



SAW Components

Data Sheet B2580





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B2580

Spectrum Shaping Filter

140,0 MHz

Data Sheet

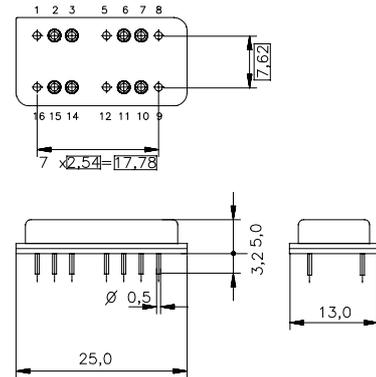
Metal package DIP 16

Features

- Spectrum shaping filter for digital radio systems
- Constant group delay
- Hermetically sealed metal package

Terminals

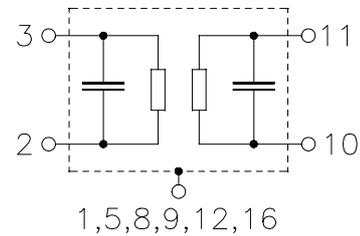
- Gold plated NiFeCo alloy



Dimensions in mm, approx. weight 4,2 g

Pin configuration

- | | |
|--------------------|-----------------|
| 2 | Input - ground |
| 3 | Input |
| 10 | Output - ground |
| 11 | Output |
| 1, 5, 8, 9, 12, 16 | Case - ground |
| 6, 7, 14 15 | Not connected |



Type	Ordering code	Marking and Package according to	Packing according to
B2580	B39141-B2580-E110	C61157-A7-A11	F61074-V8073-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40/+ 85	°C	source impedance 50 Ω
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	15	dBm	



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Characteristics

Operating temperature: $T = 40\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ.	max.	
Center frequency (center between 10 dB points)	f_C	139,85	140,00	140,15	MHz
Insertion attenuation at f_C	α_C	26,5	27,5	28,5	dB
Pass band tilt		—	-0,027	—	dB/MHz
Deviation from theoretical frequency resp.¹⁾	$\Delta\alpha$				
	$f_C \dots f_C \pm (1-a) \cdot f_Y$	—	$\pm 0,1$	$\pm 0,2$	dB
	$f_C \dots f_C \pm f_Y$	—	$\pm 0,2$	$\pm 0,3$	dB
Phase ripple (p-p)	$\Delta\phi$				
	$f_C \dots f_C \pm f_Y$	—	1,5	2,0	$^{\circ}$
Relative attenuation (relative to α_C)	α_{rel}				
	80,0 ... 105,0 MHz	45,0	52,0	—	dB
	105,0 ... 119,5 MHz	40,0	43,0	—	dB
	160,5 ... 180,0 MHz	39,0	42,0	—	dB
	180,0 ... 200,0 MHz	45,0	51,0	—	dB
Reflected wave signal suppression 0,5 μs ... 2,5 μs after main pulse		50,0	55,0	—	dB
Group delay at f_C	τ_C	—	0,825	—	μs
Nyquist frequency	f_Y	—	13,824	—	MHz
Roll-off factor	a	—	0,45	—	
Partitioning factor	p	—	0,5	—	
Temperature coefficient of frequency	TC_f	—	-87	—	ppm/K

1) Theoretical frequency response

$$H(x) = (S(x))^p$$

$$S(x) = \begin{cases} 1 & \text{for } |x| \leq 1-a \\ (1 + \cos(\pi \cdot (|x| - 1 + a) / 2a)) / 2 & \text{for } 1-a < |x| < 1+a \\ 0 & \text{for } 1+a \leq |x| \end{cases}$$

