EPCOS

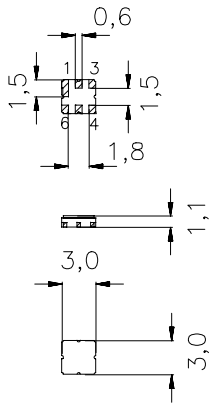
SAW Components

Data Sheet B4115

Ceramic package **DCC6D**

Features

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced Operation
- Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)



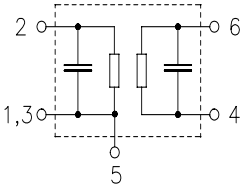
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,037 g

Pin configuration

2	Input, unbalanced
4, 6	Balanced Outputs
1, 3, 5	To be grounded
1, 3, 5	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B4115	B39941-B4115-U510	C61157-A7-A68	F61074-V8089-Z000

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

Maximum ratings

Operable temperature range	T	– 20 / + 80	˚C	
Storage temperature range	T_{stg}	– 40 / + 85	˚C	
DC voltage	V_{DC}	3	V	
Input power max.	P_{IN}			source and load impedance 50 Ω peak power of GSM signal
880 ... 915 MHz		5	dBm	duty cycle 1 : 8
		3	dBm	duty cycle 2 : 8
elsewhere		0	dBm	continuous wave

Characteristics

Operating temperature range: T = 25+-2˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	2,7	3,7	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	0,8	2,0	dB
Input/Output VSWR					
925,0 ... 960,0 MHz		—	1,8	2,0	
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)					
925,0 ... 960,0 MHz		170	—	190	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
925,0 ... 960,0 MHz		-1,0	0	1,0	dB
Output reflection coefficient @942,5 MHz					
Phase		-59	-39	-19	˚
Attenuation	α				
0,0 ... 880,0 MHz		50	60	—	dB
880,0 ... 905,0 MHz		28	35	—	dB
905,0 ... 915,0 MHz		18	25	—	dB
980,0 ...1050,0 MHz		22	24	—	dB
1050,0 ...1680,0 MHz		50	60	—	dB
1680,0 ...2000,0 MHz		45	55	—	dB
2000,0 ...3000,0 MHz		30	45	—	dB
3000,0 ...6000,0 MHz		15	25	—	dB

Characteristics

Operating temperature range: T = -20˚C to +75˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω (balanced)

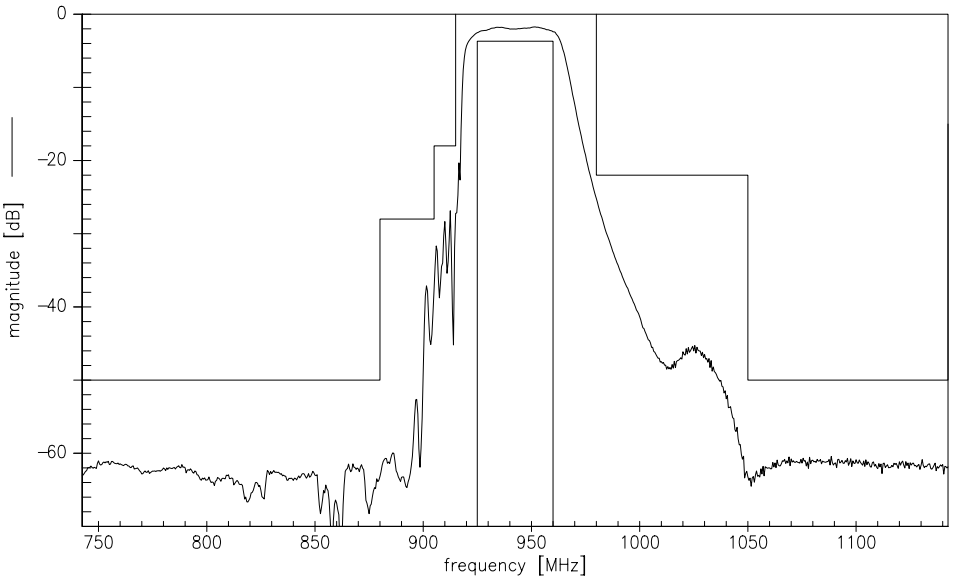
		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	3,0	4,2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,3	2,5	dB
Input/Output VSWR					
925,0 ... 960,0 MHz		—	1,8	2,3	
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)					
925,0 ... 960,0 MHz		170	—	190	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
925,0 ... 960,0 MHz		-1,0	0	1,0	dB
Attenuation	α				
0,0 ... 880,0 MHz		50	60	—	dB
880,0 ... 905,0 MHz		28	33	—	dB
905,0 ... 915,0 MHz		15	23	—	dB
980,0 ...1050,0 MHz		20	22	—	dB
1050,0 ...1680,0 MHz		50	60	—	dB
1680,0 ...2000,0 MHz		45	55	—	dB
2000,0 ...3000,0 MHz		30	45	—	dB
3000,0 ...6000,0 MHz		15	25	—	dB

