EPCOS

SAW Components

Data Sheet B3815

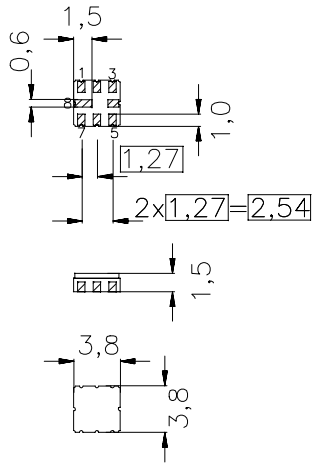
Ceramic package QCC8B

Features

- Low-loss filter for Trunked Radio
- Usable bandwidth 10 MHz
- No matching required for operation at 50 Ω
- Unbalanced to unbalanced or unbalanced to balanced operation
- Package for Surface Mounted Technology (SMT)
- Hermetically sealed ceramic package

Terminals

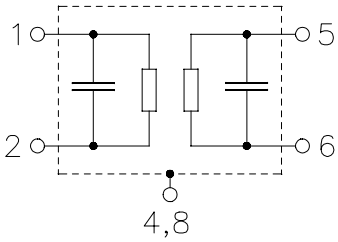
- Gold-plated



typ. Dimensions in mm, approx. weight 0,07 g

Pin configuration

5	Input
1	Output / Output balanced
2	Output ground / Output balanced
3, 6, 7	Ground
4, 8	Input ground / Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3815	B39391-B3815-Z810	C61157-A7-A46	F61074-V8037-Z000

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

Maximum ratings

Operable temperature range	T_A	-30 / +70	˚C	
Storage temperature range	T_{stg}	-40 / +85	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	100	V	
Source power	P_s	15	dBm	source impedance 50 Ω

Data Sheet

Characteristics

Operating temperature range: T_A = +15 ... +35 ˚C
Terminating source impedance: Z_S = 50 Ω unbalanced or unbalanced to balanced
Terminating load impedance: Z_L = 50 Ω unbalanced or unbalanced to balanced

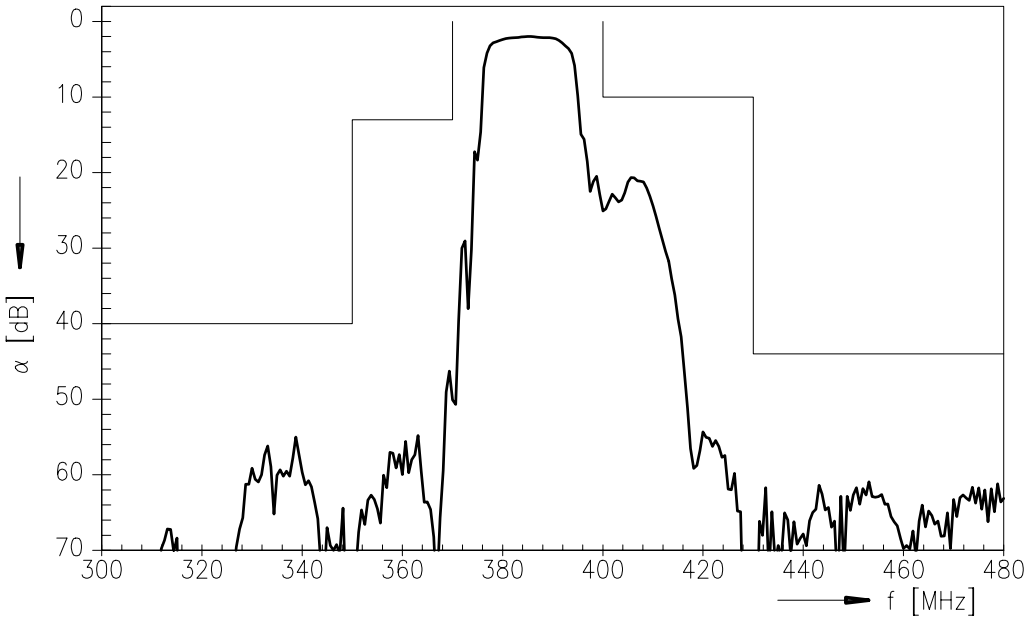
		min.	typ.	max.	
Nominal frequency	f_N	—	385,0	—	MHz
Maximum insertion attenuation	α_{max}				
380,0 MHz ... 390,0 MHz		—	2,4	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
380,0 MHz ... 390,0 MHz		—	0,5	1,5	dB
Return loss (Input and Output)					
380,0 MHz ... 390,0 MHz		10,0	12,0	—	dB
VSWR					
380,0 MHz ... 390,0 MHz		—	1,7:1	2,0:1	
Absolute attenuation	α_{abs}				
0,1 MHz ... 350,0 MHz		40	50	—	dB
350,0 MHz ... 370,0 MHz		13	35	—	dB
400,0 MHz ... 430,0 MHz		10	20	—	dB
430,0 MHz ... 760,0 MHz		44	54	—	dB
760,0 MHz ... 1496,0 MHz		30	35	—	dB
1496,0 MHz ... 2600,0 MHz		20	25	—	dB
2600,0 MHz ... 4000,0 MHz		5	6	—	dB
Symmetry in band					
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$ 380,0 ... 390,0 MHz		-0,5	0,5	1,5	dB
$\arg(S_{31}/S_{21})$ 380,0 ... 390,0 MHz		170	180	190	˚
Temperature coefficient of frequency	TC_f	—	– 70	—	ppm/K

