EPCOS

SAW Components

Data Sheet B5029

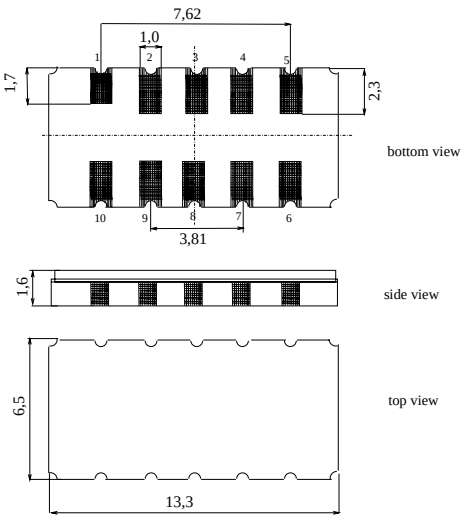
Ceramic package **DCC12A**

Features

- Low-loss IF filter for W-CDMA base station, transmit path
- 32 MHz usable bandwidth
- Balanced or unbalanced operation possible
- Hermetically sealed ceramic SMD package

Terminals

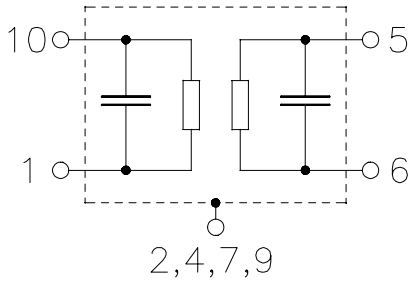
- Gold plated



Dimensions in mm, approx. weight 0,4 g

Pin configuration

10	Input
1	Input ground
5	Output
6	Output ground
2, 4, 7, 9	Case Ground
3, 8	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B5029	B39151-B5029-H510	C61157-A7-A94	F61074-V8163-Z000

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

Maximum ratings

Operable temperature range	T	–30 / +85	˚C
Storage temperature range	T_{stg}	–30 / +85	˚C
DC voltage	V_{DC}	0	V
Source power	P_s	0	dBm

