



SAW Components

Data sheet B4179





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B4179

Low-Loss Filter for Mobile Communication

897,5 MHz

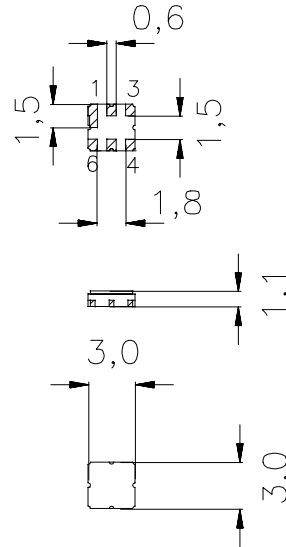
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Features

- Low-loss RF filter for mobile telephone EGSM system, transmit path
- Usable passband 35 MHz
- Balanced to unbalanced operation
- Impedance transformation from 100 Ω to 50 Ω
- Ceramic Package for **Surface Mounted Technology (SMT)**

Ceramic package **DCC6D**



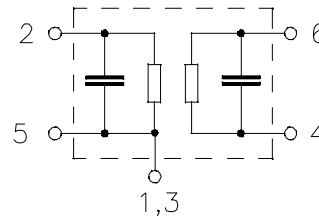
Dimensions in mm, approx. weight 0,037 g

Terminals

- Ni, gold-plated

Pin configuration

- 2 Output, unbalanced
- 4, 6 Input, balanced
- 1, 3, 5 Case ground to be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4179	B39901-B4179-U510	C61157-A7-A68	F61074-V8089-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 10 / + 80	°C	source impedance 100 Ω, load impedance 50 Ω; effective input power in ON-state, duty cycle 2 : 8 continuous wave
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}	200	V	
Input power max. 880...915 MHz	P_{IN}	10	dBm	
elsewhere		0	dBm	



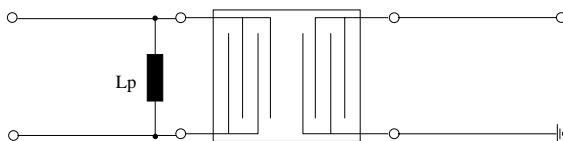
Characteristics

Operating temperature range: $T = 25 \pm 2 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 100 \text{ } \Omega$ including matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	897,5	—	MHz
Maximum insertion attenuation	α_{max}	—	2,6	3,0	dB
880,0 ... 915,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,9	1,3	dB
880,0 ... 915,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-7	—	7	degree
880,0 ... 915,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,0	—	1,0	dB
880,0 ... 915,0 MHz					
Input VSWR		—	1,6	2,0	
880,0 ... 915,0 MHz					
Output VSWR		—	1,8	2,0	
880,0 ... 915,0 MHz					
Attenuation	α				
0,0 ... 800,0 MHz		45	60	—	dB
800,0 ... 860,0 MHz		30	50	—	dB
925,0 ... 935,0 MHz		9	12	—	dB
935,0 ... 960,0 MHz		20	30	—	dB
960,0 ... 1850,0 MHz		30	40	—	dB
1850,0 ... 3660,0 MHz		20	30	—	dB
3660,0 ... 6000,0 MHz		10	23	—	dB

Test matching network

$L_p = 27 \text{ nH}$
 (20% tolerance, $Q = 30$)





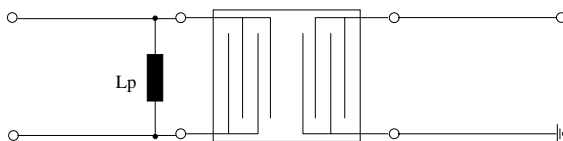
Characteristics

Operating temperature range: $T = -10$ to $+80$ °C
 Terminating source impedance: $Z_S = 100 \Omega$ including matching network
 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	897,5	—	MHz
Maximum insertion attenuation	α_{max}	—	3,0	3,3	dB
880,0 ... 915,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,3	1,6	dB
880,0 ... 915,0 MHz					
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)		-7	—	7	degree
880,0 ... 915,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,0	—	1,0	dB
880,0 ... 915,0 MHz					
Input VSWR		—	1,6	2,0	
880,0 ... 915,0 MHz					
Output VSWR		—	1,8	2,0	
880,0 ... 915,0 MHz					
Attenuation	α				
0,0 ... 800,0 MHz		45	60	—	dB
800,0 ... 860,0 MHz		20	50	—	dB
925,0 ... 935,0 MHz		7	10	—	dB
935,0 ... 960,0 MHz		20	30	—	dB
960,0 ... 1850,0 MHz		30	40	—	dB
1850,0 ... 3660,0 MHz		20	30	—	dB
3660,0 ... 6000,0 MHz		10	23	—	dB

