EPCOS

SAW Components

Data Sheet B3831

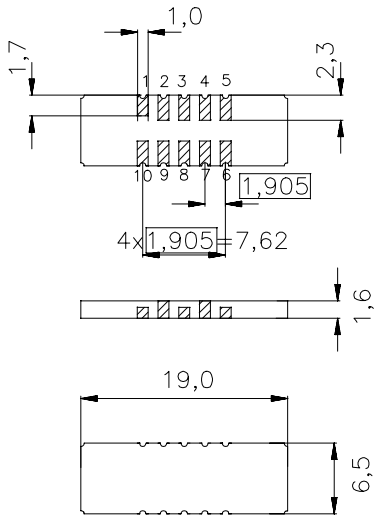
Ceramic package **DCC18**

Features

- Low-loss IF filter for CDMA base station
- Temperature stable
- Ceramic SMD package
- Unbalanced or balanced operation

Terminals

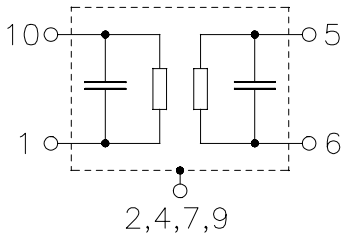
- Gold plated



Dimensions in mm, approx. weight 0,8 g

Pin configuration

10	Input or balanced input
1	Input ground or balanced input
5	Output or balanced output
6	Output ground or balanced output
3, 8	Ground
2, 4, 7, 9	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3831	B39151-B3831-U210	C61157-A7-A54	F61074-V8081-Z000

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

Maximum ratings

Operable temperature range	T	–40 / +85	˚C	
Storage temperature range	T_{stg}	–40 / +85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_s	0	dBm	

Characteristics

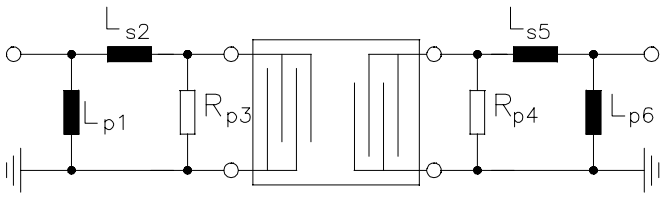
Operating temperature range: T = -40 to +85 °C
Terminating source impedance: Z_S = 1000 Ω || 87nH
Terminating load impedance: Z_L = 1000 Ω || 73nH

		min.	typ.	max.	
Nominal frequency	f_N	—	150	—	MHz
Minimum insertion attenuation	α_{min}	—	16,5	18	dB
1dB bandwidth α_{rel} ≤ 1,0 dB	$B_{1,0dB}$	1,29	1,45	—	MHz
Amplitude ripple (p-p) $f_N \pm 615$ kHz	$\Delta\alpha$	—	0,5	1,0	dB
Phase linearity (p-p) $f_N \pm 615$ kHz	$\Delta\varphi$	—	3,7	5,0	deg
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 2,25$ MHz ... $f_N \pm 40,0$ MHz		30	42	—	dB
VSWR $f_N \pm 615$ kHz		—	1,4:1	1,6:1	
Temperature coefficient of frequency [1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	35	—	°C

[1] Temperature dependance of f_c: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

