

SAW Components

Data Sheet B3807





| SAW Components | B3807 |
|-----------------|-----------|
| Low-Loss Filter | 326,4 MHz |

Features

- Low-loss IF filter for W-CDMA base station
- Usable bandwidth 15 MHz
- Ceramic SMD package

Terminals

Gold plated



Ceramic package QCC8C

Dimensions in mm, approx. weight 0,10 g

Pin configuration

| 7 | Input |
|------------|---------------|
| 6 | Input Ground |
| 3 | Output |
| 2 | Output Ground |
| 1, 4, 5, 8 | Ground |



| Туре | Ordering code | Marking and Package | Packing | |
|-------|-------------------|---------------------|-------------------|--|
| | | according to | according to | |
| B3807 | B39331-B3807-U310 | C61157-A7-A56 | F61074-V8070-Z000 | |

Electrostatic Sensitive Device (ESD)

Maximum ratings

| Operable temperature range | Т | -40/ +85 | °C |
|----------------------------|------------------|----------|-----|
| Storage temperature range | $T_{\rm sta}$ | -40/ +85 | °C |
| DC voltage | $V_{\rm DC}$ | 0 | V |
| Source power | $P_{\rm s}^{-1}$ | 15 | dBm |





| SAW Components | | | | | | 33807 |
|--|-----------------------------------|--------------------|-------------|-----------|-------|-------|
| Low-Loss Filter 326,4 MH | | | | | 4 MHz | |
| Data Sheet Characteristics | | | | | | |
| Operating topporature: | τ- | 10 19 | ۶0 °C | | | |
| | 7 = - | -10+0 | 50 C | | | |
| Terminating source impedance: | Z _S = | $50 \ \Omega$ an | id matching | g network | | |
| Terminating load impedance: | Z _S = | 50 Ω an | nd matching | g network | | |
| | | | min. | typ. | max. | |
| Nominal frequency | | f _N | — | 326,4 | _ | MHz |
| Minimum insertion attenuation | | $lpha_{min}$ | — | 2,0 | 4,0 | dB |
| Amplitude ripple (p-p) | | Δα | | | | |
| f _N -2,5 I | MHzf _N +2,5 MHz | | — | 0,3 | 0,5 | dB |
| f _N -7,5 I | MHzf _N +7,5 MHz | | — | 1,0 | 3,0 | dB |
| Pass bandwidth | | B _{1,0dB} | | | | |
| | $\alpha_{rel} \le 1,0 \text{ dB}$ | | — | 15 | — | MHz |
| | $\alpha_{rol} \leq 10 \text{ dB}$ | B _{10dB} | _ | 20 | _ | MHz |
| | oner | | | | | |
| Relative attenuation (relative to α_{min}) | | α_{rel} | | | | |
| 10,0 MHz | f _N – 18,0 MHz | | 40 | 50 | — | dB |
| f _N -38,395 MHz | f _N -38,405 MHz | | 43 | 50 | — | dB |
| f _N –19,195 MHz … | f _N -19,205 MHz | | 43 | 50 | — | dB |
| f _N - 18,0 MHz | f _N – 12,5 MHz | | 13 | 15 | — | dB |
| f _N + 12,5 MHz | f _N + 30,0 MHz | | 11 | 13 | — | dB |

| Temperature coefficient of frequency | TC _f — | - 70 | _ | ppm/K |
|--|-------------------|-----------|-----|---------|
| Output: Z _{OUT} = R _{OUT} C _{OUT} | — | 73 0,2 | | Ω pF |
| input: $Z_{IN} = R_{IN} C_{IN}$ | _ | 12 0,4 | - | Ω∥p⊢ |
| | | 70 11 0 4 | | |
| Impedance at f. (without matching)1 | | | | |
| f _N -7,5 MHzf _N +7,5 MHz | 5 | 8 | | dB |
| r _N -7,0 MHZr _N +7,0 MHZ | 8 | 10 | | uв |
| 1_{N} = 2,5 1011 = 21 N = 2,5 1011 = 42 0 MU = | 0 | 10 | | |
| f2.5 MHz f. +2.5 MHz | 10 | 11 | _ | dB |
| Return Loss | | | | |
| t _N +2,5 MHzt _N +7,5 MHz | _ | 50 | 65 | ns |
| IN-2,5 MHZIN+2,5 MHZ | _ | 10 | 25 | 115 |
| $f_{N} = 25 \text{ MHz} + f_{1} + 25 \text{ MHz}$ | | 15 | 25 | 00 |
| f 75 MHz f 25 MHz | _ | 90 | 110 | ns |
| Group delay ripple (p-p) | Δτ | | | |
| f _N + 30,0 MHz f _N + 450,0 MHz | 25 | 30 | _ | dB |
| t _N + 12,5 MHz t _N + 30,0 MHz | 11 | 13 | _ | dB |
| $1_{\rm N}$ 10,0 1012 $1_{\rm N}$ 12,0 1012 | 13 | 15 | _ | |

¹(port extensions directly at filter)



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| | |

Matching network to 50 Ω

(Element values depend upon PCB layout)



| L _{s1} = 22 nH | C _{p3} = 2,7 pF |
|--------------------------|--------------------------|
| C _{p2} = 2,7 pF | L _{s4} = 22 nH |

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| SAW components | B3607 |
|-----------------|-----------|
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Normalized frequency response



Normalized frequency response (pass band)





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