Test matching network

$L_p = 27$ nH
 (20% tolerance, $Q = 30$)

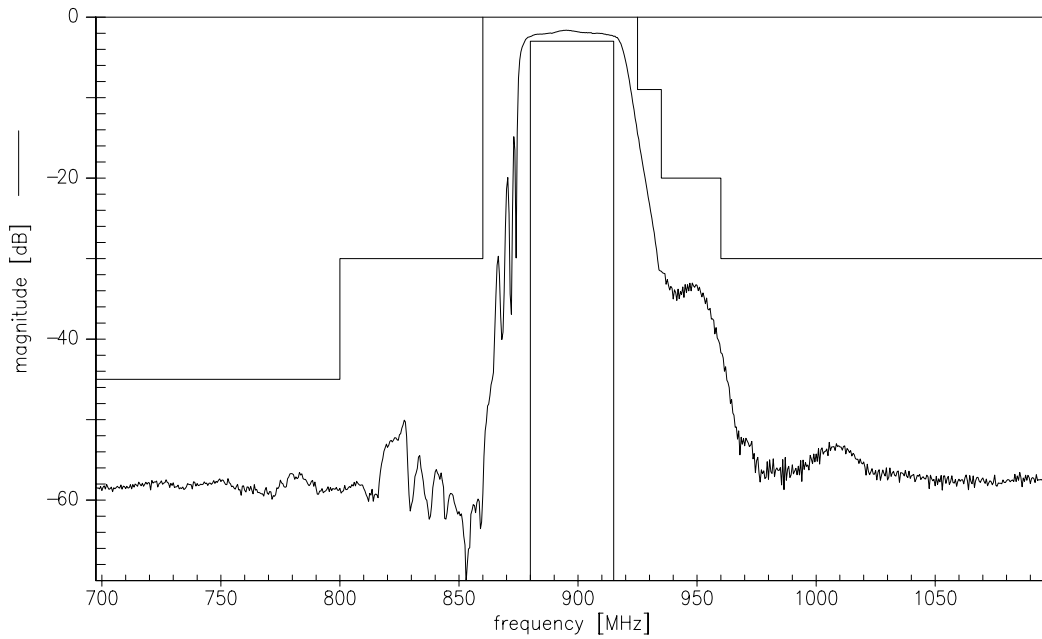




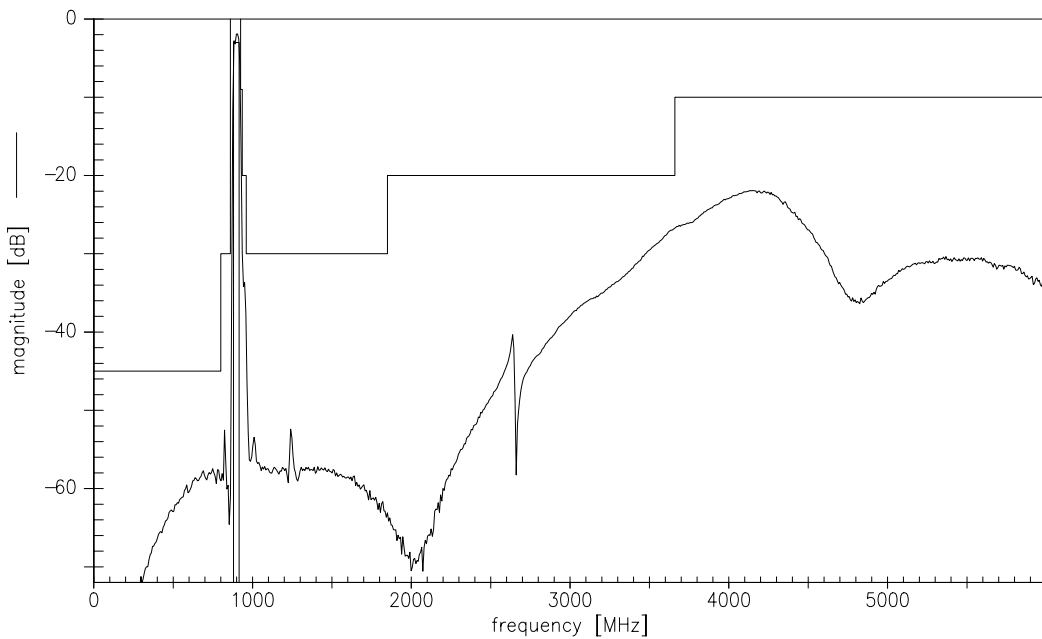
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Transfer function:

