

Qualcomm / RF360 **SAW/BAW** filters are designed for spectrum challenging applications and are optimized for harsh environments like high temperature and humidity. With their small packaging footprints as small as 1.1 x 0.9mm, these high performing SAW filters are cost competitive and can easily be incorporated into the smallest of “things”. Further, Qualcomm / RF360 SAW filters can be customized for specific applications and AEC-Q200 compliance.

### Features

- Suitable for LPWAN (e.g. LoRa®, Sigfox, Wi-Fi, Zigbee, Z-Wave, HaLow, and Wi-SUN and ISM Short Range Data)
- Low-loss
- Impedance 50 ohm input and output
- Frequency spectrum 300MHz to 2.4GHz
- Narrow band and Wide band

### Types (Grades)

Available in 2 different reliability levels:

- Commercial Grade
- Industrial Grade

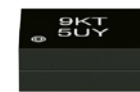
### Package sizes:



3030



1411

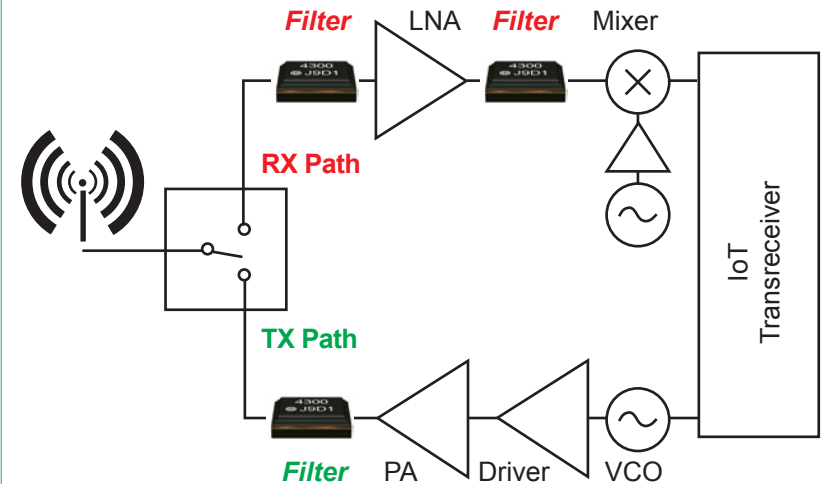


1109

### Maximum Rating / Qualification Tests by Types (Grades)

Package technology	Commercial grade	Industrial grade
Package size [mm]	1109, 1411	1109, 1411, 3030
Operating temperature (standard)	-30 °C to +85 °C	-40 °C to +95 °C
Temperature cycling	100 cycles @ -40 °C to +85 °C	1000 cycles @ -40 °C to +85 / 125 °C
Biased or static humidity @ 85 °C, 85% rel. humidity	168 hours	1000 hours

