



SAW Components

SAW filter

Short range devices

Series/type:	B3590
Ordering code:	B39461B3590Z810
Date:	November 08, 2007
Version:	2.0

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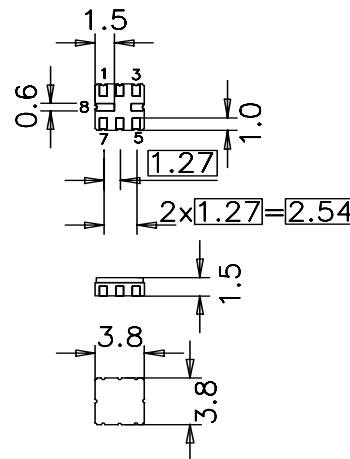
Application

- Low-loss RF filter for meter reading
- Unbalanced to unbalanced operation
- No matching network required for operation at 50 Ω



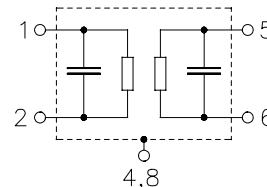
Features

- Package size 3.8 x 3.8 x 1.5 mm³
- Package code QCC8B
- RoHS compatible
- Approximate weight 0.07 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- Passivation layer ELPAS
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 2 Input
- 6 Output
- 1,3,5,7 To be grounded
- 4,8 Case ground



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



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SAW filter

460.00 MHz

Data sheet



Characteristics

Temperature range for specification: $T_A = -40\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\Omega$
 Terminating load impedance: $Z_L = 50\Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	460.0	—	MHz
Maximum insertion attenuation	α_{max}	—	2.0	3.5 ¹⁾	dB
450.0 ... 470.0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.7	2.7 ²⁾	dB
450.0 ... 470.0 MHz					
Input return loss		10.0	14.5	—	dB
450.0 ... 470.0 MHz					
Output return loss		10.0	17.5	—	dB
450.0 ... 470.0 MHz					
Attenuation	α				
1.0 ... 300.0 MHz		30	42	—	dB
300.0 ... 380.0 MHz		24	34	—	dB
380.0 ... 430.0 MHz		15	23	—	dB
504.825... 524.825MHz		12	32	—	dB
559.65 ... 579.65 MHz		28	41	—	dB
669.3 ... 689.3 MHz		24	37	—	dB
689.3 ... 1000.0 MHz		26	34	—	dB

1) 2.2 dB at 25 °C; 3.2 dB for -30 °C to +60 °C
 2) 1.4 dB at 25 °C; 2.4 dB for -30 °C to +60 °C

Maximum ratings

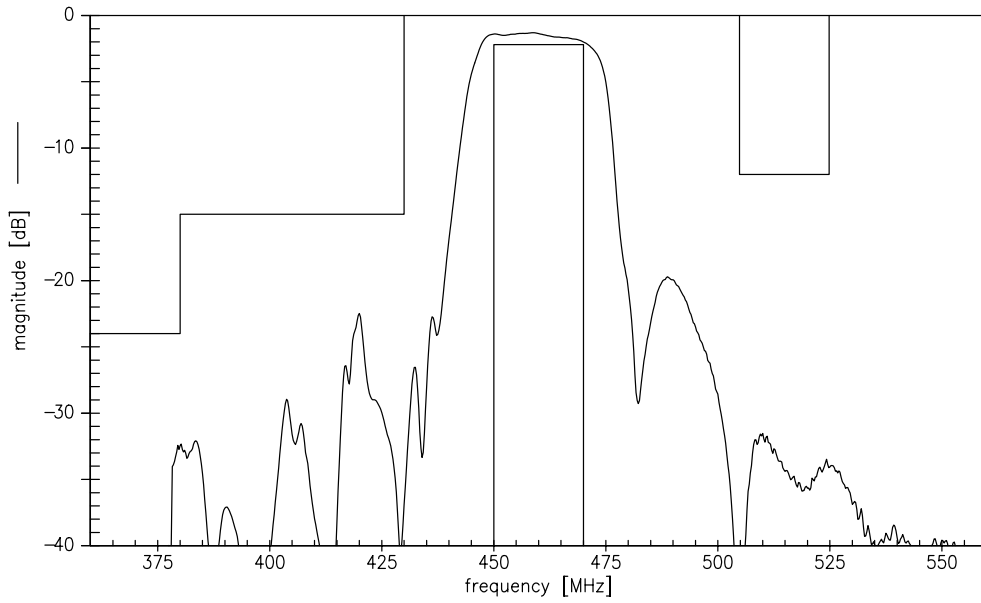
Operable temperature range	T_A	-45/+125	°C	machine model, 10 pulses continuous wave
Storage temperature range	T_{stg}	-45/+125	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100 ¹⁾	V	
Input Power at				
450.0 ... 470.0 MHz	P_{IN}	10	dBm	

1) acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.

