



SAW Components

SAW IF filter

IF Filter for Video Applications

Series/type:	K 7280 M
Ordering code:	B39380-K7280-M100
Date:	January 19, 2009
Version:	2.2



SAW Components

K 7280 M

SAW IF filter

38.00 MHz

Data Sheet

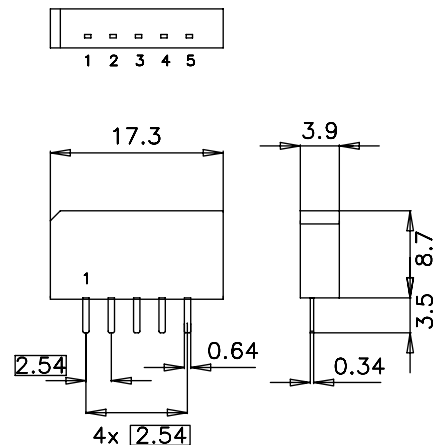
Application

- Standard: B/G, D/K, M/N
- TV IF filter switchable from B/G, D/K mode to M/N mode
- B/G, D/K mode with Nyquist slope and sound suppression
- Constant group delay
- M/N mode with Nyquist slope and sound suppression
- Customized group delay predistortion



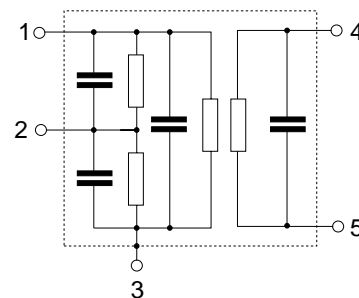
Features

- Plastic package **SIP5K**
- Approximate weight 1.0 g
- RoHS compatible
- Tinned CuFe alloy terminals



Pin configuration

- 1 Input
- 2 Switching input
- 3 Chip carrier - ground
- 4 Output
- 5 Output



Please read *cautions and warnings and important notes* at the end of this document.


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Data Sheet
Characteristics in B/G, D/K mode (switching pin 2 connected to ground)

Reference temperature: $T_A = 25\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 2\text{ k}\Omega \parallel 3\text{ pF}$

		min.	typ. @ 25 °C	max.	
Insertion attenuation α					
Reference level for the following data	36.50 MHz	13.3	14.7	16.3	dB
Relative attenuation α_{rel}					
Picture carrier	38.00 MHz	4.9	5.9	6.9	dB
Color carrier	33.57 MHz	1.5	2.5	3.5	dB
Sound carrier	32.50 MHz	40.0	48.0	—	dB
	32.55 MHz	—	48.0	—	dB
	32.00 MHz	44.0	56.0	—	dB
	31.50 MHz	42.0	54.0	—	dB
Adj. picture carrier	30.00 MHz	46.0	60.0	—	dB
	31.00 MHz	46.0	58.0	—	dB
Adj. sound carrier	39.50 MHz	44.0	55.0	—	dB
	40.00 MHz	42.0	56.0	—	dB
	40.50 MHz	43.0	52.0	—	dB
Lower sidelobe	25.00 ... 30.00 MHz	44.0	51.0	—	dB
Upper sidelobe	39.50 ... 45.00 MHz	38.0	44.0	—	dB
Reflected wave signal suppression					
1.2 μ s ... 6.0 μ s after main pulse (test pulse 250 ns, carrier frequency 36.50 MHz)		42.0	50.0	—	dB
Feedthrough signal suppression					
1.2 μ s ... 1.1 μ s before main pulse (test pulse 250 ns, carrier frequency 36.50 MHz)		—	56.0	—	dB
Group delay ripple (p-p) $\Delta\tau$		—	40	—	ns
Impedance at 36.50 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1.1 \parallel 15.9	—	k Ω \parallel pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1.5 \parallel 4.6	—	k Ω \parallel pF
Temperature coefficient of frequency TC_f		—	-72	—	ppm/K



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Characteristics in M/N mode (switching pin 2 connected to pin 1)

