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SAW Components

Data Sheet B3831





SAW Components	B3831
Low-Loss Filter	150,0 MHz

Data Sheet

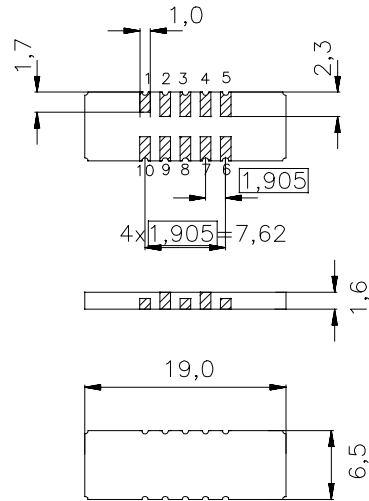
Features

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

Terminals

- Gold plated

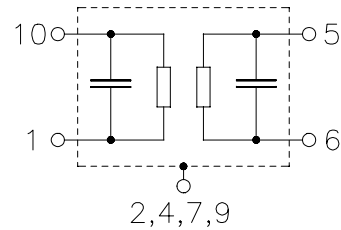
Ceramic package DCC18



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 Sensitive Device (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



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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 ± 615 kHz	Δα	—	0,5	1,0	dB
Phase linearity (p-p)	f _N ± 615 kHz	Δφ	—	3,7	5,0	deg
Relative attenuation (relative to α_{min})		α _{rel}				
	f _N ± 2,25 MHz ... f _N ± 40,0 MHz		30	42	—	dB
VSWR	f _N ± 615 kHz		—	1,4:1	1,6:1	
Temperature coefficient of frequency ¹⁾	TC _f		—	-0,036	—	ppm/K ²
Turnover temperature	T ₀		—	35	—	°C

¹⁾ Temperature dependence of f_c: f_c(T_A) = f_c(T₀)(1 + TC_f(T_A - T₀)²)

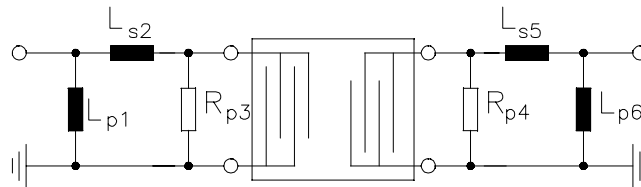


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Matching network to 50 Ω

(Element values depend on PCB layout)



$L_{p1} = 27\text{nH}$

$R_{p4} = 820\Omega$

$L_{s2} = 56\text{nH}$

$L_{s5} = 56\text{nH}$

$R_{p3} = 1000\Omega$

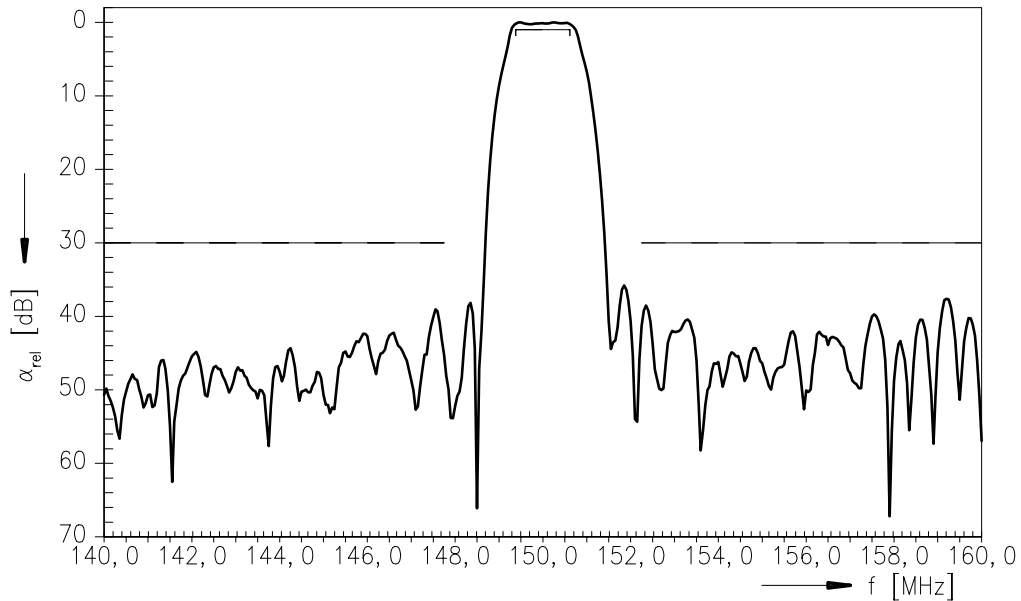
$L_{p6} = 33\text{nH}$



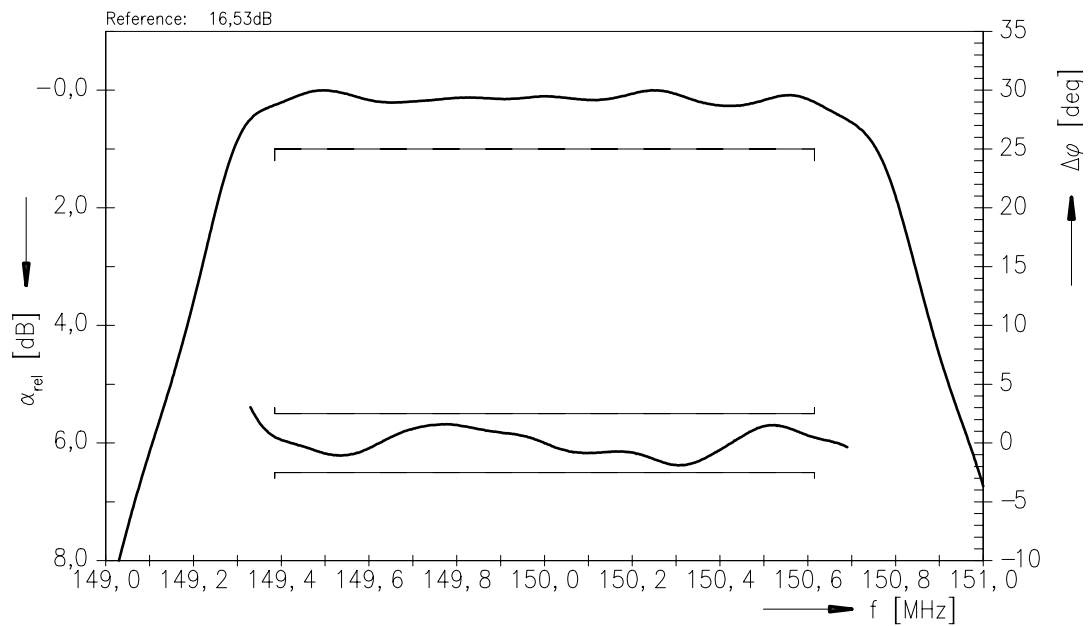
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Normalized frequency response



Normalized frequency response (pass band)





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SAW MC IS, P.O. Box 80 17 09, 81617 Munich, GERMANY

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