### Typical IoT Front End



#### Lighting

Light switch, Outdoor, LED

#### Home Comfort/Energy

Meter, Smartplug, Thermostat

#### Small Appliances

Coffee maker, Router, Gaming console

#### Home Security

Surveillance, Entry, Smoke detector

#### White Goods Appliances

Fridge, Air Conditioning, Laundry

#### Remote Control

TV, Smart, Gaming

#### Industrial

Transportation, Waste, Automation

# Qualcomm SAW / BAW Filters: IoT Applications

PassBand [MHz]				Package size [mm x mm]			Comment	
Lower Frequency (FL)	Center Frequency (FC)	Upper Frequency (FU)	Bandwidth	1.1 x 0.9	1.4 x 1.1	3.0 x 3.0		
344.60	345.00	345.40	0.8			B3408		
433.00	433.92	434.71	1.7			B3710	Rx filter, designed for Semtech SX1301 - SX1255	
470.00	480.00	490.00	20.0			B3427	Rx filter, co-designed with B3426 for LoRa duplexing	
500.00	505.00	510.00	10.0			B3426	Tx filter, co-designed with B3427 for LoRa duplexing	
855.00	861.00	867.00	12.0		AR63		India	
863.00	866.50	870.00	7.0		B4377	B3717	Reference design Semtech SX1308 Picocell Gateway - EU B3717: Semtech Macro Gateway V2 - EU	
863.00		870.00	7.0			B3420	High power version of B3717	
865.60	866.80	868.00	2.4			B3441	Temperature compensated filter - LTE co-existence	
863.00	868.00	873.00	10.0			B3430		
868.15	868.30	868.45	0.3			B3734		
868.00		868.60				B3744		
868.00	868.60	869.20	1.2			B3948		
868.00		869.20				B3746		
868.70	868.95	869.20	0.5			B3941		
862.00	869.00	876.00	14.0		B2600			
868.00		870.00	2.0		B4365	B3440	Temperature compensated filters - LTE coexistence B3440: Semtech Macro Gateway V2 - EU	
868.00		870.00	2.0		B4316	B3715		
868.00		870.00	2.0			B3716	GSM attenuation	
868.00		870.00	2.0			B3725	Improved nearby attenuation	
863.00		869.50	876.00	13.0			B3418	
868.00	872.00	876.00	8.0			BK86		
868.00	876.00	876.00	8.0			B3443	Temperature compensated filter - LTE co-existence	
870.00	873.00	876.00	6.0			AK33	Temperature compensated filter - GSM850 suppression	
902.00	908.50	915.00	13.0			B3429	Rx filter, codesigned with B3433 for duplexing	
923.00	925.50	928.00	5.0			B3433	Tx filter, co-designed with B3429 for duplexing	
908.27	908.42	908.57	0.3			B3943	Z-Wave	
908.00	912.50	917.00	9.0			B3406		
902.00	915.00	928.00	26.0		B4344	B3728	Reference design Semtech SX1308 Picocell Gateway - NAFTA B3728: Semtech Macro Gateway V2 - NAFTA B4344: improved left skirt attenuation	
902.00		928.00	26.0		B4379	B4301	North America	
902.00		928.00	26.0		B2671 (GT)	B2672 (GT)	North America	
902.00		928.00	26.0				BK91	North America, se/bal
910.00		920.00	10.0				B3726	North America
910.00		920.00	10.0				B3434	North America
912.50		917.50	5.0		AR52 (GT)			North America
912.80		915.70	918.60	5.8			B3432	Low IA
914.25	916.00	917.75	3.5			B3718		
915.90	916.50	917.10	1.2			B3300		
915.00	918.00	921.00	6.0		AK64			
921.27	921.42	921.57	0.3			B3949	Z-Wave	
915.00	921.50	928.00	13.0		AT01		Australia	
920.00	922.50	925.00	5.0		AT02	B3407	Hong Kong	
923.40	924.00	924.60	1.2			B3945	New Zealand	
920.60	924.15	927.70	7.1			B3419		
922.00	924.40	927.00	5.0		AT04		New Zealand	
923.40	925.00	926.60	3.2			B3919		
922.20	925.15	928.10	5.9		B4336		Japan	
922.20	925.15	928.10	5.9		B8331 (GT)		Japan	
922.30	925.20	928.10	5.8			B3926	Japan	
923.50	925.50	927.50	4.0			B3446	Temperature compensated filter - LTE co-existence	
922.30	925.80	928.10	5.8			B3916	Japan; low IA	
923.50		928.10	4.6			B3921	Japan; high selectivity	
2400.00	2442.00	2483.50	83.5		B4360	B4347	SAW B4347 and B3918 with SDARS co-existence	
2400.00	2442.00	2483.50	79.0		B8873(GT)	B8312	SAW B8873 w LTE co-exist	
2401.50	2442.00	2480.50	79.0	B8857 (GT), M5300	B4346, B9634		BAW; with B7/B40/B41 co-existence	
2400.00	2448.50	2497.00	97.0			B3912		

GT = For indoors/wearable/consumer applications