



SAW Components

Data Sheet B4690





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B4690

Low-Loss Filter

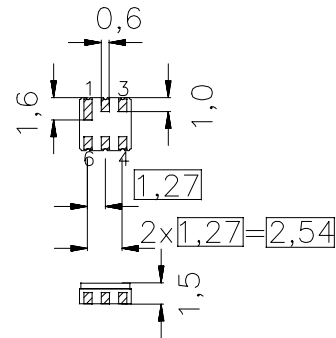
836,50 MHz

Data Sheet

Ceramic package **DCC6**

Features

- Low-loss RF filter for basestations (IS-54), receive path
- Low amplitude ripple
- Usable passband 25 MHz
- No matching network required for operation at 50 Ω
- Ceramic package for **Surface Mounted Technology (SMT)**



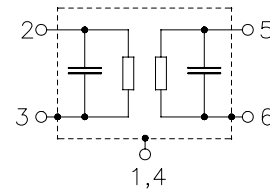
Terminals

- Ni, gold-plated

Dim. in mm, approx. weight 0,07 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B4690	B39841-B4690-Z610	C61157-A7-A41	F61064-V8030-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 30/+ 85	°C	source impedance 50 Ω
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	



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Characteristics

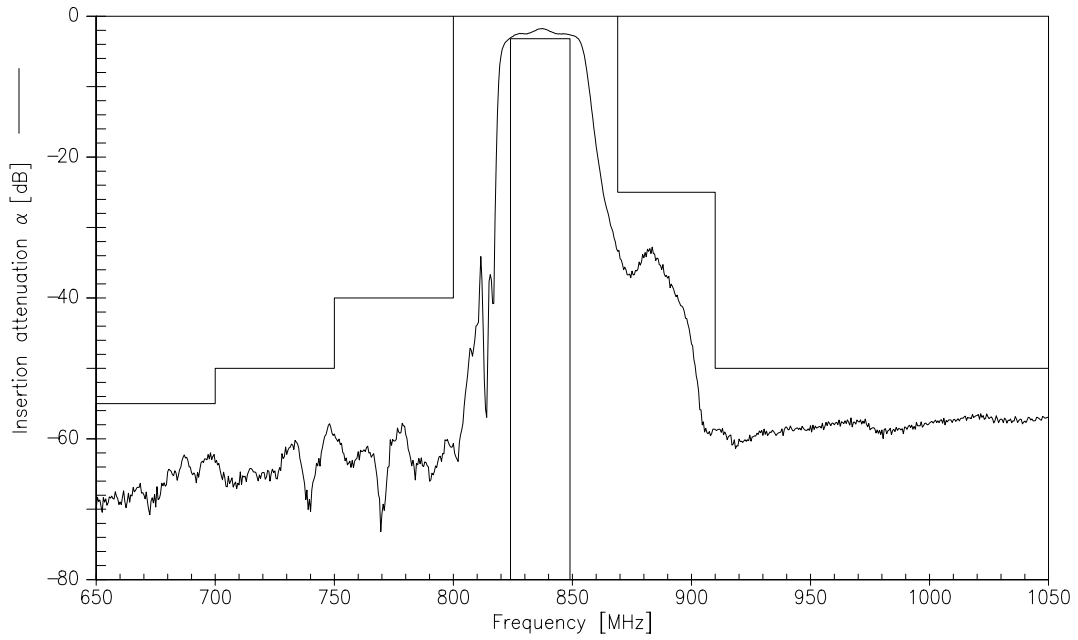
Operating temperature range: $T = -30$ to $+85$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ.	max.	
Center frequency	f_c	—	836,50	—	MHz
Maximum insertion attenuation	α_{max}				
824,0 ... 849,0	MHz	—	3,0	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
824,0 ... 849,0	MHz	—	1,0	1,7	dB
VSWR					
824,0 ... 849,0	MHz	—	1,9	2,0	
Attenuation	α				
0,0 ... 600,0	MHz	60	70	—	dB
600,0 ... 700,0	MHz	55	65	—	dB
700,0 ... 750,0	MHz	50	60	—	dB
750,0 ... 800,0	MHz	40	60	—	dB
869,0 ... 910,0	MHz	25	35	—	dB
910,0 ... 1100,0	MHz	50	58	—	dB
1100,0 ... 1500,0	MHz	40	50	—	dB
1500,0 ... 2000,0	MHz	30	50	—	dB
2000,0 ... 2500,0	MHz	20	30	—	dB
2500,0 ... 3000,0	MHz	12	15	—	dB