Characteristics

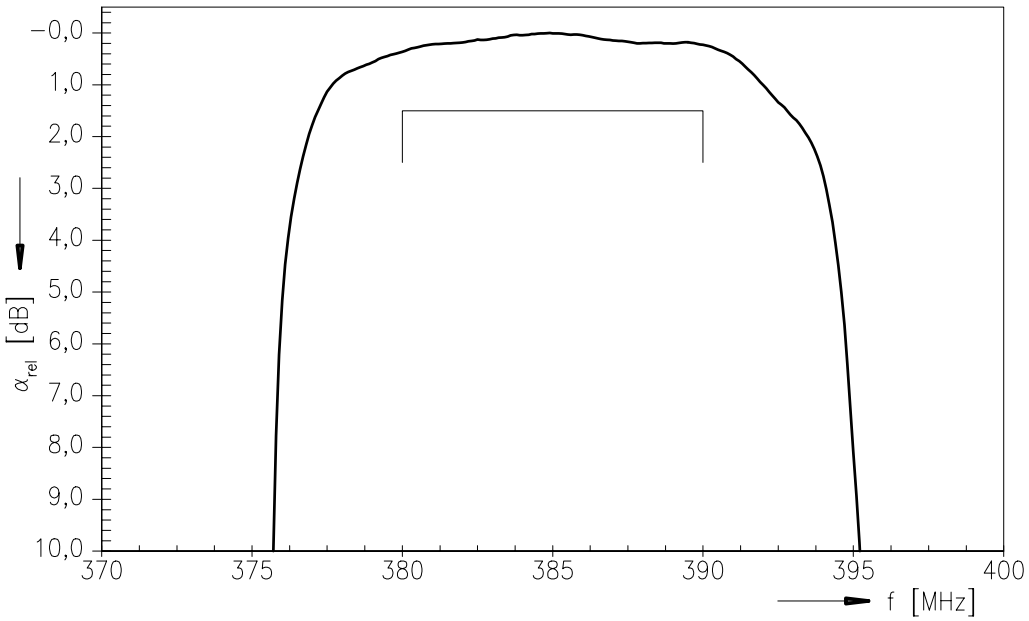
Operating temperature range: T_A = -30 ... +70 °C
Terminating source impedance: Z_S = 50 Ω unbalanced or unbalanced to balanced
Terminating load impedance: Z_L = 50 Ω unbalanced or unbalanced to balanced

		min.	typ.	max.	
Nominal frequency	f_N	—	385,0	—	MHz
Maximum insertion attenuation	α_{max}				
380,0 MHz ... 390,0 MHz		—	2,6	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
380,0 MHz ... 390,0 MHz		—	0,7	2,0	dB
Return loss (Input and Output)					
380,0 MHz ... 390,0 MHz		10,0	12,0	—	dB
VSWR					
380,0 MHz ... 390,0 MHz		—	1,8:1	2,0:1	
Absolute attenuation	α_{abs}				
0,1 MHz ... 350,0 MHz		40	50	—	dB
350,0 MHz ... 370,0 MHz		13	25	—	dB
400,0 MHz ... 430,0 MHz		10	17	—	dB
430,0 MHz ... 760,0 MHz		44	52	—	dB
760,0 MHz ... 1496,0 MHz		30	35	—	dB
1496,0 MHz ... 2600,0 MHz		20	25	—	dB
2600,0 MHz ... 4000,0 MHz		5	6	—	dB
Symmetry in band					
$\lvert S_{31}\rvert/\lvert S_{21}\rvert$ 380,0 ... 390,0 MHz		-0,5	0,5	1,5	dB
$\arg(S_{31}/S_{21})$ 380,0 ... 390,0 MHz		170	180	190	°
Temperature coefficient of frequency	TC_f	—	– 70	—	ppm/K

