



SAW Components

Data Sheet B5013

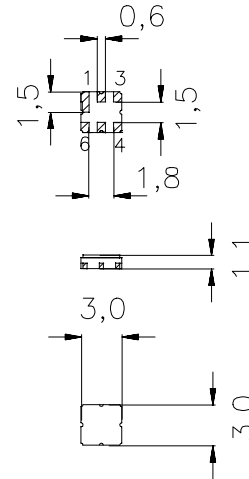


Data Sheet
Ceramic package DCC6D
Features

- Low-loss filter (RX) for Trunked Radio
- Usable bandwidth 19 MHz
- No matching required for operation at 50 Ω
- Unbalanced to unbalanced or unbalanced to balanced operation
- Package for Surface Mounted Technology (SMT)
- Hermetically sealed ceramic package

Terminals

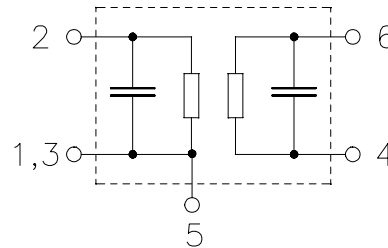
- Gold-plated



typ. Dimensions in mm, approx. weight 0,037 g

Pin configuration

- | | |
|---------|---------------------------------|
| 2 | Input |
| 6 | Output / Output balanced |
| 4 | Output ground / Output balanced |
| 1, 3, 5 | Input ground / Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B5013	B39861-B5013-U510	C61157-A7-A68	F61074-V8168-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T_A	-40 / +85	$^{\circ}\text{C}$	
Storage temperature range	T_{stg}	-40 / +85	$^{\circ}\text{C}$	
DC voltage	V_{DC}	5	V	
Source power	P_s	13,0	dBm	source impedance 50 Ω



SAW Components

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Low-Loss Filter

860,5 MHz

Data Sheet

Characteristics

Operating temperature range: $T_A = +15 \dots +35 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ unbalanced to balanced operation
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ unbalanced to balanced operation

		min.	typ.	max.	
Nominal frequency	f_N	—	860,5	—	MHz
Maximum insertion attenuation 851,0 MHz ... 870,0 MHz	α_{\max}	—	3,0	3,9	dB
Amplitude ripple (p-p) 851,0 MHz ... 870,0 MHz	$\Delta\alpha$	—	0,9	1,5	dB
VSWR (Input) 851,0 MHz ... 870,0 MHz		—	2,2	2,4	
VSWR (Output) 851,0 MHz ... 870,0 MHz		—	2,6	2,8	
Absolute attenuation	α_{abs}				
0,1 MHz ... 708,0 MHz		42	44	—	dB
708,0 MHz ... 789,0 MHz		30	40	—	dB
789,0 MHz ... 825,0 MHz		23	37	—	dB
825,0 MHz ... 841,0 MHz		13	22	—	dB
888,0 MHz ... 950,0 MHz		13	18	—	dB
950,0 MHz ... 2450,0 MHz		22	25	—	dB
2450,0 MHz ... 3700,0 MHz		20	23	—	dB
3700,0 MHz ... 4000,0 MHz		10	18	—	dB
Symmetry in band					
$ S_{31} / S_{21} $ 851,0 ... 870,0 MHz		-1,5	-0,5	0,5	dB
$\arg(S_{31}/S_{21})$ 851,0 ... 870,0 MHz		170	180	190	$^\circ$
Temperature coefficient of frequency	TC_f	—	-36	—	ppm/K


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Low-Loss Filter
860,5 MHz
Data Sheet
Characteristics

Operating temperature range:

$T_A = -30 \dots +70 \text{ }^\circ\text{C}$

Terminating source impedance:

$Z_S = 50 \text{ } \Omega$ unbalanced to balanced operation

Terminating load impedance:

