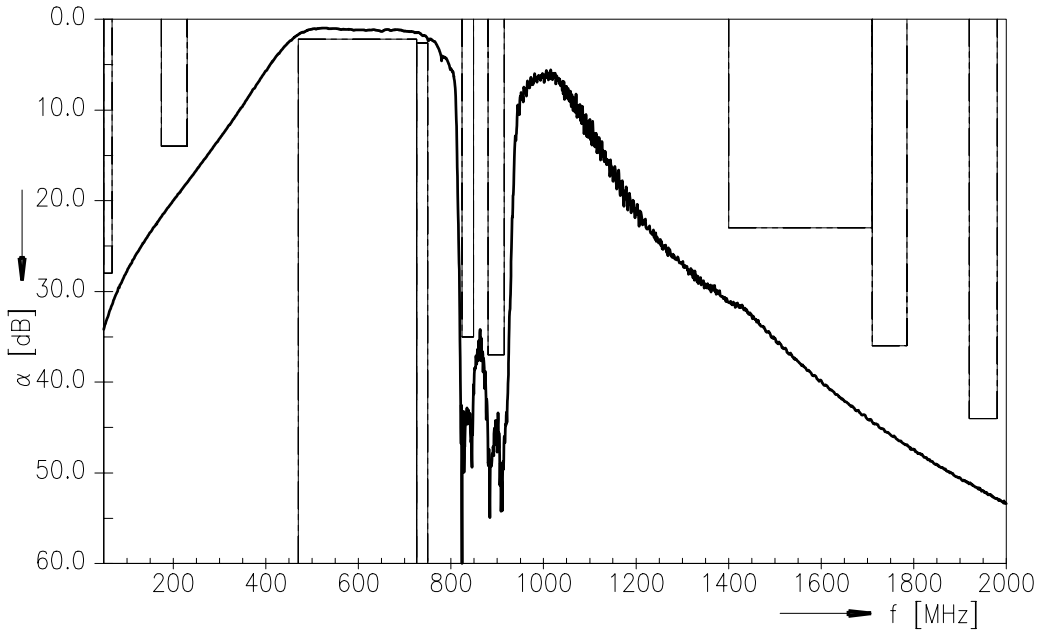
Transfer function



Transfer function (pass band)



Transfer function (wide band)



References

Type	B8764
Ordering code	B39901-B8764-P810
Marking and package	C61157-A8-A17
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B8764_NB_UN.s4p, B8764_WB_UN.s4p (unmatched) 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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
Matching coils	See http://www.tdk.co.jp/tefe02/coil.htm#aname1 http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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