$$x = (f - f_C) / f_Y$$



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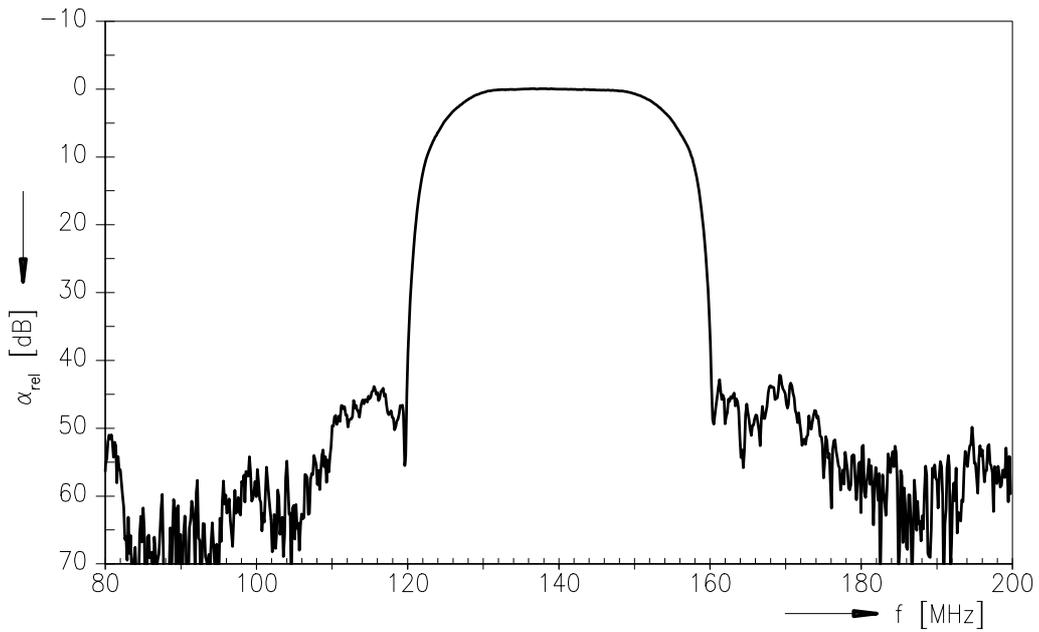
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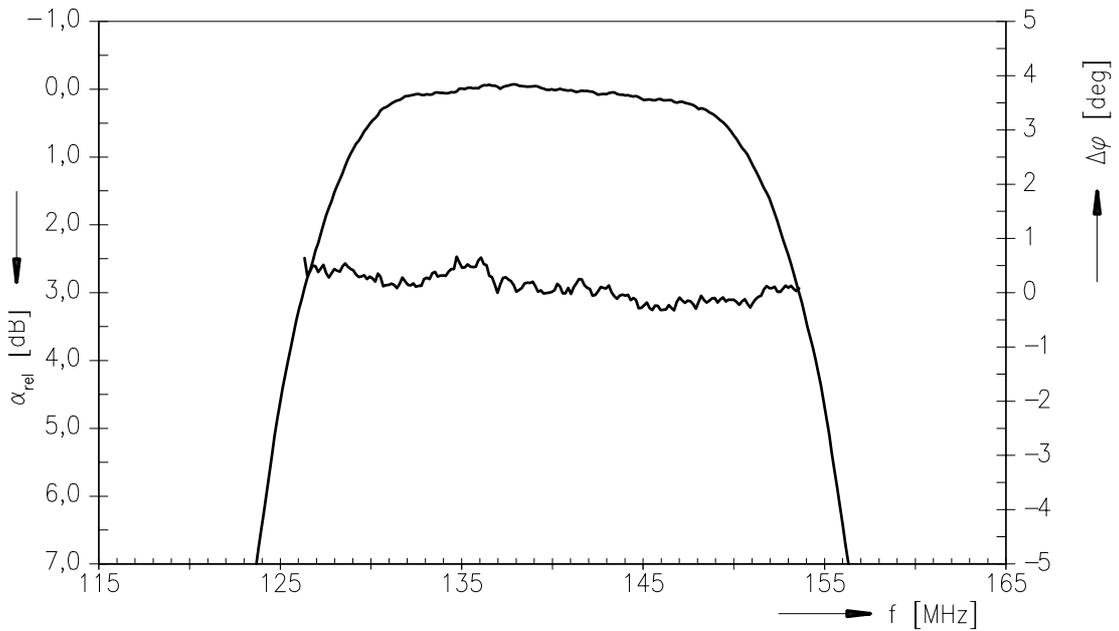
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Normalized frequency response



Normalized frequency response





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Published by EPCOS AG

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