Measurement condition

Ambient temperature:	25	°C
Input power level:	0	dBm
Terminating impedance:		
Input:	50	Ω
Output:	50	Ω

Characteristics

Remark:
The minimum of the attenuation a_{min} is defined as the insertion loss a_e. The centre frequency f_c is the arithmetic mean value of the upper and lower frequencies at the 3 dB filter attenuation level relative to the insertion loss a_e.

D a t a		**typ. value**		**tolerance / limit**		
Insertion loss	a_e	5,3	dB		8,3	dB
Center frequency (center frequency between 3dB points)	f_c	804,5	MHz		± 250	kHz
Phase at f_c		152	°			
Loaded quality factor	Q_L	4550		min.	3000	
Unloaded quality factor	Q_U	9800		min.	6300	
Ageing of f_c				max.	-40/+10	ppm/a
Equivalent circuit elements						
Motional capacitance	C_1	0,27	fF		-	
Motional inductance	L_1	144	uH		-	
Motional resistance	R_1	75	Ω		-	
Input / Output capacitance	C_0	1,6	pF		-	
Input power level				max.	0	dBm
Permissible DC voltage				max.	0	V
Operating temperature		-			+ 25	°C
Operable temperature range	OTR	-			- 45 °C ... + 85	°C
Storage temperature range		-			- 45 °C ... + 85	°C
Frequency inversion temperature		- 0,035	ppm/K²		-	
Temperature coefficient of frequency	TC_f **	ca. 25	°C	max.	± 10	°C

**) $\Delta f(Hz) = TC_f(ppm/K) \times (T-T_0) \times f_{TO}(MHz)$.

Generated:

Checked / Approved:

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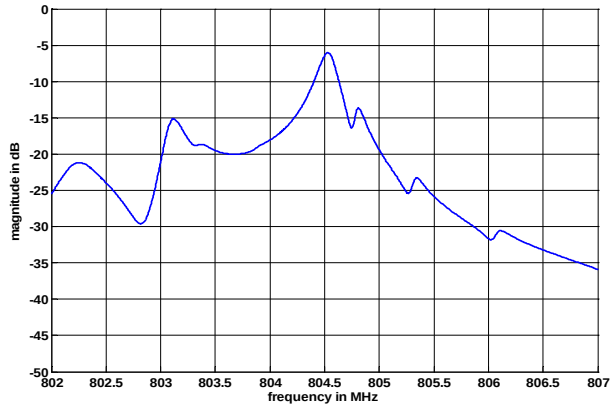
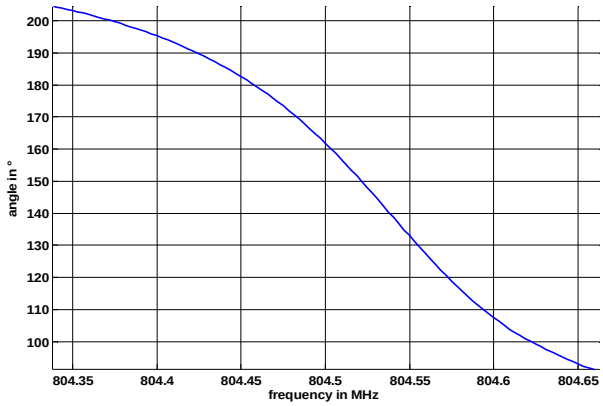
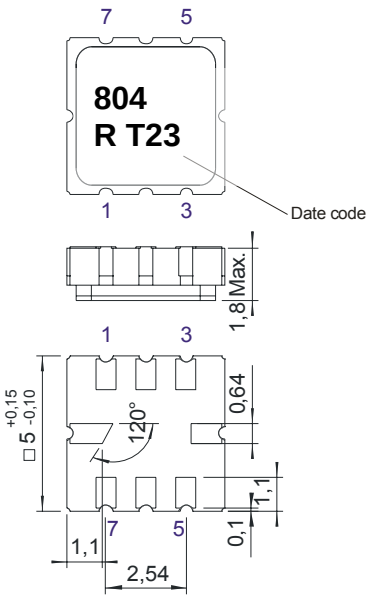
Filter characteristic





