Siemens Matsushita Components

SAW Components
Spectrum Shaping Filter

B2585
140,00 MHz

Data Sheet

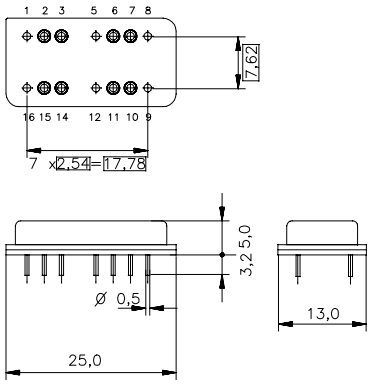
Metal package **DIP 16**

Features

- Spectrum shaping filter for digital radio systems
- High performance passband
- Group delay predistortion
- Hermetically sealed metal package

Terminals

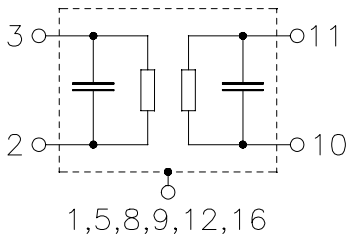
- Gold plated NiFeCo alloy



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
B2585	B39141-B2585-E110	C61157-A7-A11	F61064-V8013-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	15	dBm

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Characteristics

Operating temperature: T = 45 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency (center between 6 dB points)	f_C	139,75	140,00	140,25	MHz
Insertion attenuation at f_C	α_C	—	29,5	30,5	dB
Pass band tilt		—	0,0	0,01	dB/MHz
Deviation from theoretical frequency resp.[1]	$\Delta\alpha$				
f_C ... $f_C \pm f_Y$		—	± 0,1	± 0,4	dB
Phase ripple (p-p)[2]	$\Delta\varphi$				
f_C ... $f_C \pm f_Y$		—	2,5	4,0	°
Relative attenuation (relative to α_C)	α_{rel}				
40,0 ... 122,0 MHz		40	48	—	dB
158,0 ... 240,0 MHz		40	45	—	dB
Reflected wave signal suppression					
1,0 µs ... 4,5 µs after main pulse		45	65	—	dB
1,5 µs ... 1,0 µs before main pulse		45	65	—	dB
Group delay at f_C	τ_C	—	1,5	—	µs
Nyquist frequency	f_Y	—	13,805	—	MHz
Roll-off factor	a	—	0,25	—	
Partitioning factor	p	—	0,5	—	
Phase coefficient	p3	—	9,987	—	1E-03
Phase coefficient	p5	—	6,524	—	1E-01
Phase coefficient	p7	—	-6,715	—	1E-01
Phase coefficient	p9	—	3,920	—	1E-01
Phase coefficient	p11	—	-1,100	—	1E-01
Phase coefficient	p13	—	1,421	—	1E-02
Phase coefficient	p15	—	-6,794	—	1E-04
Temperature coefficient of frequency	TC_f	—	– 87	—	ppm/K

1) and 2) see next page

1) Theoretical frequency response:

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

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

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

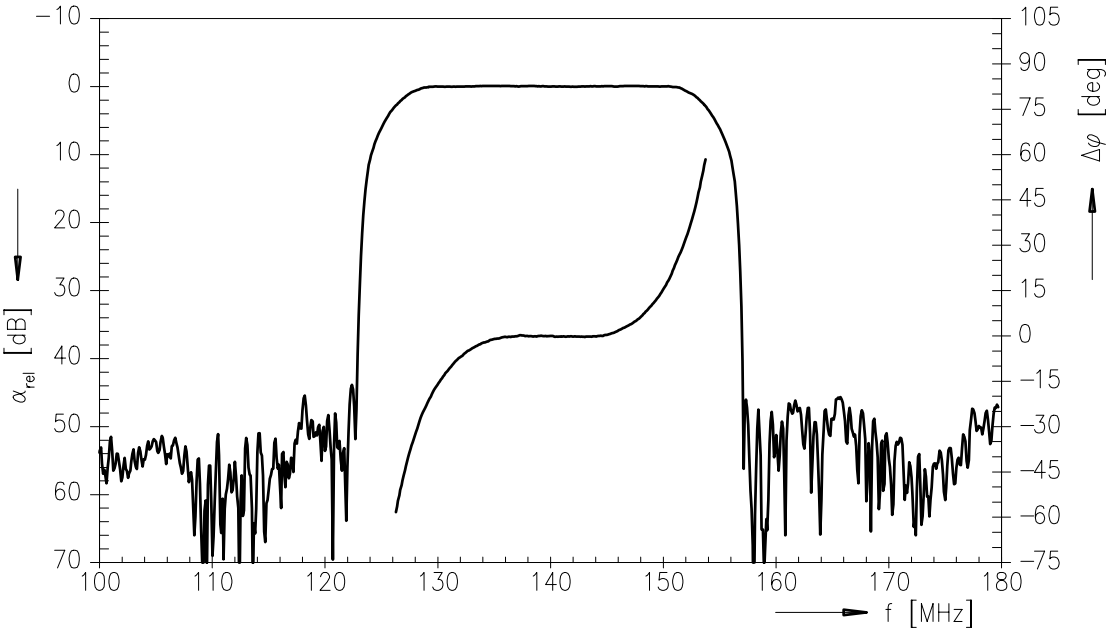
2) Theoretical phase response:

$$Ph(f) = p3*((f-f_C)/1\ MHz)^3 + p5*((f-f_C)/1\ MHz)^5 + p7*((f-f_C)/1\ MHz)^7 + p9*((f-f_C)/1\ MHz)^9 + p11*((f-f_C)/1\ MHz)^{11} + p13*((f-f_C)/1\ MHz)^{13} + p15*((f-f_C)/1\ MHz)^{15}$$

The part will not show any critical pyroelectric effect.

Data Sheet

Normalized frequency response



Normalized frequency response