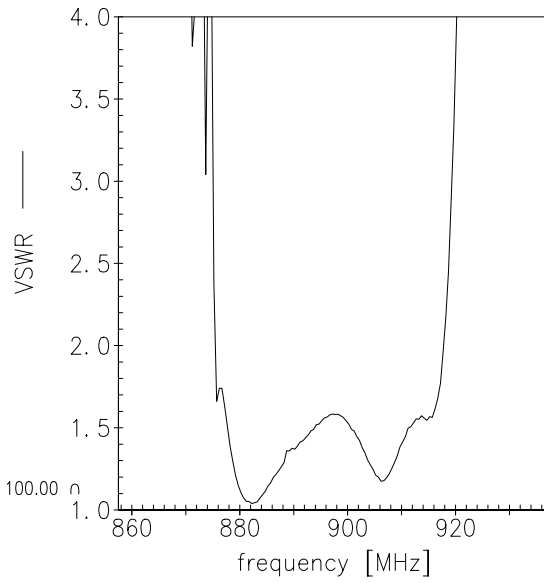
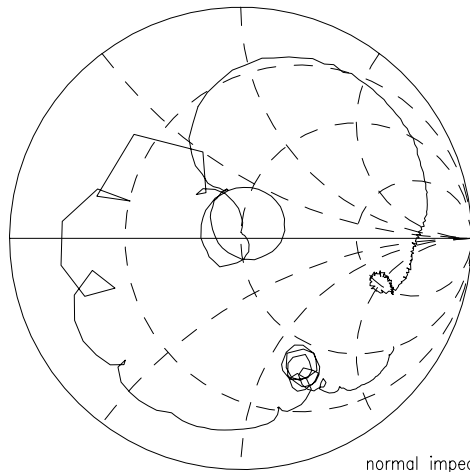


Transfer function (wideband)

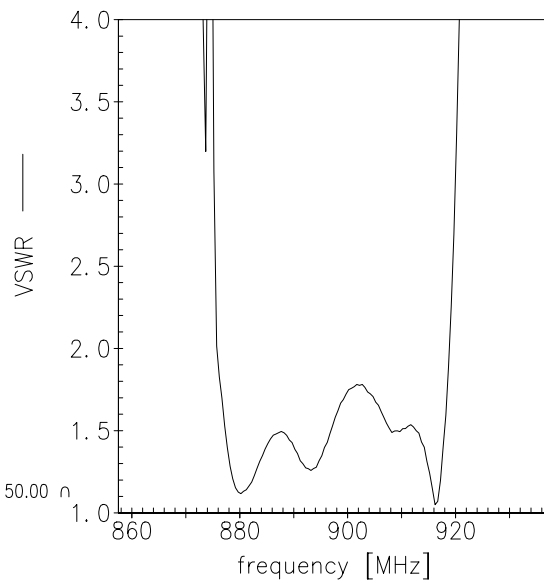
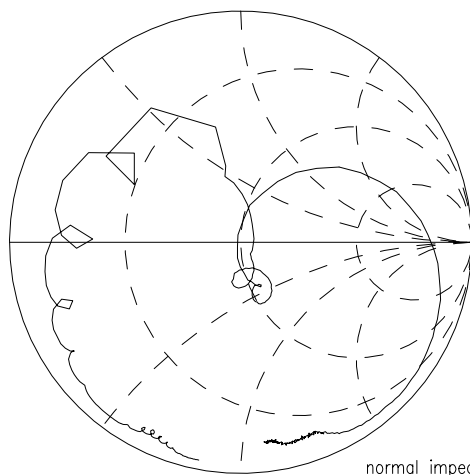


Matching (measurement including calculated matching network; S11 is balanced input)

S11



S22





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