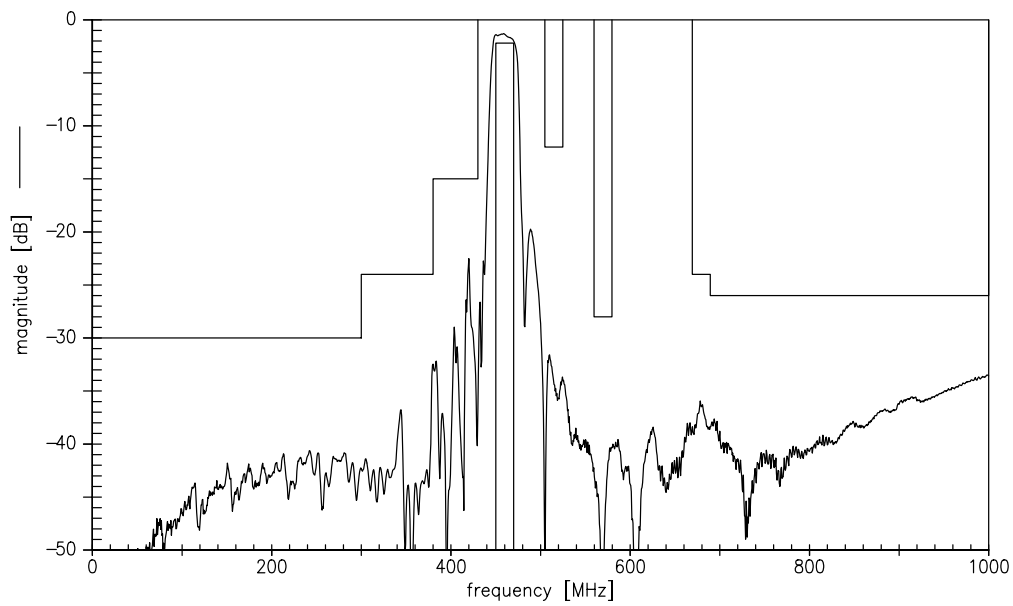
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Transfer function (narrowband)



Transfer function (wideband)



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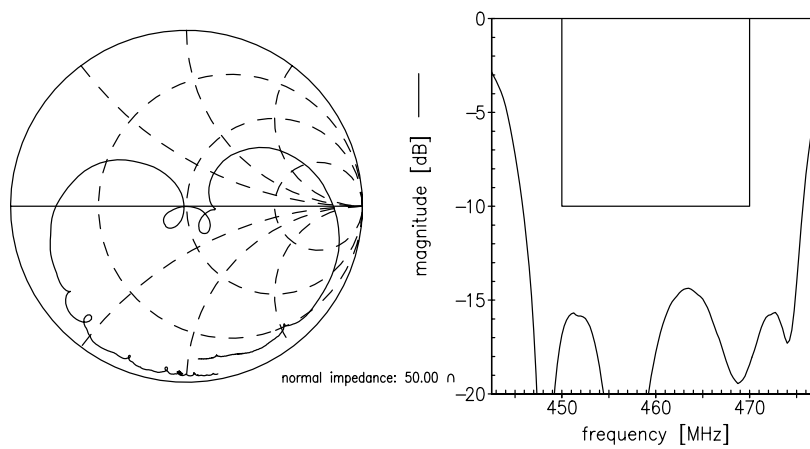


Data sheet

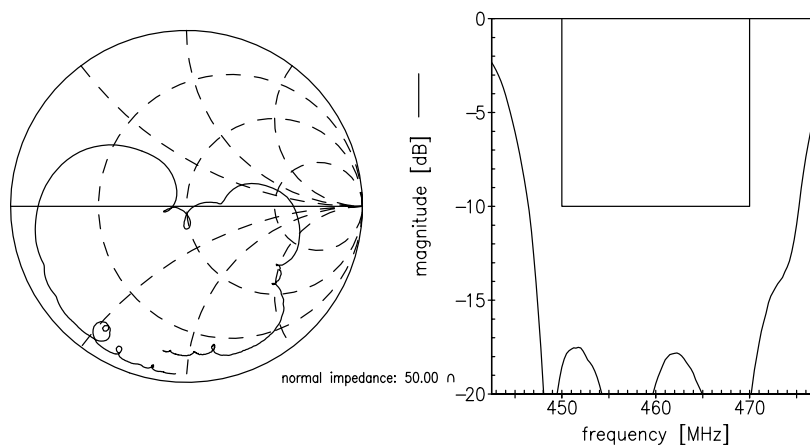


Smith chart

S₁₁ function



S₂₂ function



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**SAW Components****B3590****SAW filter****460.00 MHz**

Data sheet

**References**

Type	B3590
Ordering code	B39461B3590Z810
Marking and package	C61157-A7-A46
Packaging	F61074-V8167-Z000
Date codes	L_1126
S-parameters	B3590_NB.s2p B3590_WB.s2p
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."

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