Reference temperature: $T_A = 25\text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 2\ \text{k}\Omega \parallel 3\ \text{pF}$

		min.	typ. @ 25 °C	max.	
Insertion attenuation α					
Reference level for the following data	36.50 MHz	12.0	13.5	15.0	dB
Relative attenuation α_{rel}					
Picture carrier	38.00 MHz	4.8	5.8	6.8	dB
Color carrier	34.42 MHz	1.4	2.4	3.4	dB
Sound carrier	33.50 MHz	30.0	36.0	—	dB
Adj. picture carrier	32.00 MHz	46.0	53.0	—	dB
Adj. sound carrier	39.50 MHz	44.0	53.0	—	dB
Lower sidelobe	25.00 ... 32.00 MHz	40.0	46.0	—	dB
Upper sidelobe	39.50 ... 45.00 MHz	40.0	46.0	—	dB
Reflected wave signal suppression					
1.3 μs ... 6.0 μs after main pulse (test pulse 250 ns, carrier frequency 36.50 MHz)		42.0	55.0	—	dB
Feedthrough signal suppression					
1.2 μs ... 1.1 μs before main pulse (test pulse 250 ns, carrier frequency 36.50 MHz)		—	56.0	—	dB
Group delay predistortion $\Delta\tau$ (reference frequency 38.00 MHz)					
	35.00 MHz	—	20	—	ns
	34.42 MHz	—	40	—	ns
Impedance at 36.50 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	0.9 \parallel 21.3	—	k Ω \parallel pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1.5 \parallel 4.6	—	k Ω \parallel pF
Temperature coefficient of frequency TC_f					
		—	-72	—	ppm/K



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Maximum ratings

Operable temperature range	T	-25 / +65	°C	
Storage temperature range	T _{stg}	-40 / +85	°C	
DC voltage	V _{DC}	5	V	between any terminals
AC voltage	V _{pp}	10	V	between any terminals