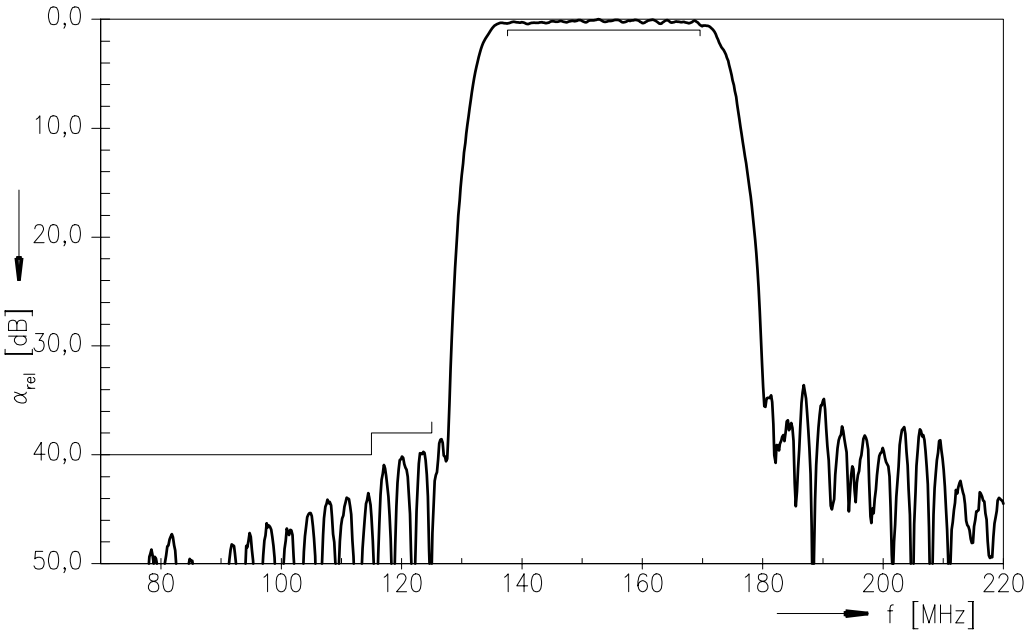
Data Sheet

Characteristics

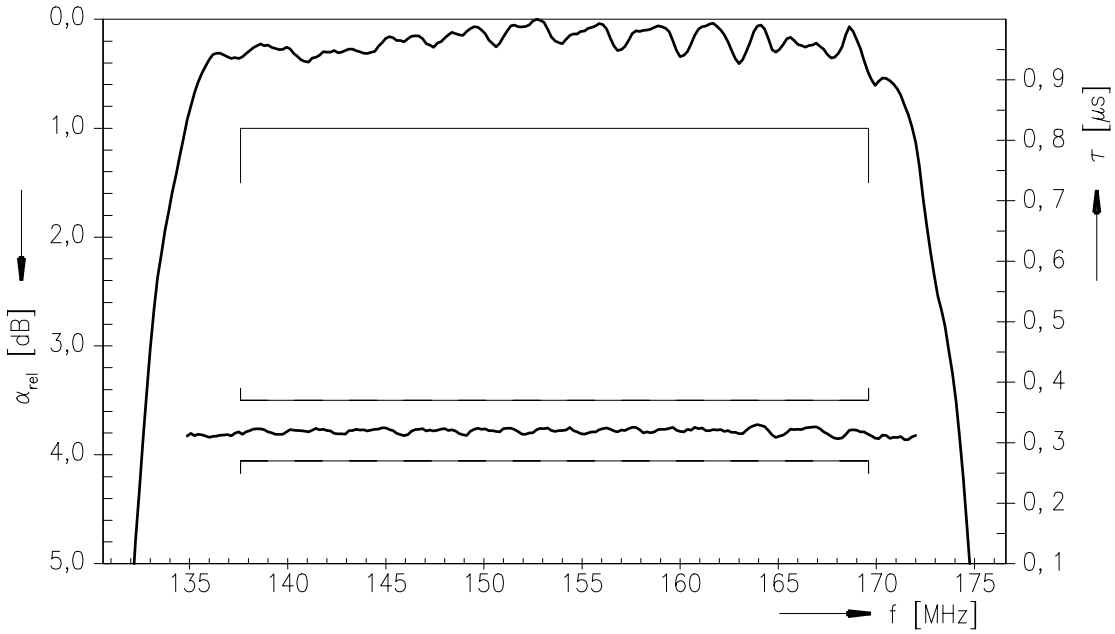
Operating temperature range: T= -10 .. 80 ˚C
Terminating source impedance: Z_S= 50 Ω unbalanced and matching network
Terminating load impedance: Z_L= 50 Ω unbalanced and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	153,6	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	12,5	15,0	dB
Passband width $\alpha_{rel} \leq 1$ dB	B_{1dB}	32	37	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N \pm 16$ MHz		—	0,6	1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 16$ MHz		—	25	100	ns
Absolute Group delay $f_N \pm 16$ MHz	τ	—	0,32	0,6	µs
Phase ripple (rms)	$\Delta\varphi_{rms}$				
$f_N \pm 16$ MHz		—	1,1	1,5	°
Phase ripple (p-p)	$\Delta\varphi_{p-p}$				
$f_N \pm 16$ MHz		—	7	10	°
Relative attenuation (relative to α_{min})	α_{rel}				
70 MHz ... 115 MHz		40	42	—	dB
115 MHz ... 125 MHz		38	40	—	dB
275 MHz ... 350 MHz		35	45	—	dB
400 MHz ... 1000 MHz		40	47	—	dB
1000 MHz ... 2000 MHz		30	37	—	dB
Input and Output return loss $f_N \pm 16$ MHz		6	6,5	—	dB
Temperature coefficient of frequency	TC_f	—	– 87	—	ppm/K

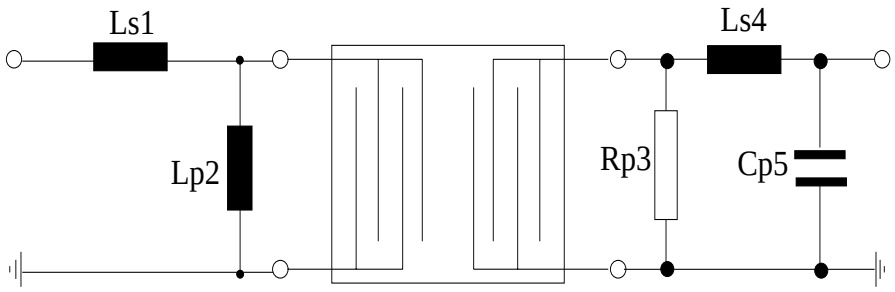
Normalized frequency response



Normalized frequency response (pass band)



Matching network to 50 Ω (element values depend on pcb layout)



L_{s1} = 47 nH
L_{p2} = 62 nH
R_{p3} = 560 Ω
L_{s4} = 62 nH
C_{p5} = 22 pF

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