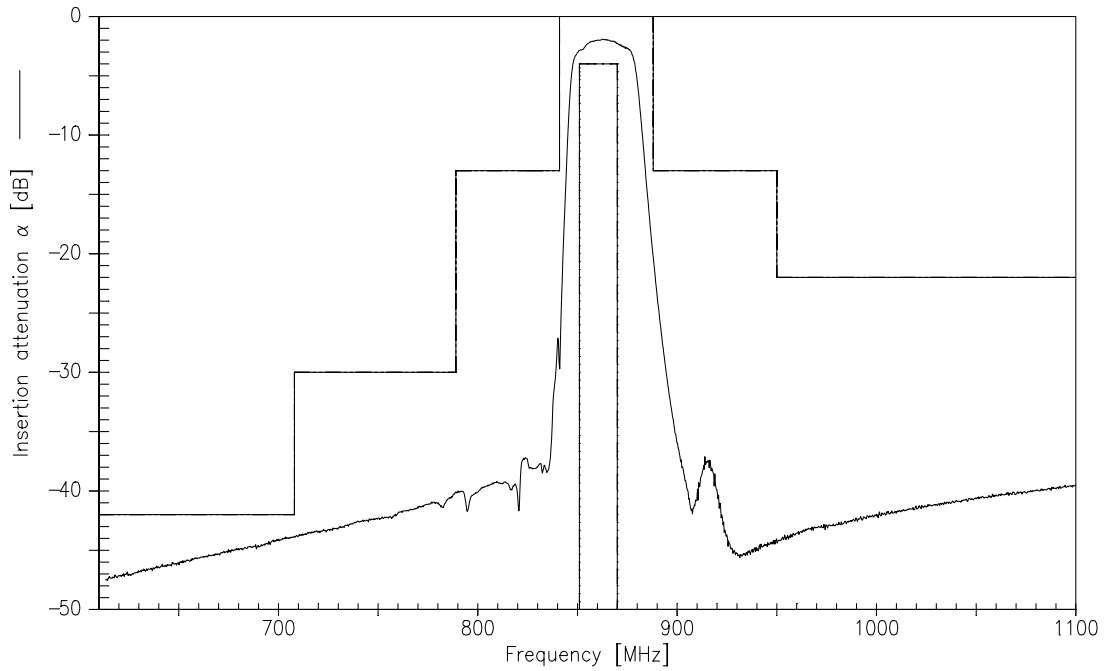
$Z_L = 50 \text{ } \Omega$ unbalanced to balanced operation

		min.	typ.	max.	
Nominal frequency	f_N	—	860,5	—	MHz
Maximum insertion attenuation 851,0 MHz ... 870,0 MHz	α_{\max}	—	3,6	4,5	dB
Amplitude ripple (p-p) 851,0 MHz ... 870,0 MHz	$\Delta\alpha$	—	1,1	2,5	dB
VSWR (Input) 851,0 MHz ... 870,0 MHz		—	2,4	2,6	
VSWR (Output) 851,0 MHz ... 870,0 MHz		—	2,7	2,9	
Absolute attenuation	α_{abs}				
0,1 MHz ... 708,0 MHz		42	44	—	dB
708,0 MHz ... 789,0 MHz		30	40	—	dB
789,0 MHz ... 825,0 MHz		23	37	—	dB
825,0 MHz ... 841,0 MHz		13	22	—	dB
888,0 MHz ... 950,0 MHz		13	18	—	dB
950,0 MHz ... 2450,0 MHz		22	25	—	dB
2450,0 MHz ... 3700,0 MHz		20	23	—	dB
3700,0 MHz ... 4000,0 MHz		10	18	—	dB
Symmetry in band					
$ S_{31} / S_{21} $ 851,0 ... 870,0 MHz		-1,5	-0,5	0,5	dB
$\arg(S_{31}/S_{21})$ 851,0 ... 870,0 MHz		170	180	190	°
Temperature coefficient of frequency	TC_f	—	-36	—	ppm/K