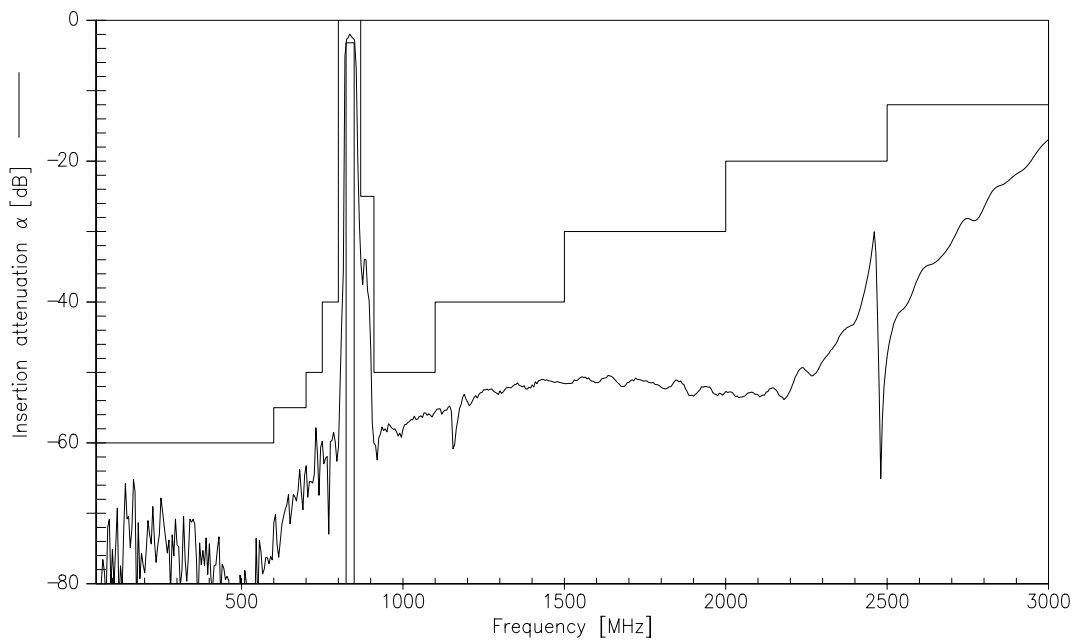


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Transfer function



Transfer function (wideband)

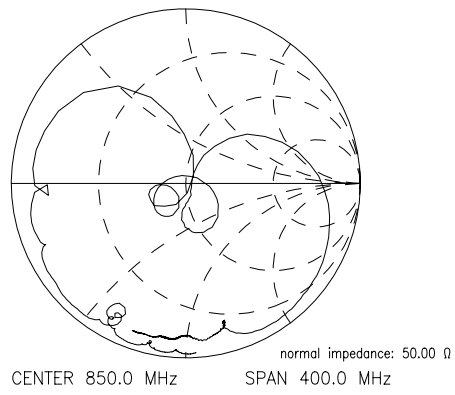
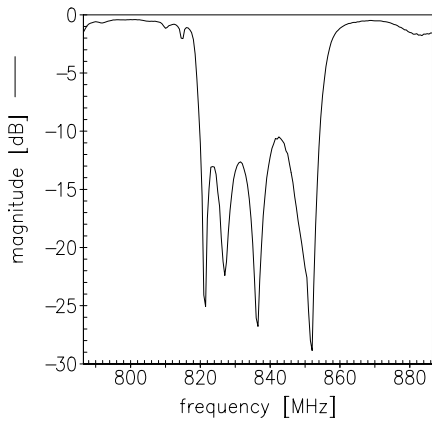




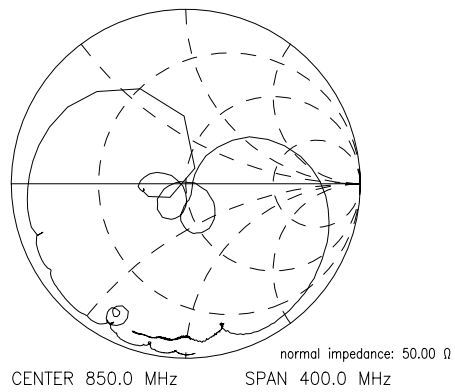
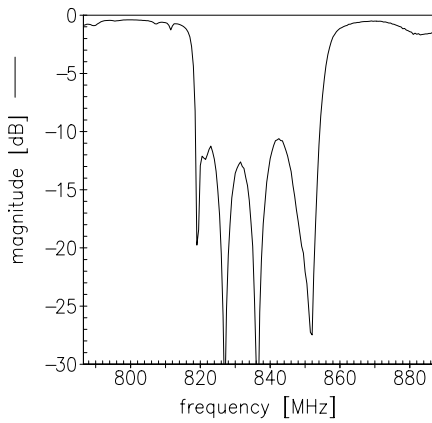
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Reflection functions

S_{11}



S_{22}





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Remarks on power durability of SAW filter B4690:

The power durability of SAW filter B4690 depends on ambient temperature and time. Measurements have shown that for an ambient temperature of 85 °C and a CW input power $P_{in} = -1.5$ dBm at 849 MHz the filter has a TTF of more than 100 000 h. The allowed input power for other parameters is given in the following table:

T_{amb} [°C]	TTF [h]	P_{in} [dBm]
85	100 000	-1.5
55	100 000	1.9
25	100 000	5.9
85	10 000	1.8
55	10 000	5.2
25	10 000	9.1

TTF: time to failure (frequency shift of 1 MHz and/or increase of α_{max} by 0,5 dB)

T_{amb} : ambient temperature

These results are based on extrapolations of measured results. The statistical uncertainty is about ± 3 dB.



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