SAW Components

Data Sheet B9015

EPCOS

SAW Components	B9015

Low-Loss Filter for Mobile Communication	897,5 MHz

Data Sheet   SMD

Chip sized SAW package DCS6Q

Dimensions in mm

Features

■ Low-loss RF filter for mobile telephone EGSM systems, transmit path
■ Low amplitude ripple
■ Usable passband 35MHz
■ Impedance transformation from 200Ω to 50Ω
■ Suitable for GPRS class 1 to 12
■ Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

■ Ni, gold-plated
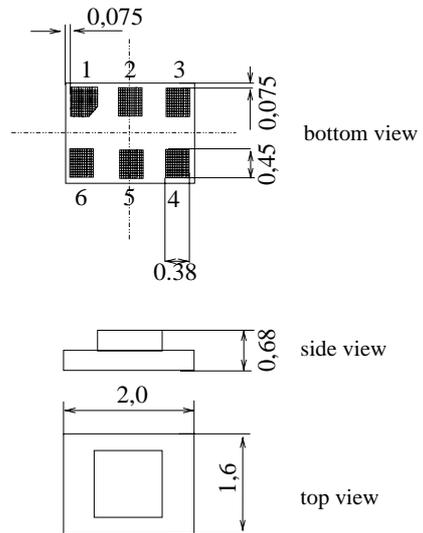
Pin configuration

2	Output, unbalanced
4, 6	Inputs, balanced
1, 3, 5	To be grounded
1, 5	Case ground
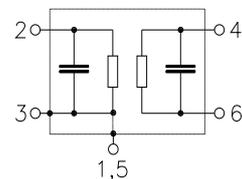
Type	Ordering code	Marking and Package according to	Packing according to
B9015	B39901-B9015-E710	C61157-A7-A104	F61074-V8152-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operating temperature range	T	– 10/+ 80	˚C	
Storage temperature range	T_{stg}	– 40/+ 85	˚C	
DC voltage	V_{DC}	5	V	
Input power max.				source impedance 200Ω, load impedance 50Ω
880 ... 915 MHz	P_{IN}	15	dBm	duty cycle 1 : 8
		15	dBm	duty cycle 4 : 8
elsewhere		0	dBm	continuous wave

Data Sheet SMD

Characteristics

Operating temperature range: T = +25 ± 5˚C
Terminating source impedance: Z_S = 200 Ω || 82 nH
Terminating load impedance: Z_L = 50 Ω

			min.	typ.	max.	
Center frequency		f_c	—	897,5	—	MHz
Maximum insertion attenuation		α_{max}				
	880,0 ... 915,0 MHz		—	2,5	3,0	dB
Amplitude ripple (p-p)		$\Delta\alpha$				
	880,0 ... 915,0 MHz		—	0,9	1,5	dB
Input VSWR						
	880,0 ... 915,0 MHz		—	1,8	2,1	
Balanced Output VSWR						
	880,0 ... 915,0 MHz		—	1,7	2,0	
Output phase balance $(\phi(S_{31})-\phi(S_{21})+180˚)$			-10,0	0,0	+10,0	˚
Output amplitude balance $(|S_{31}/S_{21}|)$						
	880,0 ... 915,0 MHz		-1,0	0,0	1,0	dB
Attenuation		α				
	0,0 ... 800,0 MHz		55,0	72,0	—	dB
	800,0 ... 850,0 MHz		45,0	56,0	—	dB
	850,0 ... 871,0 MHz		12,0	23,0	—	dB
	935,0 ... 960,0 MHz		20,0	28,0	—	dB
	960,0 ...1000,0 MHz		34,0	36,0	—	dB
	1000,0 ...6000,0 MHz		40,0	60,0	—	dB

Data Sheet

Characteristics

Operating temperature range: T = -10 to +80˚C
Terminating source impedance: Z_S = 200 Ω || 82 nH
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	897,5	—	MHz
Maximum insertion attenuation α_{max}					
880,0 ... 915,0 MHz		—	2,7	3,2	dB
Amplitude ripple (p-p) $\Delta\alpha$					
880,0 ...9150,0 MHz		—	1,0	1,8	dB
Input VSWR					
880,0 ... 915,0 MHz		—	1,8	2,1	
Output VSWR					
880,0 ... 915,0 MHz		—	1,7	2,0	
Output phase balance $(\phi(S_{31})-\phi(S_{21})+180˚)$					
880,0 ... 915,0 MHz		-10,0	0,0	+10,0	˚
Output amplitude balance $(|S_{31}/S_{21}|)$					
880,0 ... 915,0 MHz		-1,0	0,0	-1,0	dB
Attenuation α					
0,0 ... 800,0 MHz		55,0	72,0	—	dB
800,0 ... 850,0 MHz		45,0	56,0	—	dB
850,0 ... 871,0 MHz		12,0	23,0	—	dB
935,0 ... 960,0 MHz		20,0	28,0	—	dB
960,0 ...1000,0 MHz		34,0	36,0	—	dB
1000,0 ...6000,0 MHz		40,0	60,0	—	dB

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Low-Loss Filter for Mobile Communication	**897,5 MHz**