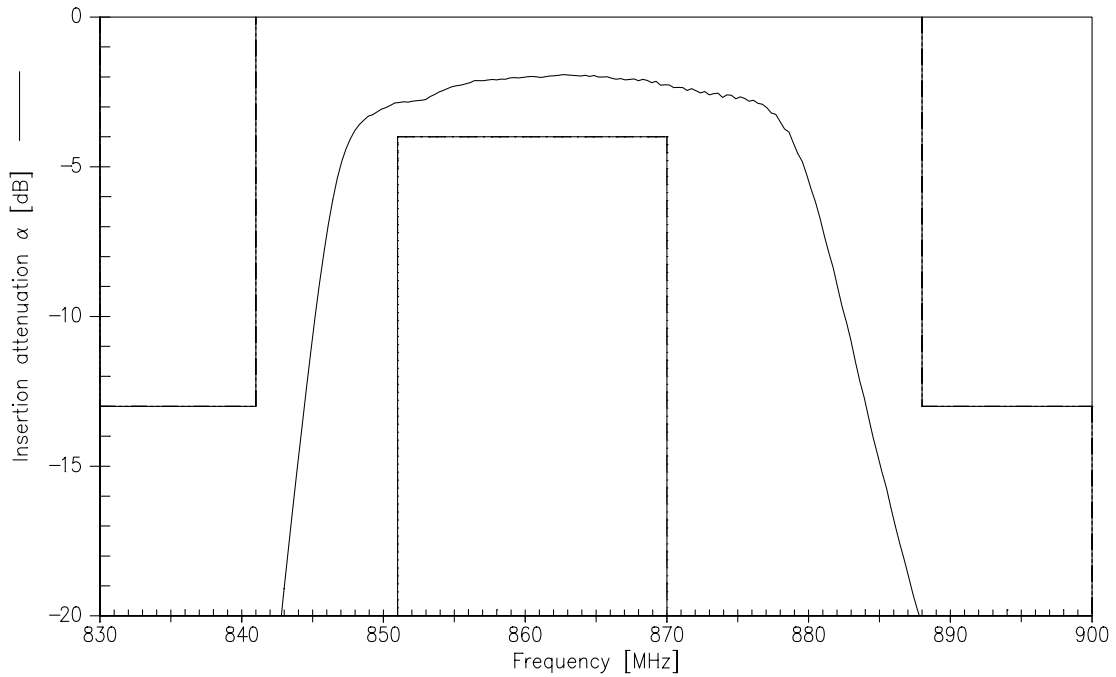


Data Sheet

Transfer function (unbalanced to balanced operation)