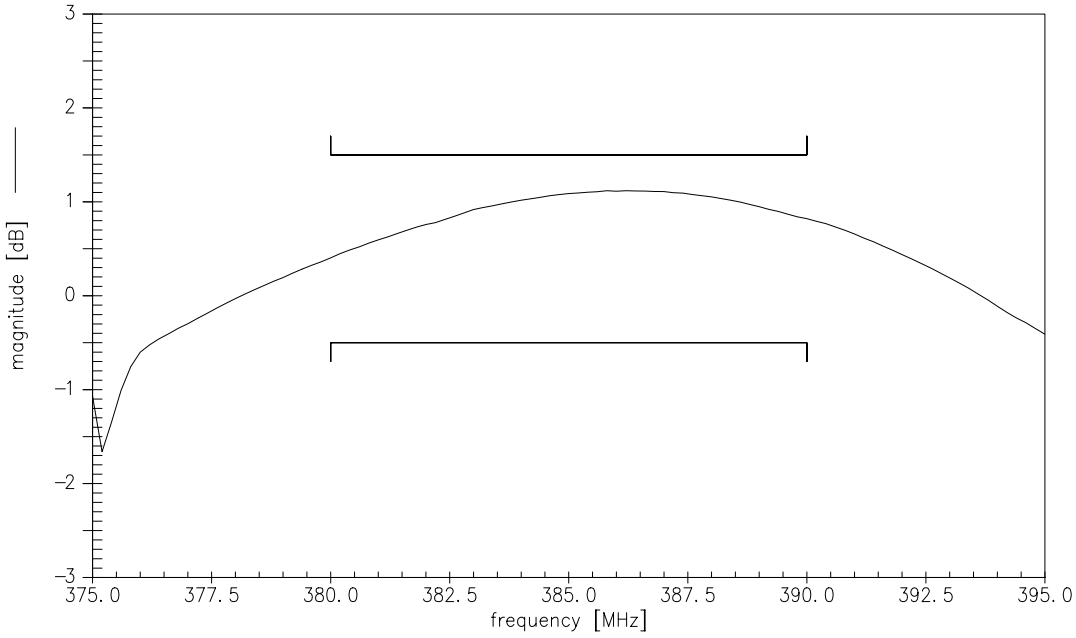
Transfer function



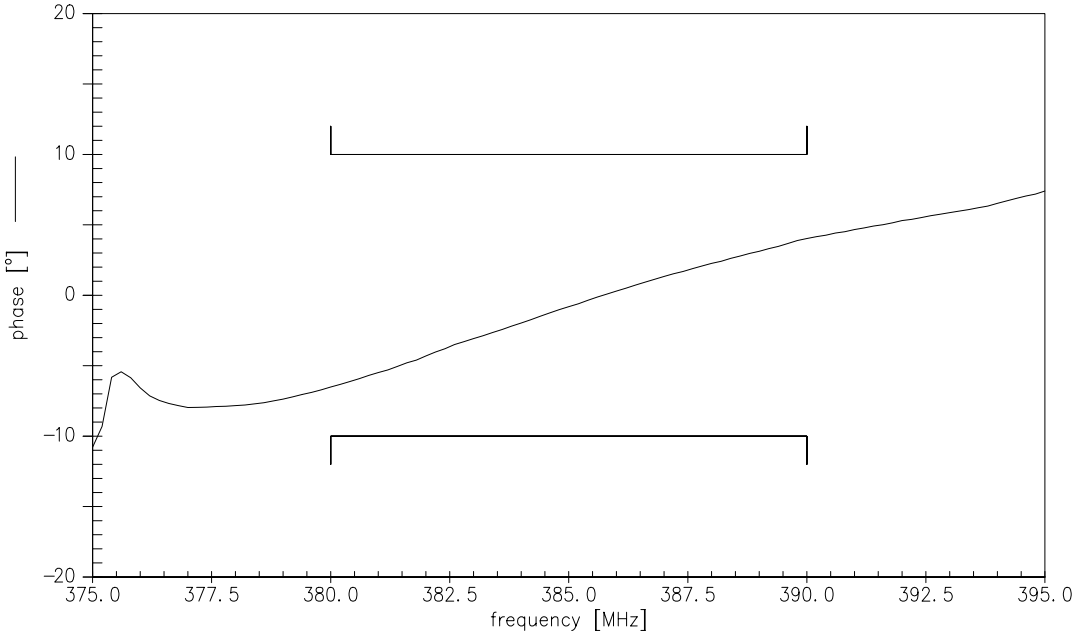
Normalized transfer function (pass band; +15 ˚C ... +35 ˚C)



Amplitude symmetry $|S_{31}|/|S_{21}|$



Phase symmetry $\arg(S_{31}/S_{21})$ - 180˚



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC IS
P.O. Box 80 17 09, 81617 Munich, GERMANY

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.