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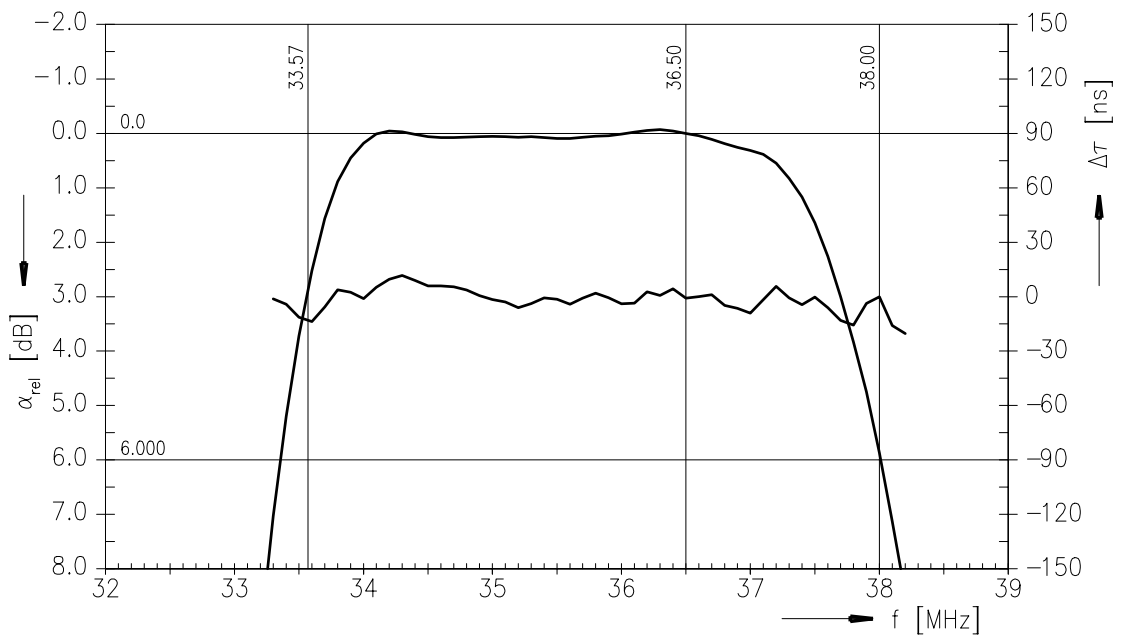
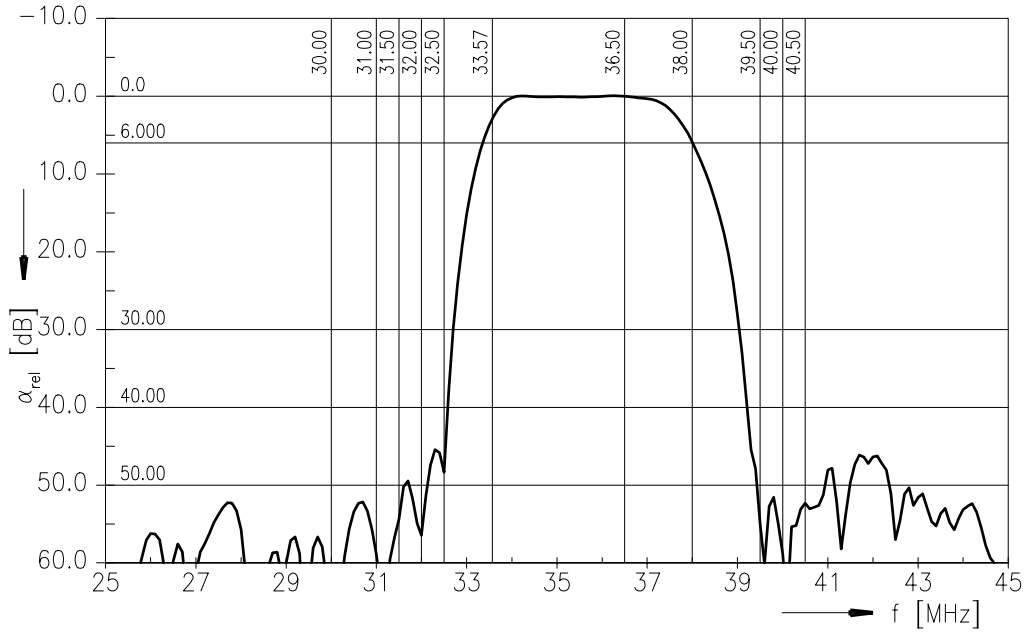
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Data Sheet

Frequency response in B/G, D/K mode



Please read *cautions and warnings* and *important notes* at the end of this document.