Construction and pin connection

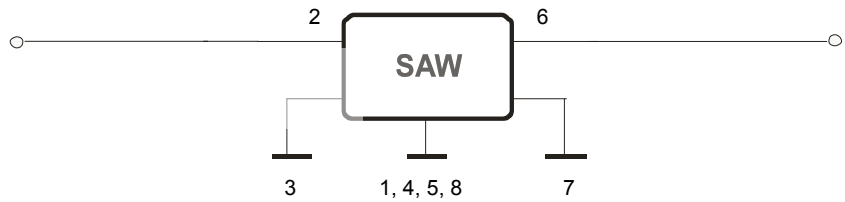
(All dimensions in mm)



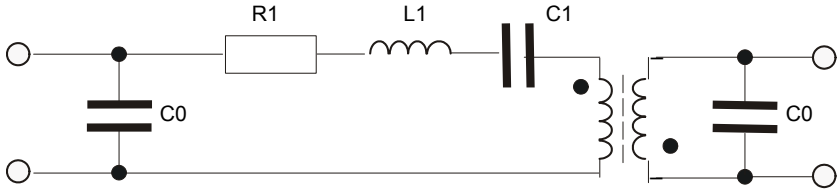
1	Ground
2	Input
3	Input RF Return
4	Ground
5	Ground
6	Output
7	Output RF Return
8	Ground

Date code:	Year + week
T	2005
U	2006
V	2007
...	

50 Ohm Test circuit



Equivalent Circuit



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Stability characteristics

After the following tests the filter shall meet the whole specification:

1. Shock:	500g, 1 ms, half sine wave, 3 shocks each plane; DIN IEC 68 T2 - 27
2. Vibration:	10 Hz to 500 Hz, 0,35 mm or 5 g respectively, 1 octave per min, 10 cycles per plan, 3 plans; DIN IEC 68 T2 - 6
3. Change of temperature:	-55 °C to 125°C / 30 min. each / 10 cycles DIN IEC 68 part 2 – 14 Test N
4. Resistance to solder heat (reflow):	reflow possible: twice max.; for temperature conditions refer to the attached "Air reflow temperature conditions" on page 4;

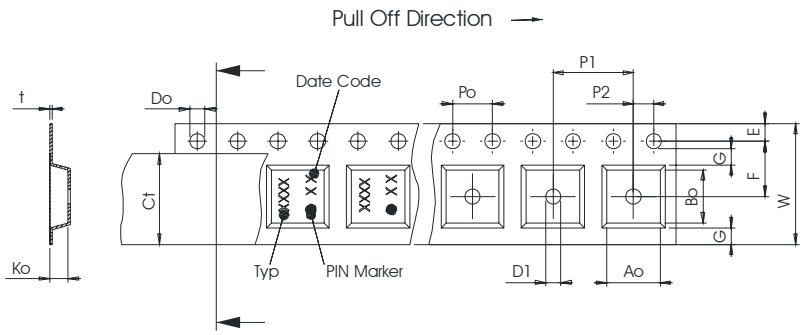
Packing

Tape & Reel: IEC 286 – 3, with exeption of value for N and minimum bending radius;
tape type II, embossed carrier tape with top cover tape on the upper side;

max. pieces of filters peer reel:	3000
reel of empty components at start:	min. 300 mm
reel of empty components at start including leader:	min. 500 mm
trailer:	min. 300 mm

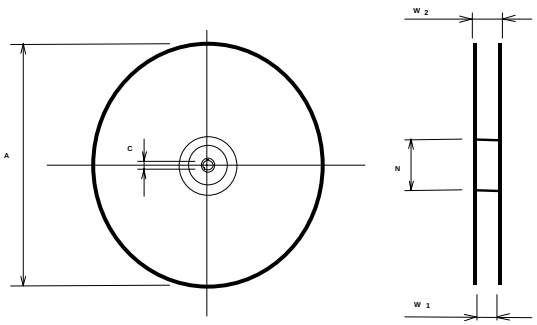
Tape (all dimensions in mm)

