

SAW Filters

for smart watches, wearables and small smart devices (2.4 GHz and GNSS)



Smart watches, fitness trackers and other wearables such as hearing aids and small smart devices typically use GNSS for positioning and 2.4 GHz based Wi-Fi and/or Bluetooth®, e.g. for data transfer or connection to headsets or mobile phones.

Qualcomm Technologies – a leader in SAW filters

Here we present SAW filter highlights for 2.4 GHz and GNSS based wireless connections.

Please contact your sales representative for alternative filters if the highlighted filters do not fulfil your requirements.

Reference designs

You will find our filters in many of our and other IC makers' transceiver/receiver reference designs.

Product Range

Filters for 2.4 GHz Wi-Fi and Bluetooth

Device	Type	Package size [mm x mm]	Start Freq [MHz]	Center Freq [MHz]	Stop Freq [MHz]	IL, typ [dB]	IL, max [dB]	Highlight
Single	B7544*	0.9 x 0.7	2403.1	2442.0	2480.9	1.0–1.4	1.7–2.1	B7/B40/B41 coexistence, very low insertion loss
Single	B7530	0.9 x 0.7	2403.1	2442.0	2480.9	0.6–1.0	1.2–1.9	superior B7/B40/B41 coexistence
Single	B7520*	1.1 x 0.9	2403.1	2442.0	2480.9	0.9–1.4	1.5–2.0	B7/B40/B41 coexistence, very low insertion loss
Single	B7509	1.1 x 0.9	2403.1	2442.0	2480.9	1.1–1.7	1.7–2.5	superior B7/B40/B41 coexistence
Single	B7506*	1.1 x 0.9	2403.1	2442.0	2480.9	1.0–1.4	1.5–1.9	very low insertion loss

* require no matching circuit

Filters for GNSS

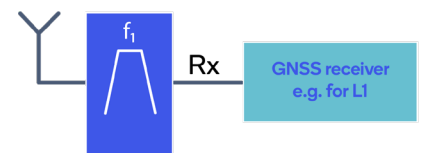
Device	Type	Package size [mm x mm]	Start Freq [MHz]	Center Freq [MHz]	Stop Freq [MHz]	IL, typ [dB]	IL, max [dB]	GNSS bands
Single	B7504	0.9 x 0.7	1559	1583	1606	0.9–1.2	1.4–2.4	L1
Single	B8813	1.1 x 0.9	1559	1583	1606	0.8–1.3	1.3–2.0	L1
Single	B7505	0.9 x .07	1166	1176	1186	0.9	1.3	L5, E5a
Single	B8884	1.1 x 0.9	1166	1176	1186	1	1.6	L5, E5a
Single	B8889	1.1 x 0.9	1166	1197	1228	0.9–1.4	1.3–2.6	L5, E5a, E5b, G3, B2-1, L2
Single	B2642	1.4 x 1.1	1166	1225	1284	1.1–2.2	1.5–2.4	L5, E5a, E5b, G3, B2-1, L2, G2, B3-1, E6
Diplexer	B1267	1.5 x 1.1	1166	1176	0086	1.2	2.3	L5, E5a
			1559	1583	1606	1.2–1.5	1.5–2.2	L1
Diplexer	B9973	1.5 x 1.1	1166	1197	1228	1.2–1.7	2.1–3.0	L5, E5a, E5b, G3, B2-1, L2
			1559	1583	1606	1.2–1.5	1.7–2.0	L1
Double hump	B8389	1.4 x 1.1	1166	1176	1186	1.0	1.6	L5, E5a
			1159	1583	1607	1.8	2.5	L1

Technical data subject to change. Filter specification must be taken from the respective product Data Sheet.

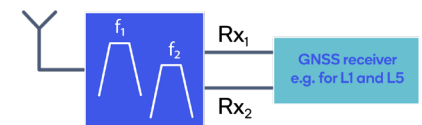
87-27156-1 Rev.B

Block diagram examples for GNSS

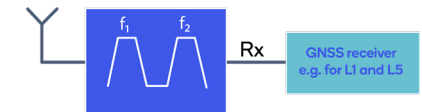
Single Filter



Diplexer



Diplexer



For datasheets see:
rffe.qualcomm.com

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