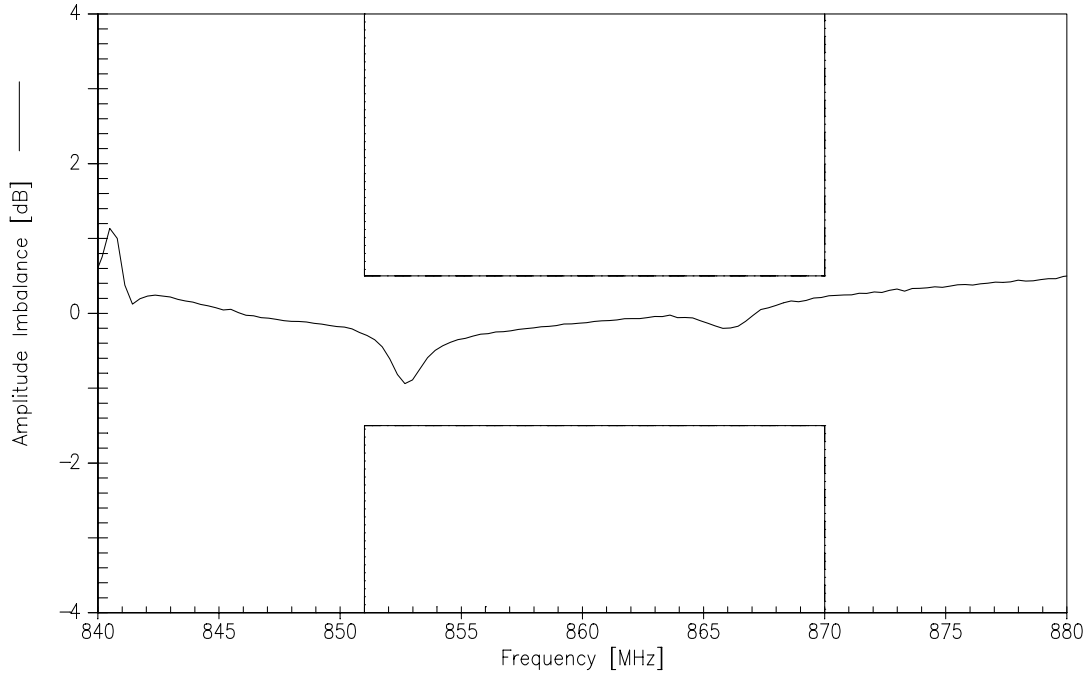
Transfer function (pass band; unbalanced to balanced operation)



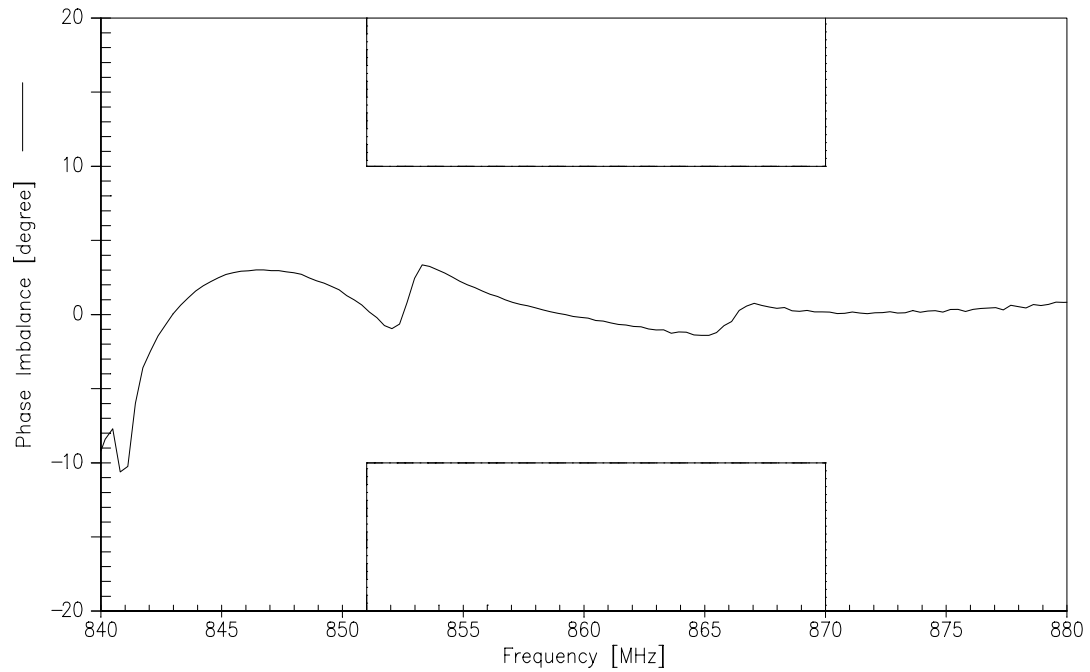


Data Sheet

Amplitude symmetry $|S_{31}|/|S_{21}|$



Phase symmetry $\arg(S_{31}/S_{21}) - 180^\circ$





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Low-Loss Filter

860,5 MHz

Data Sheet

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