W	:	12,00 ± 0,3
Po	:	4,00 ± 0,1
Do	:	1,50 +0,1/-0
E	:	1,75 ± 0,1
F	:	5,50 ± 0,05
G(min)	:	0,75
P2	:	2,00 ± 0,05
P1	:	8,00 ± 0,1
D1(min)	:	1,50
Ao	:	5,30 ± 0,1
Bo	:	5,30 ± 0,1
Ct	:	9,5 ± 0,1



Reel (all dimensions in mm)

A	:	330
W1	:	12,4 +2/-0
W2(max)	:	18,4
N(min)	:	50
C	:	13,0 +0,5/-0,2



The minimum bending radius is 45 mm.

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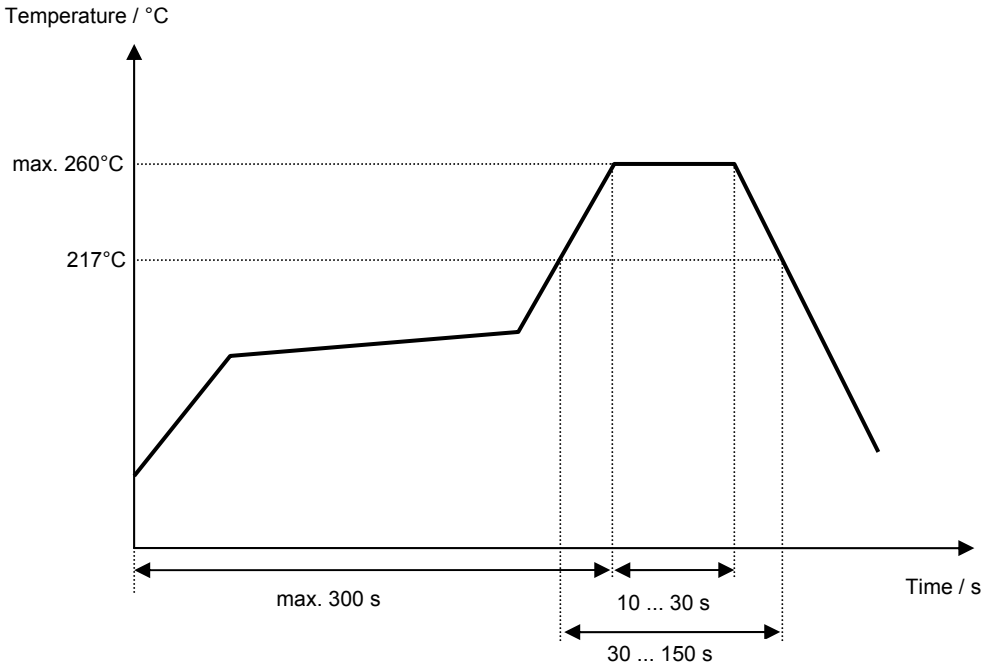
Air reflow temperature conditions

Conditions	Exposure
Average ramp-up rate (30°C to 217°C)	less than 3°C/second
> 100°C	between 300 and 600 seconds
> 150°C	between 240 and 500 seconds
> 217°C	between 30 and 150 seconds
Peak temperature	max. 260°C
Time within 5°C of actual peak temperature	between 10 and 30 seconds
Cool-down rate (Peak to 50°C)	less than 6°C/second
Time from 30°C to Peak temperature	no greater than 300 seconds

Chip-mount air reflow profile



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History

Version	Reason of Changes	Name	Date
1.0	- Generation of development specification	Martens	23.11.2004
2.0	- Generation of filter specification	Steiner	31.05.2005
2.1	- Clarification of ageing (from unit ppm to ppm/a)	Dr. Wall	22.02.2007

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