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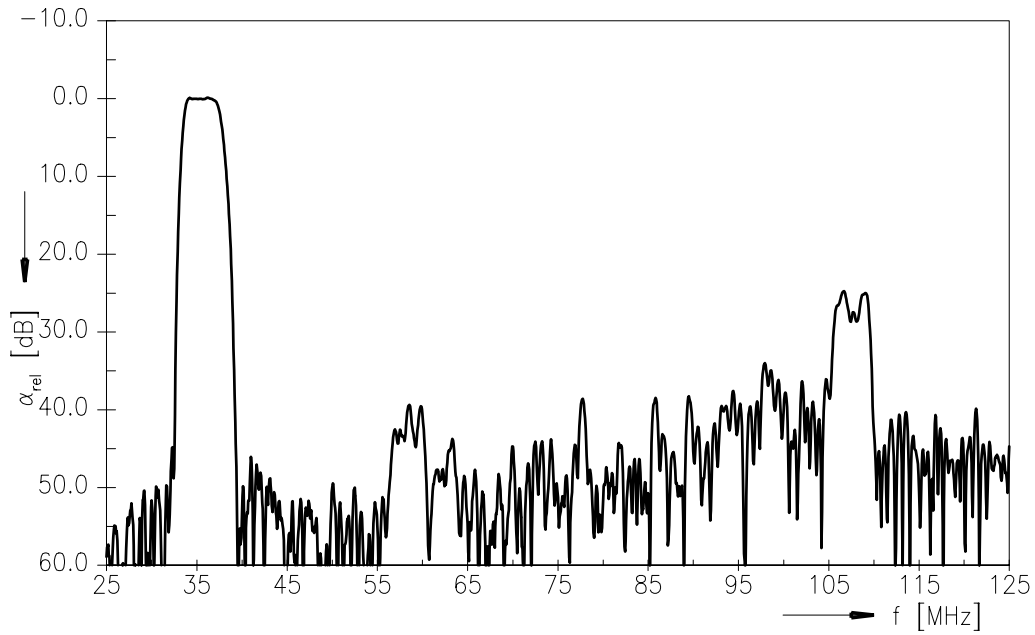
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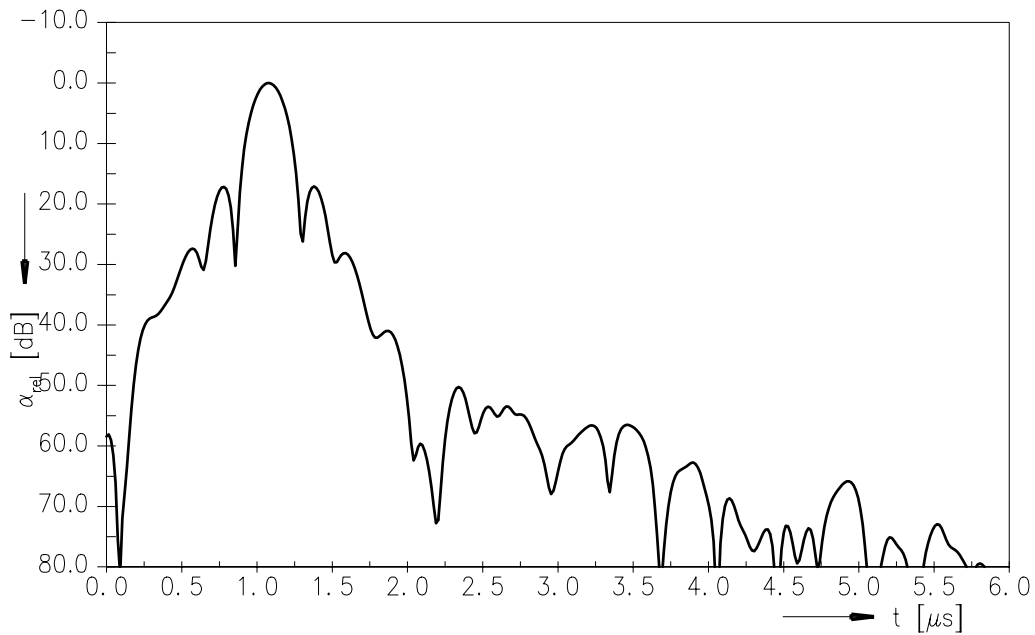
38.00 MHz