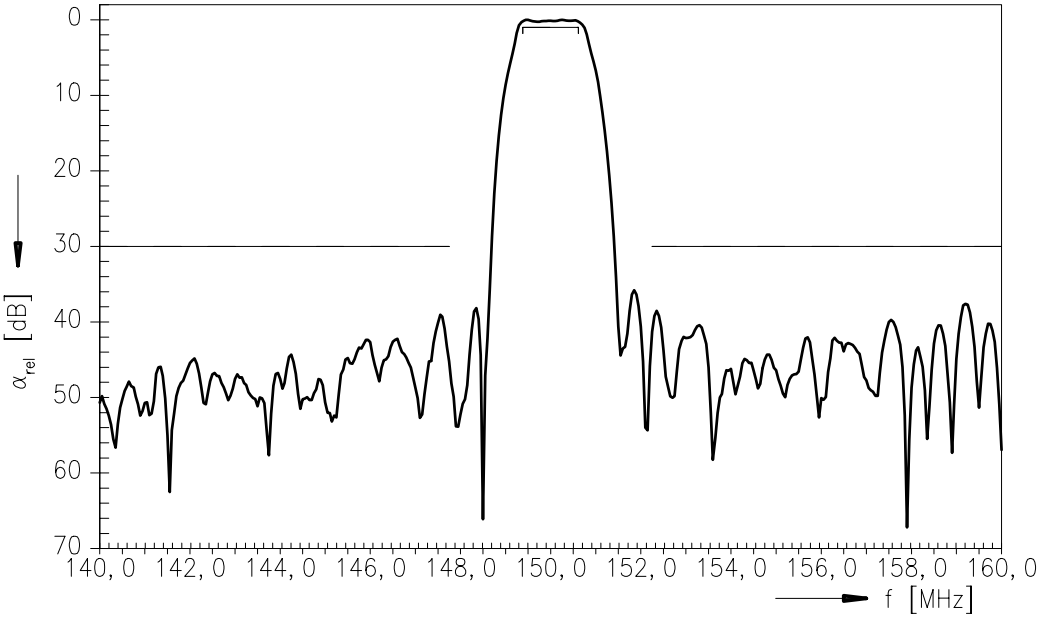
Matching network to 50 Ω

(Element values depend on PCB layout)

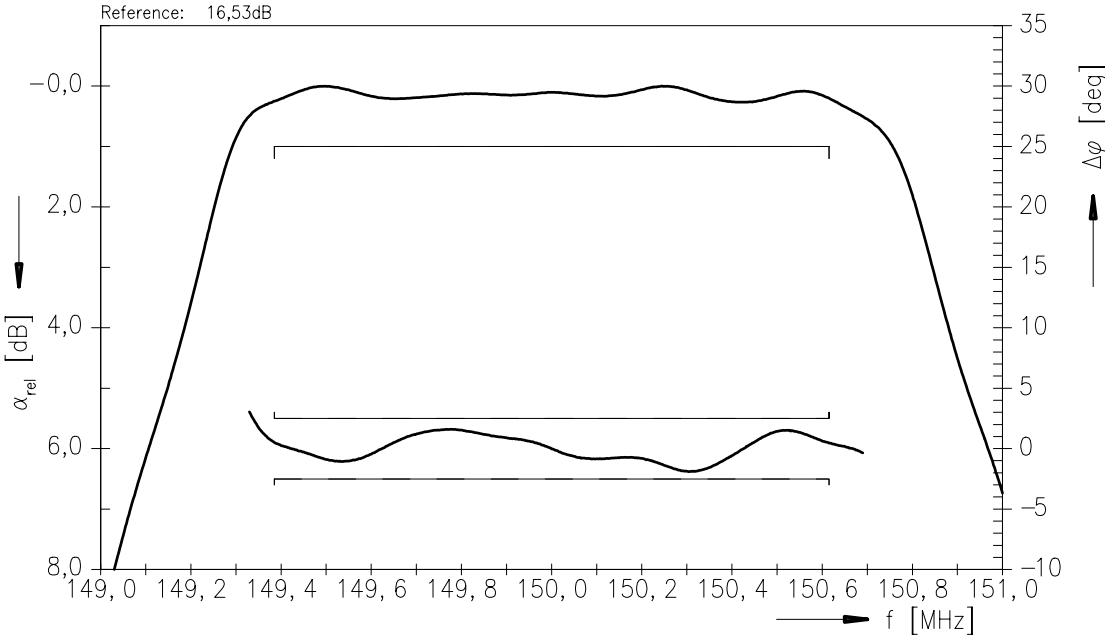


Lp1 = 27nH	Rp4 = 820Ω
Ls2 = 56nH	Ls5 = 56nH
Rp3 = 1000Ω	Lp6 = 33nH

Normalized frequency response



Normalized frequency response (pass band)



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