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Transfer function (Narrowband measurement)
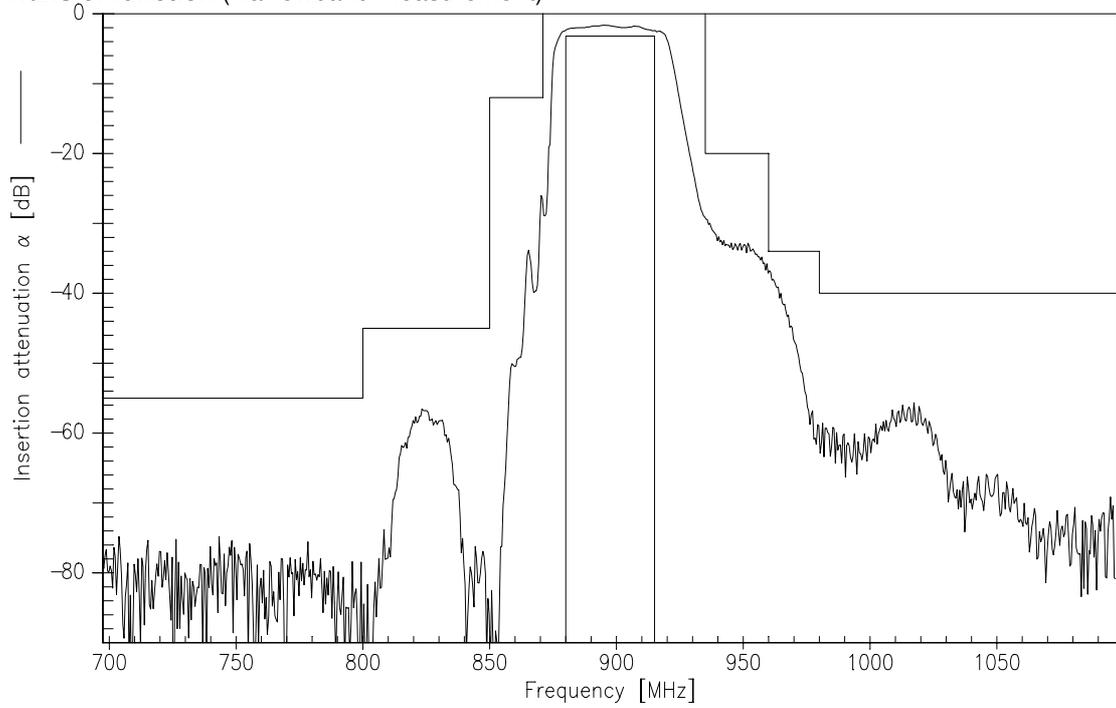
Transfer function (Wideband measurement)
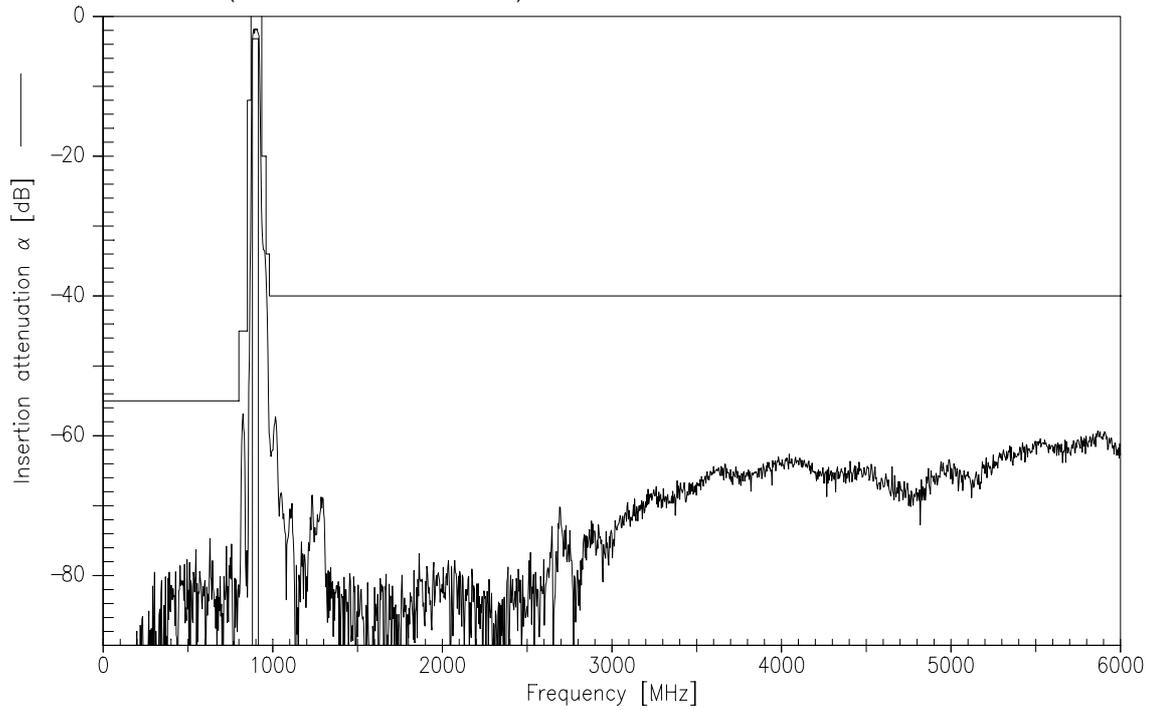
Published by EPCOS AGPublished by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC WT
P.O. Box 80 17 09, 81617 Munich, GERMANY

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This brochure replaces the previous edition.

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