Data Sheet

Frequency response B/G, D/K mode



Time domain response B/G, D/K mode

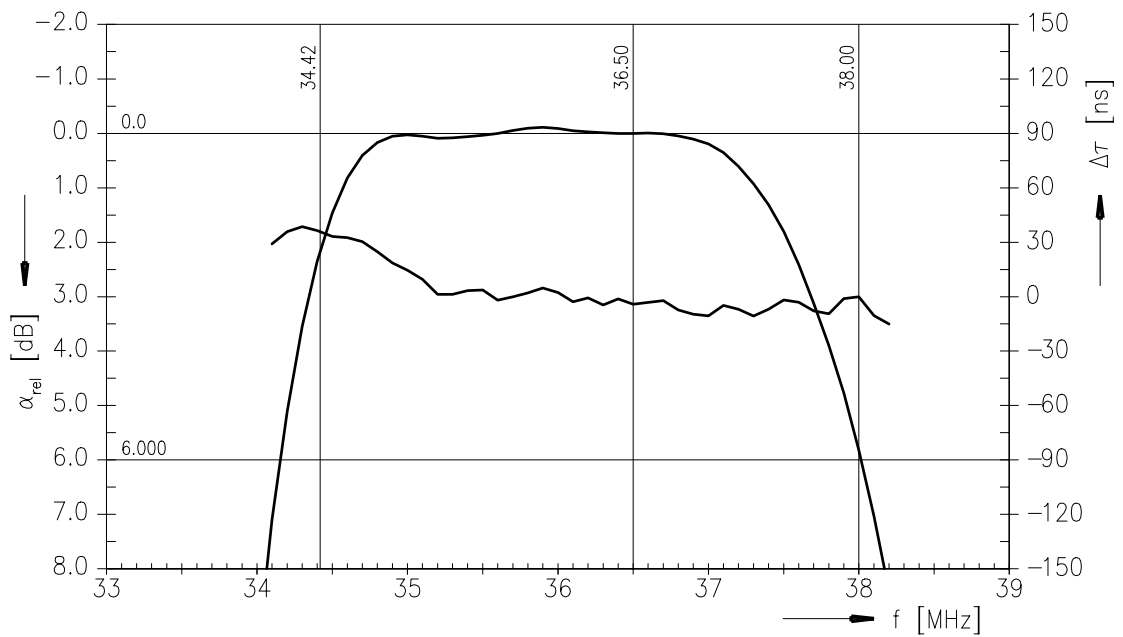
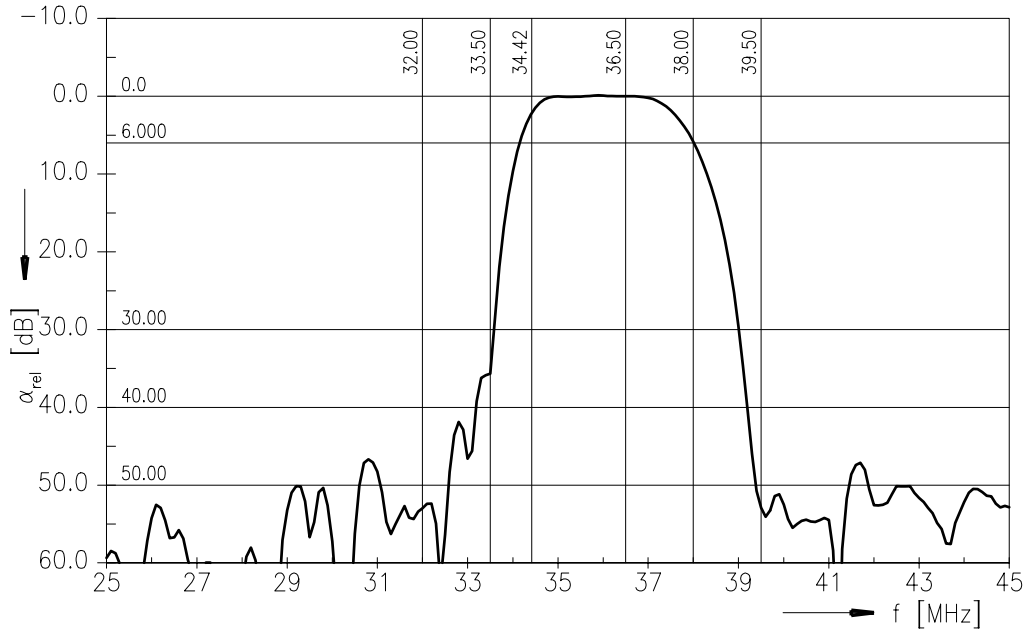