Characteristics

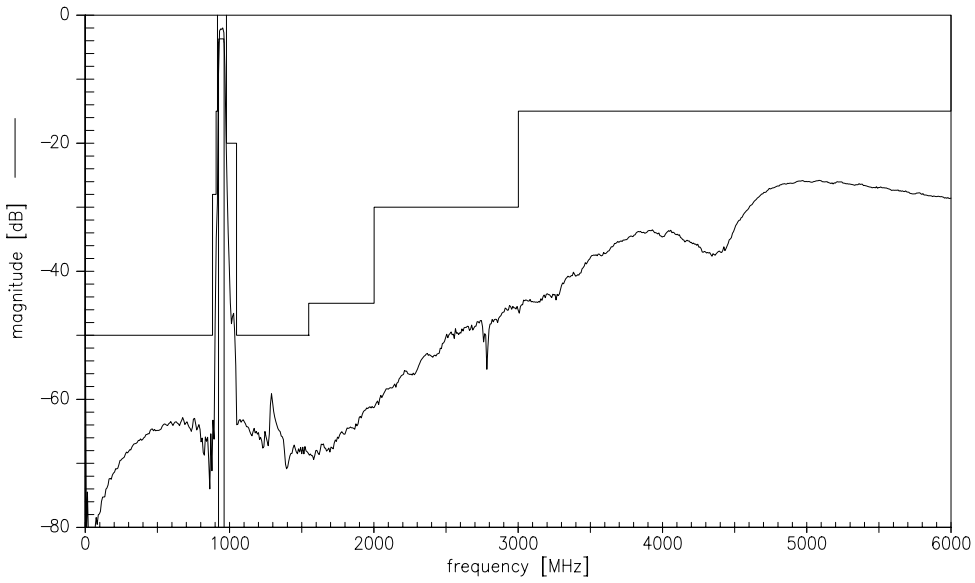
Operating temperature range: T = -20˚C to +80˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	3,0	4,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,3	2,6	dB
Input/Output VSWR					
925,0 ... 960,0 MHz		—	1,8	2,3	
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)					
925,0 ... 960,0 MHz		170	—	190	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
925,0 ... 960,0 MHz		-1,0	0	1,0	dB
Attenuation	α				
0,0 ... 880,0 MHz		50	60	—	dB
880,0 ... 905,0 MHz		28	33	—	dB
905,0 ... 915,0 MHz		13	21	—	dB
980,0 ...1050,0 MHz		20	22	—	dB
1050,0 ...1680,0 MHz		50	60	—	dB
1680,0 ...2000,0 MHz		45	55	—	dB
2000,0 ...3000,0 MHz		30	45	—	dB
3000,0 ...6000,0 MHz		15	25	—	dB

Transfer function



Transfer function (wide band)



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