EPCOS

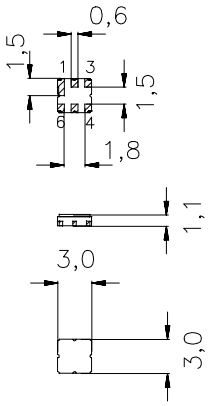
SAW Components

Data Sheet B4159

Ceramic package **DCC6C**

Features

- Low-loss RF filter for mobile telephone PCS systems, transmit path
- High Rx rejection
- Usable passband of 60 MHz
- No matching network required for operation at 50 Ω
- Package for **S**urface **M**ounted **T**echnology (**SMT**)



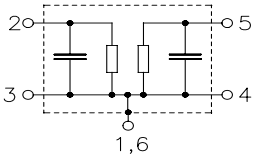
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,037 g

Pin configuration

2	Input
1, 3	To be grounded
5	Output
4, 6	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4159	B39192-B4159-U410	C61157-A7-A67	F61074-V8088-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 30 /+ 85	˚C	
Storage temperature range	T_{stg}	– 40 /+ 85	˚C	
DC voltage	V_{DC}	0	V	
Input power max.				source and load impedance 50 Ω
1850...1910 MHz	P_{IN}	13	dBm	peak power of TDMA signal, duty cycle 1 : 3
		10	dBm	continuous wave

Characteristics

Operating temperature range: T = -30 to 0˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	1880,0	—	MHz
Maximum insertion attenuation	α_{max}				
1850,0 ...1910,0 MHz		—	3,0	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1850,0 ...1910,0 MHz		—	1,7	2,2	dB
Input VSWR					
1850,0 ...1910,0 MHz		—	1,7	2,0	
Output VSWR					
1850,0 ...1910,0 MHz		—	1,7	2,0	
Attenuation	α_{min}				
10,0 ...1400,0 MHz		16,0	17,0	—	dB
1400,0 ...1600,0 MHz		20,0	23,0	—	dB
1600,0 ...1720,0 MHz		23,0	26,0	—	dB
1720,0 ...1785,0 MHz		29,0	32,0	—	dB
1785,0 ...1830,0 MHz		4,0	13,0	—	dB
1930,0 ...1990,0 MHz		14,0	16,0	—	dB
1990,0 ...3800,0 MHz		22,0	25,0	—	dB
3800,0 ...5000,0 MHz		15,0	17,0	—	dB
5000,0 ...6000,0 MHz		10,0	13,0	—	dB

Characteristics

Operating temperature range: T = 0 to +65˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			min.	typ.	max.	
Center frequency	f_c		—	1880,0	—	MHz
Maximum insertion attenuation	α_{max}					
1850,0 ...1910,0	MHz		—	3,5	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
1850,0 ...1910,0	MHz		—	2,0	2,5	dB
Input VSWR						
1850,0 ...1910,0	MHz		—	1,8	2,0	
Output VSWR						
1850,0 ...1910,0	MHz		—	1,8	2,0	
Attenuation	α_{min}					
10,0 ...1400,0	MHz		16,0	17,0	—	dB
1400,0 ...1600,0	MHz		20,0	23,0	—	dB
1600,0 ...1720,0	MHz		23,0	26,0	—	dB
1720,0 ...1785,0	MHz		29,0	32,0	—	dB
1785,0 ...1830,0	MHz		4,0	10,0	—	dB
1930,0 ...1990,0	MHz		16,0	24,0	—	dB
1990,0 ...3800,0	MHz		22,0	25,0	—	dB
3800,0 ...5000,0	MHz		15,0	17,0	—	dB
5000,0 ...6000,0	MHz		10,0	13,0	—	dB

Characteristics

Operating temperature range: T = +65 to +75˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	1880,0	—	MHz
Maximum insertion attenuation	α_{max}				
1850,0 ...1910,0 MHz		—	4,0	5,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1850,0 ...1910,0 MHz		—	2,0	3,0	dB
Input VSWR					
1850,0 ...1910,0 MHz		—	1,8	2,0	
Output VSWR					
1850,0 ...1910,0 MHz		—	1,8	2,0	
Attenuation	α_{min}				
10,0 ...1400,0 MHz		16,0	17,0	—	dB
1400,0 ...1600,0 MHz		20,0	23,0	—	dB
1600,0 ...1720,0 MHz		23,0	26,0	—	dB
1720,0 ...1785,0 MHz		29,0	32,0	—	dB
1785,0 ...1830,0 MHz		4,0	9,0	—	dB
1930,0 ...1990,0 MHz		16,0	25,0	—	dB
1990,0 ...3800,0 MHz		22,0	25,0	—	dB
3800,0 ...5000,0 MHz		15,0	17,0	—	dB
5000,0 ...6000,0 MHz		10,0	13,0	—	dB