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Data Sheet

Frequency response in M/N mode



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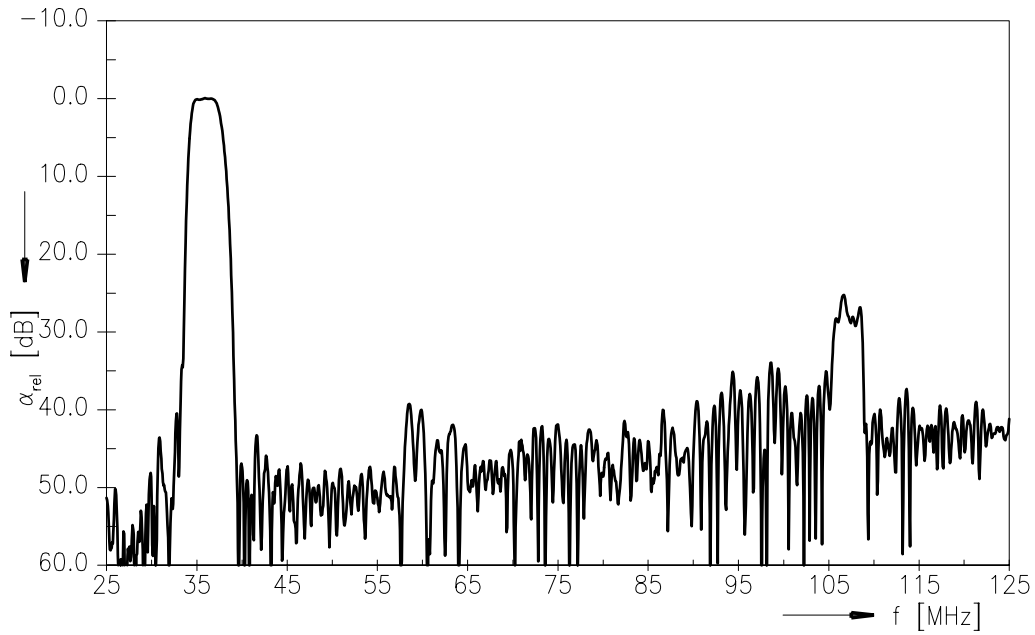
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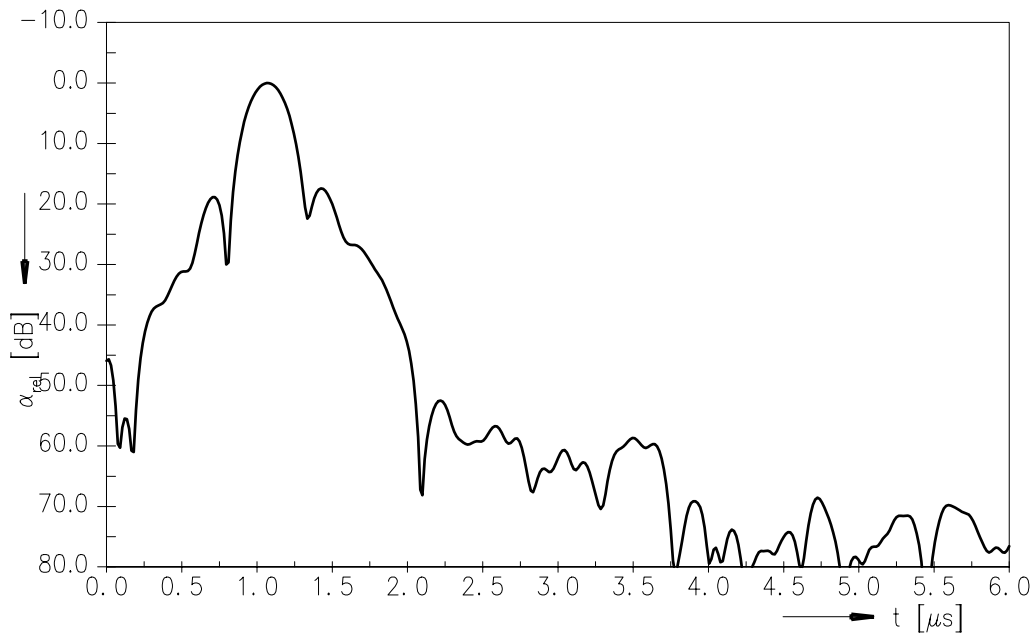
38.00 MHz

Data Sheet

Frequency response M/N mode



Time domain response M/N mode



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References

Type	K 7280 M
Ordering code	B39380-K7280-M100
Marking and package	C61157-A1-A15
Packaging	F61074-V8067-Z000
Date codes	L_1126
S-parameters	
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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Please read *cautions and warnings and important notes* at the end of this document.



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