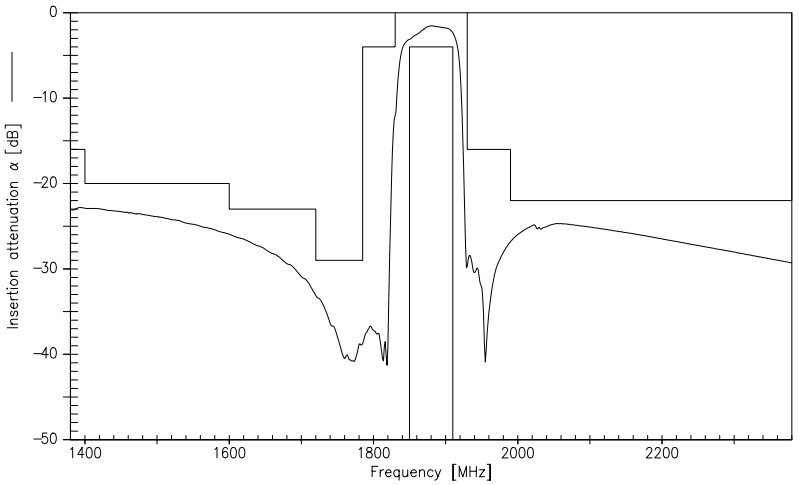
Data Sheet SMD

Characteristics

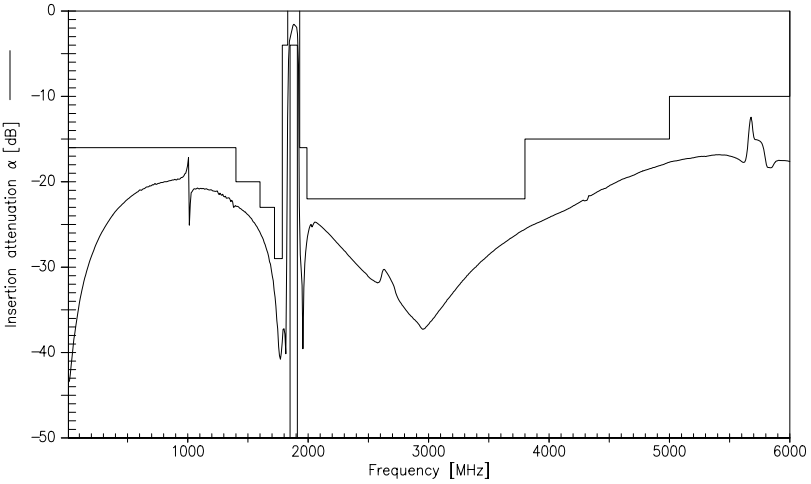
Operating temperature range: T = +75 to +85˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	1880,0	—	MHz
Maximum insertion attenuation	α_{max}				
1850,0 ...1910,0 MHz		—	4,5	5,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1850,0 ...1910,0 MHz		—	2,3	3,3	dB
Input VSWR					
1850,0 ...1910,0 MHz		—	1,8	2,0	
Output VSWR					
1850,0 ...1910,0 MHz		—	1,8	2,0	
Attenuation	α_{min}				
10,0 ...1400,0 MHz		16,0	17,0	—	dB
1400,0 ...1600,0 MHz		20,0	23,0	—	dB
1600,0 ...1720,0 MHz		23,0	26,0	—	dB
1720,0 ...1785,0 MHz		29,0	32,0	—	dB
1785,0 ...1830,0 MHz		4,0	8,0	—	dB
1930,0 ...1990,0 MHz		16,0	25,0	—	dB
1990,0 ...3800,0 MHz		22,0	25,0	—	dB
3800,0 ...5000,0 MHz		15,0	17,0	—	dB
5000,0 ...6000,0 MHz		10,0	13,0	—	dB

Transfer function (0 to 65˚C spec)

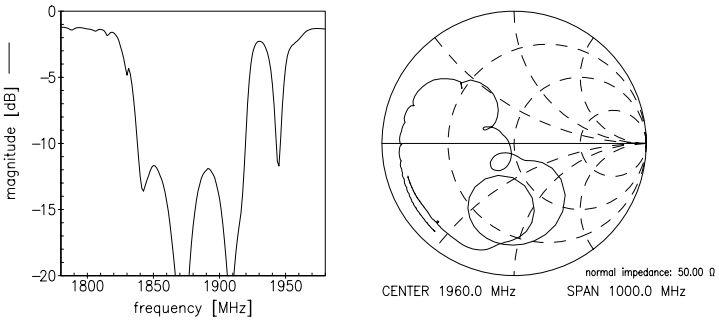


Transfer function (wideband)

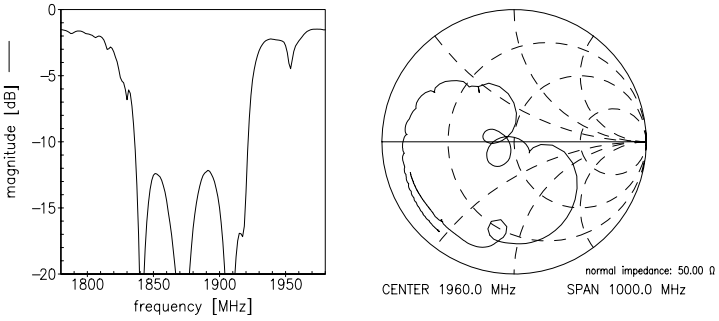


Reflection functions

S_{11}



S_{22}



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